

Trouble with Trust
Can Trust be a Problem in the Auditing Context?

Tasha Wallace

A Thesis
In the Department
of
Management

Presented in Partial Fulfillment of the Requirements

For the Degree of
Doctor of Philosophy (Administration) at

Concordia University
Montreal, Quebec, Canada

January 2012

© Tasha Wallace, 2012

CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared

By: **Tasha Wallace**

Entitled: **Trouble with Trust - Can Trust be a Problem in the Auditing Context?**

and submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (Administration)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

_____Chair
Dr. A. Jain

_____External Examiner
Dr. S. Bonaccio

_____External to Program
Dr. B. Campbell

_____Examiner
Dr. S. Audousset-Coulier

_____Examiner
Dr. A. Langley

_____Thesis Supervisor
Dr. L. Dyer

Approved by _____
Chair of Department or Graduate Program Director
Dr. H. Bhabra, Graduate Program Director

March 26, 2012

Dr. A. Hochstein, Interim Dean
John Molson School of Business

Abstract

Trouble with Trust – Can Trust be a Problem in the Auditing Context?

Tasha Wallace, Ph.D.

Concordia University, 2012

Professionals are expected to act in the best interest of those dependent on their expertise. Unfortunately, they may not always be able to do this because of cognitive or emotional biases or economic incentives which may lead them to act in their own self interest. Auditors are required by professional standards to be skeptical and base their assessment on audit evidence. Trust "...characterized by a cognitive "leap" beyond the expectations that reason and experience alone would warrant..." (Lewis & Weigert, 1985, p 970) is unacceptable as evidence. While auditor's trust of clients should be irrelevant to audit decisions, there is mixed evidence on whether professionalism overcomes such biases. The research objective is to assess whether auditing professionals are influenced by their trust of clients. Five preparatory studies developed the case, a video and other experimental materials. In a 2x2 experiment, I manipulated the behaviors of the management of the firm being audited as low or high ability (competence or expertise in their field) and low or high benevolence (positive orientation towards the auditor) to create a low trustworthiness scenario, a high trustworthiness scenario and two moderate trustworthiness scenarios. I randomly assigned 26 experienced auditors to these four experimental conditions. I assessed how much the trustworthiness of their client affected their trust and their assessment of the risk of a material misstatement. I found that client

trustworthiness marginally affected auditor's trust of the client and that it had no effect on the auditor's assessment of the risk. I assessed whether trust of the client and the risk affected a decision about the range of acceptable figures which, in turn, affects the extent of audit testing. I found that as trust increased, the extent of the audit testing was reduced. This suggests that experienced auditors may be unable to prevent trust from affecting their audit decisions. Unexpectedly, I also found that as the risk of a material misstatement increased, the extent of audit testing decreased. Both these findings were supported by qualitative analyses that also indicate auditors do not always follow their professional standards and base their audit on risk and evidence.

Acknowledgements

I have been exceptionally fortunate to have worked with the members of my committee. Dr. Linda Dyer, my supervisor, was generous, gentle and effective in teaching me what I needed to know. This meant I always felt good about things after our meetings. I would go to Dr. Sophie Audousset-Coulier with a “quick question” and get an answer an hour later – as well as a much better understanding of my question because of our conversation. Dr. Ann Langley kept me focused on key questions while suggesting helpful improvements to my research. I am very grateful for all your help.

This research would not have been possible without the auditors who collaborated when I was preparing the experimental materials and those who participated and shared their expertise, time and stories. As promised, you are anonymous, but my thanks are not.

I’d also like to thank fellow students and the other friends I met at Concordia who shared their laughter, tears, help and encouragement on this wondrous journey.

To the very special people. My mother who believed I could do anything. To my husband, Robert Wallace, sister, Janet Johnson, friends Paul and Virginia Bostock and Heather Thomson for making sure that I had what I needed. No words can say how precious you are to me.

Table of Contents

List of Figures	xiv
List of Tables	xv
Chapter 1. Trouble with Trust.....	1
Chapter 2. Literature Review	6
2.1 Professional Ethics.....	6
2.2 The Effect of Biases on Decisions	12
2.3 Auditing Professionals	19
2.4 Trust.....	27
2.5 What do we Already Know About an Audit Professional’s Ability to Overcome Biases?	33
Chapter 3. Research Objective.....	43
3.1 Trust	46
3.1.1 Trustworthiness.....	47
3.1.2 Propensity to trust	49
3.1.3 Risk taking behavior	51
3.1.4 Perceived risk.....	53
3.2 Audit Risk.....	54
3.2.1 Audit risk	55
3.2.2 Inherent risk.....	56
3.2.3 Control risk	57
3.2.4 Detection risk.....	58
3.3 An Integrated Model of Trust and Audit Risk	59
3.3.1 Perceived client risk.....	59
3.3.2 Ability.....	61
3.3.3 Benevolence.....	63
3.3.4 Integrity.....	65
3.3.5 Relationship and Non Relationship Risk.....	66
3.3.6 Audit Plan.....	67
3.3.7 Effect of Ability, Integrity and Benevolence on the Audit Plan.....	69
Chapter 4. Overview of Research	71

4.1 Research Choices	71
4.2 Hypothesis Summary	74
4.3 Overview of Studies.....	77
Chapter 5. Study 1 – Identification of Benevolent Behaviors	81
5.1 Method	82
5.1.1 Participants.....	82
5.1.2 Procedures and measures.	83
5.2 Results.....	83
5.3 Discussion.....	87
Chapter 6. Study 2 – Classification of Behaviors Along the Three Dimensions of Trustworthiness – Ability, Benevolence and Integrity	88
6.1 Method	89
6.1.1 Participants.....	89
6.1.2 Procedures and measures.	89
6.1.3 Analysis.....	91
6.2 Results.....	92
6.2.1 Benevolence – non-benevolence.....	92
6.2.2 Competence – incompetence.	93
6.2.3 Honest – dishonest.	94
6.2.4 Behaviors chosen.	94
6.2.5 Behavior overlap.....	95
6.2.6 Confirmation of the behaviors chosen.	95
6.3 Discussion.....	97
Chapter 7. Study 3 – Test of the Written Scenarios.....	99
7.1 Method	99
7.1.1 Participants.....	100
7.1.2 Procedures.....	100
7.1.3 Measures.	103
7.1.4 Analysis.....	107
7.2 Results.....	107
7.2.1 Internal consistency of measures.	107
7.2.2 Manipulation check.....	107

7.3 Discussion	108
7.3.1 Internal consistency of measures.	108
7.3.2 Manipulation check.....	109
Chapter 8. Study 4 – Test of the Enhanced Written Scenarios.....	109
8.1 Expansion of the Behavioral Manipulations.....	110
8.1.1 Confirmation of the behaviors chosen.	111
8.2 Method	114
8.2.1 Participants.....	114
8.2.2 Procedures.....	114
8.2.3 Measures	115
8.2.4 Analysis.....	116
8.3 Results.....	116
8.4 Discussion.....	117
Chapter 9. Study 5 – Pilot Test of the Video Scenarios.....	117
9.1 Method	118
9.1.1 Participants.....	118
9.1.2 Procedures.....	119
9.1.3 Measures.	120
9.1.4 Analysis.....	120
9.2 Results.....	120
9.3 Discussion.....	121
9.4 Pilot Test of the Main Research Question	121
9.4.1 Measures.	122
9.4.2 Analysis.....	125
9.5 Results.....	125
9.5.1 Internal consistency.	126
9.5.2 Scenario effects.....	126
9.5.3 Correlation matrix.....	126
9.5.4 Trustworthiness and trust model.....	127
9.5.5 Trustworthiness and risk model.....	129
9.5.6 Trust, risk and audit plan model	130
9.6 Discussion.....	131
9.6.1 Trustworthiness and trust model.....	131
9.6.2 Trustworthiness and risk model.....	134

9.6.3 Trust, risk and audit plan model	134
Chapter 10. Study 6 – Participants and Common Procedures	135
10.1 Method	136
10.1.1 Participants.....	136
10.1.2 Procedures.....	136
Chapter 11. 6A – Consequences of Trustworthiness	137
11.1 Method	137
11.1.1 Measures.	138
11.2 Results.....	139
11.2.1 Manipulation checks.	139
11.2.2 Scenario effects.....	141
11.2.3 Correlation matrix.....	141
11.2.4 Tests of the models.	143
11.3 Discussion.....	146
11.3.1 Manipulation checks.....	147
11.3.2 Tests of the models.	147
Chapter 12. 6B – Effect of Trustworthiness on Risk	148
12.1 Method	149
12.1.1 Participants.....	149
12.1.2 Procedures.....	150
12.1.3 Analysis.....	150
12.2 Results.....	161
12.2.1 Free response risk factors for each experimental condition.....	161
12.2.2 Comparison of risk factors common to all scenarios with risk factors based on an experimental manipulation.....	163
12.2.3 Risk factors common to all scenarios.	163
12.2.4 Risk factors triggered by an experimental manipulation.	165
12.2.5 Comparison of risk factors by category of risk factors.....	167
12.2.6 Comparison of risk factors by category of risk factors per experimental manipulation.	169
12.2.7 Risk factors triggered by an experimental manipulation – positive manipulations vs. negative manipulations.	172
12.3 Discussion.....	175
Chapter 13. 6C – Verbal Protocol Analysis.....	177

13.1 Method	177
13.1.1 Procedures.....	177
13.1.2 Analysis.....	178
13.2 Results.....	181
13.2.1 Operators applied when making the point estimate and extent of audit testing decision.	181
13.2.2 Auditors’ focus with respect to risk and trust when making the point estimate and extent of audit testing decision.....	186
13.3 Discussion.....	190
Chapter 14. 6D – Interviews with Auditors on Trust in Client Management.....	193
14.1 Method	194
14.1.1 Procedures.....	194
14.1.2 Analysis.....	194
14.2 Results.....	195
14.2.1 Ability.	195
14.2.2 Benevolence.....	196
14.2.3 Integrity.....	197
14.2.4 Risk.....	198
14.2.5 Relationship.....	199
14.2.6 Inappropriate behaviors.....	201
14.2.7 Auditors’ intuition.....	202
14.3 Discussion.....	203
Chapter 15. General Discussion.....	204
15.1 Trust.....	204
15.1.1 Limitations.....	206
15.1.2 Contributions.....	206
15.2 Risk.....	209
15.2.1 Limitations.....	211
15.2.2 Contributions.....	211
15.3 Audit Decision.....	213
15.3.1 Limitations.....	215
15.3.2 Contributions.....	215
Chapter 16. Conclusion.....	217
References.....	221

Appendix A. Trust Questions for Auditors in the Pilot Test	232
Appendix B. Benevolent and Non-benevolent Behaviors Suggested by Experienced External Auditors	234
Appendix C. Instructions and Questionnaire for Rating the Benevolence and Non-benevolence of Behaviors	238
Appendix D. Behaviors Rated on the Three Trustworthiness Dimensions	240
Benevolence behaviors.	240
Ability Behaviors. (Anderson & Marchant, 1989, p 7)	241
Integrity Behaviors. (Anderson & Marchant, 1989, p 8).....	242
Appendix E. Questions About the Likelihood of a Type of Manager Exhibiting a Specific Behavior	244
Appendix F. Text of the Scenarios With Four Manipulated Behaviors Each	262
Scenario 1 – High benevolence and high ability behaviors.....	262
Scenario 2 – Low benevolence and high ability behaviors.....	266
Scenario 3 – High benevolence and low ability behaviors.....	270
Scenario 4 – Low benevolence and low ability behaviors.....	275
Appendix G. Risk and Extent of Audit Testing Questionnaire – Study 3	280
Appendix H. Trust, Trustworthiness and Propensity to Trust Questionnaire – Study 3	284
Appendix I. List of Items for Trust, Trustworthiness, Propensity to Trust	303
Trust – measure 1	303
Trust – measure 2.....	303
Ability	304
Benevolence – measure 1.....	304
Benevolence – measure 2.....	304
Integrity.....	304
Propensity to trust	305
Appendix J. Text of the Scenarios With Eight Manipulated Behaviors Each	306
Scenario 1 – High benevolent and high ability behaviors.....	306
Scenario 2 – Low benevolence and high ability behaviors.....	310
Scenario 3 – High benevolence and low ability behaviors.....	315
Scenario 4 – Low benevolence and low ability behaviors.....	319
Appendix K. Risk and Extent of Audit Testing Questionnaire – Study 4	325
Appendix L. Trust, Trustworthiness and Propensity to Trust Questionnaire – Study 4	329
Appendix M. List of Items for the Gillespie Trust Scale.....	337

Appendix N. Risk and Extent of Audit Testing Questionnaire – Study 5	339
Appendix O. Trust, Trustworthiness and Propensity to Trust Questionnaire – Study 5	343
Appendix P. Risk and Extent of Audit Testing Questionnaire – Study 6.....	353
Appendix Q. Trust, Trustworthiness and Propensity to Trust Questionnaire – Study 6	357
Appendix R. Free Response Risk Factors Which Contained More Than One Risk.....	370
Appendix S. Details of the Coding for Risk Factors Inherent to the Case vs. Risk Factors Triggered by the Manipulated Behaviors	374
Risk factors triggered by manipulated behaviors.....	374
Risk factors triggered by behaviors inherent to the case and common to all scenarios	377
Risk factors whose trigger is unknown.....	377
Consistency of the coding with the experimental condition.	379
Appendix T. Details of the Coding of Free Response Risk Factors by Category of Risk	381
Competence of management.....	381
Nonroutine transactions	382
Management’s integrity	383
Client’s relationship with preceding auditors	384
Judgment required to record transactions correctly	385
Client motivation to manipulate the financial results	387
Nature of the client’s business	387
Financial risk.....	388
Suitability of relationship of new auditor with client	389
Reliance on the financial statements.....	389
First time client for the auditor.	390
Reliance on technology & its complexity, results of previous audits, related parties, assets susceptible to misappropriation, and type of items to be audited.....	390
Appendix U. Coding of the Verbal Protocols.....	392
Appendix V. Counts of Operators Used by Individual Auditor for the Complete Verbal Protocol.....	412
Appendix W. Counts of Operators Used by Individual Auditor to Estimate the Audited Gross Profit Margin	415
Appendix X. Counts of Operators Used by Individual Auditor for Extent of Audit Testing Decision	418

Appendix Y. Counts of Operators That Mention Risk or Trustworthiness by Individual Auditor 421

List of Figures

Figure 1. The integrated model of trust (Mayer et al., 1995).....	46
Figure 2. An integrated model of trust and audit risk.	71
Figure 3. Theoretical model and summary of hypotheses.	77
Figure 4. Amount of interdependence among behaviors rated high on benevolence, competence and honesty.	98
Figure 5. Amount of interdependence among behaviors rated high on non-benevolence, incompetence and dishonesty.	99
Figure 6. Experimental manipulation for each scenario.	101
Figure 7. Enhanced experimental manipulation for each scenario.	113
Figure 8. Summary of hypotheses	122
Figure 9. Relationship between the width of the range and the extent of audit testing. .	124

List of Tables

Table 1. Behaviors rated as extremely and moderately benevolent and non-benevolent.	85
Table 2. Eight behaviors chosen as manipulations for benevolence and ability.	95
Table 3. Sixteen behaviors chosen as manipulations for benevolence and ability.	110
Table 4. Pearson Correlation Matrix.....	127
Table 5. Regression estimates for the effects of ability, benevolence and propensity to trust on trust controlling for integrity.....	129
Table 6. Regression estimates for the effects of ability and benevolence on risk controlling for integrity.....	130
Table 7. Regression estimates for the effects of risk and trust on the extent of audit testing.....	131
Table 8. Post hoc regression estimates for the effects of ability, benevolence and propensity to trust on trust controlling for integrity.....	133
Table 9. Descriptive statistics for the manipulation checks.....	140
Table 10. Pearson correlation matrix.....	142
Table 11. Regression estimates for the effects of ability, benevolence and propensity to trust on trust controlling for integrity.....	144
Table 12. Regression estimates for the effects of ability and benevolence on risk controlling for integrity.....	145
Table 13. Regression estimates for the effects of risk and trust on the extent of the audit testing.....	146
Table 14. Count of the number of free response risk factors by experimental condition.	161
Table 15. Count of free response risk factors by source of the triggering behavior.	163
Table 16. Count of free response risk factors which were common to all scenarios.....	164
Table 17. Count of free response risk factors which were triggered by behaviors manipulated in the experimental conditions.	165

Table 18. Count of free response risk factors by category of risk.	168
Table 19. Count of number of times a free response risk factor was given - by category of free response risk factor and by experimental condition.	170
Table 20. Count of free response risk factors by the type of manipulated behavior that triggered them.	172
Table 21. Count of the free response risk factors that were triggered by positive and negative manipulated behaviors.	173
Table 22. Operators used to code the decision making protocols.	179
Table 23. Number of times the auditors used each type of operator.	181
Table 24. Operators used by an average auditor when estimating the audited gross profit margin and the extent of audit testing decision.	182
Table 25. Operators used by an average auditor when deciding the extent of audit testing.	185
Table 26. Count of operators that mention risk when estimating audited gross profit margin.	187
Table 27. Count of operators that mention risk when making the extent of audit testing decision.	189
Table 28. Illustrative comments for the Ability theme.	196
Table 29. Illustrative comments for the Benevolence theme.	197
Table 30. Illustrative comments for the Integrity theme.	198
Table 31. Illustrative comments for the Risk theme.	199
Table 32. Illustrative comments for the Relationship theme.	200
Table 33. Illustrative comments for the Inappropriate behavior theme.	202
Table 34. Comment for the Auditors' intuition theme.	202
Table 35. Summary table of themes.	203
Table S 1. Examples of free response risk factors triggered by manipulated behaviors.	375

Table T 1. Examples of free response risk factors coded to the Competence of management category.	381
Table T 2. Examples of free response risk factors coded to the Nonroutine transactions category.	383
Table T 3. Examples of free response risk factors coded to the Management’s integrity category.	384
Table T 4. Examples of free response risk factors coded to the Client’s relationship with preceding auditors category.	385
Table T 5. Examples of free response risk factors coded to the Judgment required to record transactions correctly category.	386
Table T 6. Examples of free response risk factors coded to the Client motivation to manipulate the financial results category.	387
Table T 7. Examples of free response risk factors coded to the Nature of the client’s business category.	388
Table T 8. Examples of free response risk factors coded to the Financial risk category.	388
Table T 9. Examples of free response risk factors coded to the Suitability of relationship of new auditor with client category.	389
Table T 10. Examples of free response risk factors coded to the Reliance on the financial statements category.	390

Chapter 1. Trouble with Trust

The majority opinion is that trust is a good thing. “It has ... become accepted that trust is always good and its effects on performance are always positive.” (Jeffries & Reed, 2000, p 880). For example, trust facilitates cooperative (vs. competitive) relationships (Deutsch, 1958), is linked to organizational outcomes such as sales and profits ((Davis, Schoorman, Mayer, & Tan, 2000) and trust in leadership enhances job performance, organizational citizenship behaviors, organizational commitment, job satisfaction and the amount of belief in information given by the leader (Dirks & Ferrin, 2002). “Trust has been linked to a variety of positive work attitudes, such as job satisfaction and organizational commitment, as well as important work behaviors such as job performance and organizational citizenship behavior (e.g., Aryee, Budhwar, & Chen, 2002; Watson & Papamarcos, 2002).” (Gill, Boies, Finegan, & McNally, 2005, p 287). Trust is generally considered to be a good thing because of its positive outcomes. “Trust seems to be a good [that] markets and firms can’t get enough of.” (Wicks, Berman, & Jones, 1999, p 99).

However, the idea has surfaced that there is a dark side of trust (Colombo, 2010; Jeffries & Reed, 2000; Rennie, Kopp, & Lemon, 2010). For example, the SEC investigated why Bernard Madoff was able to defraud the public over several years despite numerous SEC investigations while his Ponzi scheme was in place (U.S. Securities and Exchange Commission Office of Investigations, 2009). The investigation concluded that Madoff had a “tremendous reputation” which led the SEC investigators to be “too trusting” (U.S. Securities and Exchange Commission Office of Investigations,

2009, p 373). They put too much faith in what he said instead of verifying his assertions (U.S. Securities and Exchange Commission Office of Investigations, 2009).

More recently, Rennie, Kopp and Lemon (2010) explored trust in the context of auditors and the management of the clients that were being audited. Auditors believed it was important to trust their clients (Rennie et al., 2010). They also believed that this trust did not get in the way of their professional skepticism because they had a rigorous audit process and an independent attitude towards the client during the audit (Rennie et al., 2010). That being said, Rennie, Kopp and Lemon (2010) did not address whether an auditor's trust affected the audit decisions.

Why is this important? Auditing exists so that investors and creditors can be reasonably confident that what the management of a company says in its financial statements is true (*CICA standards and guidance collection (CICAHB)*.2011, section 1000.18). As an investor or creditor, if I trusted management and believed what they said in their financial statements, I would not need the financial statements to be audited. If I do not trust management, I need an auditor who will assess the financial statements objectively and be skeptical about what they say. I do not need an auditor who trusts management and is influenced by this trust. Thus understanding whether auditors are influenced by their trust of the management of the firms they are auditing is an important issue.

If auditors trust client management and this deters them from gathering an adequate quantity or quality of audit evidence, then too much trust may be detrimental. This type of dilemma leads to calls for more research on the “down side” of trust (McEvily, Perrone, & Zaheer, 2003; Rennie et al., 2010). Investigating trust in an audit context with this potentially negative outcome is one of the contributions of this research to the trust literature.

This research will also contribute to the professional literature. Professions claim that they work for the public good instead of for the benefit of the individual professionals (Larson, 1977; Wilensky, 1964). This research may shed some light on whether this actually happens or not.

If audit decisions are influenced by an auditor’s trust of the client being audited, any understanding of the context and mechanism of this influence may contribute to an understanding of how to mitigate these effects (Rennie et al., 2010). Given the importance of auditors to the smooth functioning of capital markets, and given the academic and professional concerns about the effect of trust on auditors; it is surprising that there has been so little study about the effect of trust on auditor behavior.

This research used a multimethod approach to look at the relationship between an auditor’s trust of the management of the firm being audited and an audit decision on the extent of audit testing. It was set in the context of accepting an audit engagement with a new client. It used an experimental design on two of the dimensions of trustworthiness to

manipulate client behavior as low and high ability and low and high benevolence. Having manipulated the ability and benevolence of the client, this research then explored the effect of these variables on trust. Previous research led us to believe that high ability and high benevolence would increase the amount of trust that the auditors felt. This research also explored the effect of ability and benevolence on the auditor's assessment of the risk of a material misstatement in the financial reports. Auditing standards require auditors to consider the ability and integrity of the management of the firm being audited when assessing this risk (Canadian Institute of Chartered Accountants, 2008, section 5090.07, 5135.104 & 5141.104). Thus ability is expected to affect the assessment of the risk. The last quantitative relationship explored was the effect of risk and trust on the decision about the extent of audit testing to be done. The extent of audit testing to be done is supposed to be based on risk (Canadian Institute of Chartered Accountants, 2008, section 5141.102) and trust is not supposed to have any additional effect (Canadian Institute of Chartered Accountants, 2008, section 5090.07). Thus the effect of the manipulation of the client's ability and benevolence is supposed to affect the extent of the audit testing through risk and not affect it through trust. Additionally, the auditors used a "talk aloud" verbal protocol while making their decision on the extent of audit testing. This method provided qualitative data on how this decision was actually made. The participants also provided qualitative data on which factors influenced how they assessed the risk of an error that matters (a material misstatement) in the financial statements during the experiment. Lastly, the auditors were interviewed about their trust of two of their previous clients.

Auditors' professional standards require auditors to be independent of the client (Auditing and Assurance Standards Board, 2008, .018) and professionally skeptical about what the client says (Canadian Institute of Chartered Accountants, 2008, section 5135.042). This means that auditors do not believe or disbelieve the figures provided by the firm they are auditing (Canadian Institute of Chartered Accountants, 2008, section 5090.07). They are supposed to gather audit evidence and decide whether the figures are appropriate based on the evidence that they gather (Canadian Institute of Chartered Accountants, 2008, section 5025.53). If trust is influencing an auditor's decisions, then it would appear that the professional standards are not effective. In other words, auditors would not be able to maintain their professional skepticism when they trust the management of the firm they are auditing. Anything that impairs an auditor's professional skepticism is an important issue for standard setters and users of financial statements.

Previous research showed that trust can affect people's behavior. It increased one's willingness to take risks (Dirks & Ferrin, 2001), increased the perceived accuracy of offered information (Roberts & O'Reilly, 1974), influenced how much recommendations affected a decision (Moorman, Zaltman, & Deshpande, 1992), and influenced the acceptability of a contentious decision (Tyler & DeGoey, 1996). Would trust affect auditors to the same degree as the general population or would their professional training equip them to overcome its influence? Like trust, cognitive biases can also affect people's decisions. Previous research showed that auditors were sometimes affected by these biases to the same degree as the general population and sometimes they were not

(Bonner, 2008). Thus it seems that the question of whether trust would or would not affect auditors' decisions is an empirical one.

The goal of this research is to examine whether trust actually does affect an audit decision or not. It is an important question for the following reason. Should trust turn out to affect the extent of audit testing, this would suggest that current professional standards about the extent of audit testing being based on risk and about auditors being professionally skeptical are not effective. Potentially, this removes some of the protection that auditing provides to users of the financial reports.

Next is a Literature Review of the research that informs this study. It is followed by the Research Objective, the Research Model, Hypotheses Development and an Overview of the Studies.

Chapter 2. Literature Review

2.1 Professional Ethics

What do clergymen, lawyers, psychiatrists, architects, engineers, professors, doctors and accountants have in common? They are all professionals (Abbott, 1988; Freidson, 1986; Larson, 1977). But what, exactly, does it mean to be called a professional?

There is some disagreement about whether professionals are identified by their characteristics or by the process that converts their craft into a profession (Edwards, 2001). Some scholars identify the beneficial characteristics that professions share; an organized body of experts, who have undergone extensive training, with barriers to entry such as examinations or licensing and a code of ethics or behavior that was enforced by the organized body of experts (Abbott, 1988; T. Johnson, 1972). Others focus on the negative characteristics of professionalism; that they define the service themselves, they control the service themselves with exclusive rights to provide it (Freidson, 1986; T. Johnson, 1972).

Abbott (1988) points out that not all professions share these characteristics. For example, clergy generally do not have codes of ethics (Abbott, 1988). Auto mechanics are a reverse example; an example of a craft that is not a profession in spite of being very similar, conceptually, to medicine (Abbott, 1988).

Wilensky (1964) identifies the process that converts a craft into a profession. First, there are people who work at the job full time; second, a training school is established; third, a professional association is formed; fourth, legal protection of the job territory is gained; fifth, a formal code of ethics is established (Wilensky, 1964). Abbott points out that not all professions go through the same steps nor in the same order (Abbott, 1988). For example, accounting did not establish training schools until much later in the professionalization process. Although this controversy is still outstanding, it does not cause problems for my key point that *the person who is dependent on the professional is*

not in a position to judge the quality of the professional's work (Abbott, 1988; Larson, 1977).

When you go out to dinner and are served, you are in a position to judge the quality of service you have received. You can assess whether your server was prompt with the menus, whether your drinks order was taken quickly, how knowledgeable and enthusiastic the advice provided on the entrees was, et cetera. However, when you go to see your doctor, you cannot judge the quality of the advice you receive. You cannot distinguish between a genuine need for an operation and your doctor needing the income for his or her children's education. There are two reasons why the person who is dependent on the professional is not in a position to judge the quality of the professional's work.

The first reason is that there is a gap between the knowledge that the professional has and that a non-professional has (Abbott, 1988; Larson, 1977). Prior to being accepted into a profession, an individual must go through a specialized training program (Abbott, 1988; Larson, 1977). Doctors need to go to medical school. Accountants need to follow a specific professional training program at a business school. Generally, there is fierce competition for this type of education and non-professionals seldom have access to the knowledge that this type of education provides (Abbott, 1988).

A second reason for their inability to judge the quality of the professional's work is due to the nature of the professional's knowledge. This specialized knowledge is abstract,

ambiguous and incomplete (Abbott, 1988). Doctors know what *could* cause a pain in the stomach, but they don't have a way to detect which of these potential reasons *is* the cause of this patient's pain in the stomach. Accountants, when calculating depreciation costs, know that a truck *could* be in service for between 10 and 15 years, but are not sure which year *is* the best estimate because they don't know whether it will be driven well or poorly, how well it will be maintained and other unknown factors which affect how long the truck will be useful. Professionals and non-professionals need guidance on how to apply this abstract knowledge to their specific situation (Abbott, 1988). Professionals gain this experience during their apprenticeships, under the guidance of more experienced professionals (Abbott, 1988; Wilensky, 1964). Doctors and accountants have a formal internship requirement before they qualify as professionals. Non-professionals do not have a similar opportunity to learn how to apply knowledge to a specific situation (Abbott, 1988).

Since the person who is dependent on the professional is not in a position to judge the quality of the professional's work, he or she is vulnerable to professionals who do not work in their best interest. As Goode puts it, "Almost no client *willingly* goes to an unethical or incompetent practitioner..." (Goode, 1957, p 198). Because the professionals are in positions where they may or may not work in the best interest of those dependent on them, some sort of socialization or social control is needed to prevent abuse from occurring (Goode, 1957).

To address this problem, the professions control the training of those entering the profession, restrict those who can practice to the individuals that they license, have ethical codes and withdraw the privileges of professionals who are known to abuse these codes of ethics (Abbott, 1988; Freidson, 1986; Goode, 1957; Larson, 1977). Professionals are trained in the abstract knowledge that they will need when practicing their profession (Abbott, 1988). Included in this training is a socialization process where the trainees are also trained in the social norms of the profession (McPhail, 2001; Wilensky, 1964). Professionals are also required to pass qualifying exams which restricts those who can practice to those who have been socialized as well as trained in the techniques of the profession (McPhail, 2001). Professionals must also promise to adhere to their code of ethics which always requires them to act in the best interest of those dependent on them (Wilensky, 1964). Professions claim that they work for the public good instead of for the benefit of the individual professionals (Larson, 1977; Wilensky, 1964). Lastly, professions revoke the privilege of practicing from those who violate the professional code of ethics (Abbott, 1988).

One could argue that the above steps protect those dependent upon professionals from professionals who don't work in their best interest; however, there are two potential problems with this approach. The first is that the professions are not always effective at weeding out their unethical members (Goode, 1957).

Freidson argues that, although there are formal codes of ethics for professionals, there are few effective mechanisms in place to uncover any violations and to correct them so

that they don't happen again (Freidson, 1986). Accounting scandals such as Enron (Chandra, 2003) and Adelphia (Barlaup, Dronen, & Stuart, 2009) demonstrate that there had been violations of the professional code of conduct over many years. Some accountants were not working in the best interest of those dependent on them. During this time, there were individuals who explicitly stated that there was wrongdoing by the accountants (Chandra, 2003). Socialization, licensing, code of ethics, the threat of revoking the privileges did not prevent these and other major failures.

The second potential problem of protecting those dependent on professionals is that these steps work on intentional behavior, behavior that is governed by conscious choice. Socialization and codes of ethics are much less effective against *unconscious* biases and attitudes.

Psychological research routinely shows that biases, moods and attitudes can affect individuals and they may not be aware of these effects (Bazerman, 2006). A sunny day makes people more optimistic and helpful (Schwarz & Clore, 1996). Hearing a number affects people's estimates of unrelated things (D. Moore, Tetlock, Tanlu, & Bazerman, 2006). Trust makes you more willing to accept what you are told (Dirks & Ferrin, 2002). The significant thing about these effects is that people are often unaware of having been affected by them (D. Moore et al., 2006; Schwarz & Clore, 1996). Conscious controls, like codes of ethics, are not effective when you are not aware of contravening them (Bazerman, Morgan, & Loewenstein, 1997; Bazerman, Loewenstein, & Moore, 2002).

To summarize, people who are dependent on a professional are unable to judge the quality of the professional's work because of the ambiguous, abstract and incomplete nature of a professional's specialized knowledge. To protect those who are dependent on a professional, professions have a code of ethics that requires them, as professionals, to act in the best interests of those dependent on their expertise. The problem with this type of protection is that it depends on these professionals to identify any conflicts of interest and then to act fairly.

2.2 The Effect of Biases on Decisions

Biases can interfere with a professional's ability to identify a conflict of interest between what is in his or her own self interest and what is in the best interest of the person who is dependent on his or her expertise.

Biases are generally defined in the literature by describing a specific type of bias and by giving examples of it (Bazerman, 2006; Besharov, 2004; Das & Teng, 1999; Lyles & Thomas, 1988). One type of bias is the escalation of commitment (B. M. Staw, 1997). Staw (1997) looked at the situation where it no longer made sense to continue investing time and money in a project and compared the actions of the people who had originally approved the project to those who were not involved in the initial approval of the project. He found that those who were involved in the initial approval of the project recommended allocating more money to the project than those who were not involved in the initial approval of the project. He theorized that they were trying to justify their initial

decision to invest in the project by escalating their commitment of resources to it hoping that, ultimately, the project would succeed with the additional resources (B. Staw, 1981).

Those who escalate commitment to be consistent with and to justify their initial decision demonstrate two interesting characteristics of biases. The first is that this bias leads to a poorer decision than if it were made by an independent party (B. Staw, 1981). People tend to escalate their commitment well beyond what can be rationally justified in the situation (B. Staw, 1981). The second characteristic of the bias is that it is systematic. Those who approved the initial project were more prone to allocate more money to it (B. Staw, 1981). They were not more prone to allocate less money to it; the bias was only in the positive direction.

Emotions and moods can also bias decisions. One way that this can occur is that moods or emotions are used as a source of information about the decision (Schwarz & Clore, 1996). For example, Johnson and Tversky (1983) found that people systematically estimated risk as higher if they had read a description of negative events which induced a negative mood. Theoretically, people may attribute their negative mood to the risk they are evaluating and estimate the event as more threatening because of it (Schwarz & Clore, 1996). Those in an induced positive mood systematically estimated the risk of negative events as lower (E. Johnson & Tversky, 1983).

One interesting characteristic of the bias caused by moods is that people are generally unaware that their decisions have been affected by their moods. In the Johnson and

Tversky (1983) experiment briefly described above, 40% of the control group agreed that a negative mood could affect estimates of risk, however, only 3% of those whose estimates were affected agreed that a negative mood could affect their actual estimates of risk. Thus those whose decisions were affected by mood were less aware of the influence than those whose decisions were not affected.

Trust can also bias decisions. Trust is an attitude that reflects a person's beliefs about the trustworthiness of the trusted person (Govier, 1994). Trust implies that the feelings towards the trusted person are positive and is manifested behaviorally as "...the willingness to accept vulnerability based on positive expectations about another's intentions or behaviors..." (McEvily et al., 2003, p 92). It has been likened to a "leap" because it amounts to being vulnerable to someone else without being able to justify it rationally (Lewis & Weigert, 1985, p 970). This is due to one of the basic characteristics of trust; that you stand to lose more than you gain should your trust be betrayed (Deutsch, 1958). Otherwise, trust would simply be the same as rational risk taking behavior (Williamson, 1993). Thus trust has several features in common with cognitive and emotional biases. The first is that trust is not justifiable on a rational basis.

Secondly, trust works as a mental shortcut which conserves effort (McEvily et al., 2003). The trustworthiness of a person sending information can be used as a proxy for the accuracy of the information that is sent (McEvily et al., 2003). If the sender is trusted, then the receiver doesn't spend time verifying the information and can act on it immediately, potentially increasing their rate of learning (McEvily et al., 2003).

Unfortunately, trust, like all mental shortcuts, can lead to systematic biases which can lead to poorer decisions than if the decision were made by an independent person (McEvily et al., 2003).

What has been argued so far is that biases or attitudes can affect decisions in a systematic way and that those making the decisions may or may not be aware that their decisions are biased. The next step is to show that these biases may interfere with a professional's ability to identify a conflict between what is in his or her own self interest and what is in the best interest of the person who is dependent on his or her expertise.

Tenbrunsel and Messick (2004, p 225) argue that ethical decisions often involve "...a tradeoff between self-interest and moral principles." They further argue that self-deception allows individuals to behave in a self-interested way while at the same time, believing that they are behaving ethically (Tenbrunsel & Messick, 2004). Self-serving attribution is one bias that aids this self deception (Bazerman, 2006). Kramer, as cited in Bazerman (2006), theorizes that people take more credit for a successful outcome than justified by the situation; that people take too little responsibility for a failure, tending to blame external factors in order to protect a positive self image. This self deception leads to honest people claiming that they contributed more than they actually did (Bazerman, 2006). For example, Harvard study groups were asked to estimate how much work they personally had contributed to the group effort. An accurate estimate of the amount of work would add up to 100%; however, because individuals claimed more credit than was objectively justified, the individual estimates added up to 139 % – 39% more work than

was actually done (Bazerman, 2006). There were similar claims of more credit than justified when academic papers were authored by three to six people (Bazerman, 2006).

Some argue that this self-interest bias may be due to an individual having more knowledge of his or her own effort than of the other's efforts. (for example, Messick & Sentis, 1983). That said, this self-interest bias also exists in cases where equal knowledge is available to both parties. Hastorf and Cantril (1954) did some interesting research about biases in perception. They showed the film of a Princeton vs. Dartmouth football game to Princeton students and to Dartmouth students and asked them to count the number of infractions and their severity as they were viewing the game. Note that this design avoided problems due to memory as the tallies were made while the film was being viewed. It also avoided differences in knowledge as all the students saw the same film. Even in these circumstances, the Princeton students saw the Dartmouth team make more than two times the infractions than they counted for the Princeton team; they saw more than twice the Dartmouth team infractions than the Dartmouth students saw; and they rated the Dartmouth infractions as far more serious than the Princeton infractions (Hastorf & Cantril, 1954). The researchers concluded that the students were selectively choosing events from all that was going on in the game in order to support their own school's position (Hastorf & Cantril, 1954).

Others argue that the self-interest bias is due to an individual's preference being stronger than an individual's sense of fairness (Hastorf & Cantril, 1954; Messick & Sentis, 1983). The proposition here is that people will judge things according to their

preference so long as they can justify it as being fair. In an interesting experiment, Messick and Sentis (1979) asked students what was a fair split of the payment between themselves and another student in the hypothetical situation where both graded papers for a professor. In one instance the participant worked for 7 hours and the other worked for 10 hours. The other was paid \$25 for his work and the participants stated (on average) that the amount that would be a fair payment for his or her work was \$23.62. When the condition was reversed and the participant worked for 10 hours and the other worked for 7 hours, the participants stated (on average) that the fair amount for their own work was \$35.24 (the other still earned \$25). This significant result reflects "...the tendency for the amount of money judged fair for one to *take* for oneself to be greater than the amount the other judges fair to *give*." (Messick & Sentis, 1979, p 428).

There is much evidence that self interest biases decisions (Bazerman et al., 2002; Diekmann, Ross, Samuels, & Bazerman, 1997). If professionals are able to justify a decision as fair, they, like the students described above, may have a bias towards their desired result, all the while believing they are being fair. Professionals, because of the ambiguity inherent in their specialized knowledge, may use this discretion to choose a defensible decision that favors them.

An interesting characteristic of these biases, moods and attitudes is that sometimes they can be overcome when people are aware of their effects and sometimes they appear to be resistant to change, even when people want to be objective. In a pair of experiments Schwarz and Clore (1983) showed that a bad mood decreased people's happiness and life

satisfaction and that this effect was eliminated when people became aware of a reason for their bad mood. In one of the experiments, Schwarz and Clore (1983) asked people how they felt on a rainy day and on a sunny day in spring because prior research has shown that weather has a reliable effect on mood. As expected, their moods were affected by the weather and as well, on sunny days people were happier and more satisfied than on the rainy days (Schwarz & Clore, 1983). The fascinating result is that when people were made aware of the weather, either by a casual question about the weather or by saying that the research was about how the weather affected people's moods, their weather-induced bad moods no longer affected their happiness nor their satisfaction with life (Schwarz & Clore, 1983). In this case, awareness of the weather prevented the weather-induced bad mood bias from affecting the happiness and life satisfaction judgments.

Nevertheless, another experiment shows that knowledge is not always enough to undo biases. Undergraduate and business students played one of four roles, buyer, seller, buyer's auditor and seller's auditor and were asked to estimate the value of a company that was up for sale based on identical information (Bazerman et al., 2002). The results showed that the buyer and the buyer's auditor were biased towards a lower price and the seller and the seller's auditor were biased towards a higher price (Bazerman et al., 2002). Where it gets more interesting is that those in the auditor role were not able to undo this bias. The researchers asked the buyer's and seller's auditors to estimate the true value of the company and they were told they would be rewarded based on how similar their estimates were to impartial experts (Bazerman et al., 2002). "Despite this incentive for accuracy, the estimates of the sellers' auditors averaged 30% higher than those of the

buyers' auditors. This exemplifies the persistent influence of self-serving biases: Once participants interpreted information about the target company in a biased way, they were unable to undo the bias later." (Bazerman et al., 2002, p 100).

To summarize, biases and attitudes may affect professionals in ways that allow them to act in their self interest, believe they are being fair, even though their decisions are significantly different from those of unbiased decision makers. Under these circumstances, these biases may interfere with a professional's ability to identify a conflict of interest between what is in his or her own self interest and what is in the best interest of the person who is dependent on his or her expertise.

In the next section, I focus on auditors – a group of professionals which is interesting to study for several reasons.

2.3 Auditing Professionals

It is important to study auditors because they are seen as key to the functioning of capital markets. Arthur Levitt was a past Chairman of the U.S. Securities and Exchange Commission which oversees the functioning of the U.S. stock markets – the largest stock markets in the world (*List of stock exchanges*.2010).

I have said in the past that sound and verifiable financial reporting is to financial markets what oxygen is to breathing. I do not think that comparison

overstates the case. Investors are willing to commit capital to our securities markets because they have confidence in the quality and integrity of financial statements prepared by public companies and certified by independent auditors. Investor confidence in that financial market does not merely fuel markets – it makes markets possible. (Levitt, 2000)

It is his opinion that investor confidence is critical to capital markets; that the high quality and integrity of the financial statements allows this to happen; and that certification by independent auditors plays an integral part in creating this confidence (Levitt, 2000). He is not alone. The Securities and Exchange Commission itself was created in 1934, in response to the stock market crash in 1929, in order to restore the public's faith in capital markets (*The U.S. Securities and Exchange Commission.*). The security laws that the Security and Exchange Commission enforce require most companies listed on U.S. exchanges to provide financial statements and to have these financial statements certified by independent accountants (*The U.S. Securities and Exchange Commission.*).

I have focused here on the U.S. legislative requirements because of the dominant role that U.S. Stock Exchanges play in the global capital market. The New York Stock Exchange (NYSE) and the National Association of Securities Dealers Automated Quotations (NASDAQ) are the two largest stock exchanges in the world and between them have 56% of the value of all the trades made on the top 18 stock exchanges (*List of stock exchanges.*2010). For example, they have 24 times the value of the trades on the

Toronto Stock Exchange – the largest Canadian stock exchange (*List of stock exchanges*.2010). Nevertheless, there are similar requirements in other legislative domains. For example, the Ontario Securities Commission also requires companies listed on the Toronto Stock Exchange to provide financial statements and to have these financial statements audited by an independent auditor (*Securities act R.S.O. 1990, chapter S.5.2010, section 78.2 and 78.4*).

Auditors are also interesting professionals to study since so much money is spent on audits each year. The “Big 4” is the name given to the top 4 audit firms worldwide – Deloitte Touche Tohmatsu, PricewaterhouseCoopers, Ernst & Young, KPMG (*Big four (audit firms)*). Their combined revenue in 2010 was 95.1 billion US dollars (*Big four (audit firms); Business performance highlights.; Facts and figures.; Global review 2010 facts and figures.; KPMG Europe LLP annual report 2010 notes*). Their combined revenue for audits alone was 41.6 billion US dollars (*Big four (audit firms); Business performance highlights.; Facts and figures.; Global review 2010 facts and figures.; KPMG Europe LLP annual report 2010 notes*). To put this in perspective, only 59 countries in the world have an economy that is larger than the combined revenue of these 4 firms (*List of countries by GDP (nominal)*). Only 76 countries have an economy that is larger than the audit revenue alone from these 4 firms (*List of countries by GDP (nominal)*). (Economy is the gross domestic product or the market value of all final goods and services from a country in the given year. (*List of countries by GDP (nominal)*.)

It is also important to study auditors because there is significant public policy focused on auditors. As mentioned earlier, the US Securities and Exchange Commission legislation was enacted in order to restore investor confidence in the capital markets (*The U.S. Securities and Exchange Commission*). The Security Exchange Act of 1934 requires most companies listed on U.S. exchanges to provide financial statements and to have these financial statements certified by independent accountants (*Securities exchange act of 1934*). In 2002, the Sarbanes-Oxley Act was enacted to fight accounting fraud and, among other things, established a Public Company Accounting Oversight Board, to oversee auditing activities (*Sarbanes-Oxley act of 2002 - CHAPTER 98 - PUBLIC COMPANY ACCOUNTING REFORM AND CORPORATE RESPONSIBILITY*; *The laws that govern the securities industry*). Also as mentioned earlier, Canadian securities legislation is similar in terms of involving auditors in the assessment of the financial reports issued by companies listed on their stock exchanges (*Securities act R.S.O. 1990, chapter S.5.2010*; *An act respecting the authorite des marches financiers R.S.Q., chapter A-33.2.2011*; *Securities act [RSBC 1996] chapter 418.2011*; *The securities act (Alberta) RSA 2000 cS-4*). These public policies require time and public money to develop, enact, maintain and enforce. There is seldom data on how effective these public policies are (Bazerman, Baron, & Shore, 2001) and thus any research that touches on these issues could potentially contribute to the efficiency of these policies.

More importantly for the purpose of the present research, it is interesting to study auditors because of their unusual relationship with those who are dependent on their expertise (Lawler & Rhode, 1976). Most professionals are hired by or chosen by those

who are dependent on them. You choose which doctor will be your general practitioner. You pick which lawyer you will hire to represent you. You may attend any church where the clergyman appeals to you. There are cases where you do not choose a professional; for example, if you are alone and unconscious, the ambulance will take you to the nearest emergency room. If you are indigent, a lawyer may be assigned to you. Nevertheless, you routinely do choose which professional you will hire and you are able to change them whenever you wish to be involved with a different one.

Auditors have a different relationship with those who are dependent on them (Lawler & Rhode, 1976). One could easily argue that auditors have no relationship with those who are dependent on their expertise (Lawler & Rhode, 1976). As a matter of fact, one could argue that auditors may not even be able to identify those who are dependent on their expertise (Arens, Elder, Beasley, & Spletstoeser, 2005). The companies who choose which auditors to use and actually hire the auditors are the ones who want their financial statement audited (Goldman & Barlev, 1974). The users of the financial statements are anyone who is considering an involvement with the company and thus interested in how solid they are financially (Goldman & Barlev, 1974). They could be potential investors, deciding whether to buy shares or not: they could be potential creditors, deciding whether to loan the company money or not, and at which interest rate; they could be potential suppliers deciding whether to extend credit to the company or whether to accept cash only; they could be potential customers deciding the worth of the ten-year guarantee on their product; they could be potential employees deciding how viable a long-term career is with this firm (Arens et al., 2005).

There is a strong case to be made that the auditors are unlikely to know which potential investors, creditors, suppliers, et cetera are dependent on their expertise (Lawler & Rhode, 1976). Even if they do know the particular people who are dependent on their expertise, these users do not hire them, nor are they involved at all in the audit process (Lawler & Rhode, 1976). The significance of this non-involvement is that there is no relationship built between the auditors and those dependent on their expertise as there is with other professionals such as doctors and lawyers (Lawler & Rhode, 1976). This lack of relationship between the auditor and those who are dependent on their expertise increases the distance between them and this distance increases the likelihood that their needs are not as urgent to the auditor as his or her own needs or the needs of the company that has hired the auditor (Bazerman et al., 2002). This makes the auditors an ideal population in which to study whether biases interfere with a professional's ability to identify a conflict of interest between what is in his or her own self interest and what is in the best interest of the person who is dependent on his or her expertise (Bazerman et al., 2002).

Lastly, auditors are an understudied profession (Abbott, 1988) which is quite surprising given their financial impact and the public policies that focus on them.

But what are auditors actually paid to do? Auditors offer an opinion on how fairly the financial statements reflect the hiring company's financial reality (Goldman & Barlev, 1974). They do not offer guarantees; however, they need to do enough investigating so

that they don't run a big risk of being wrong and accepting the hiring company's financial statements as being accurate when they are not (Dusenbury, Reimers, & Wheeler, 2000). In order to remain competitive with other accounting firms, they cannot do too much investigating into the hiring company's activities as this would raise their fees so high that they would no longer be competitive in the market for audit services (Dusenbury et al., 2000).

Auditors offer an opinion on how fairly the financial statements of the hiring company reflect their financial reality (Goldman & Barlev, 1974). Auditors base this opinion on an assessment of the audit evidence that they gather (Canadian Institute of Chartered Accountants, 2008, section 5025.53). Auditors are also responsible for deciding how much audit evidence they need to gather (Canadian Institute of Chartered Accountants, 2008, section 5025.53). But auditors are not permitted to just arbitrarily decide that they have gathered enough audit evidence. They are required to follow their professional standards – the Generally Accepted Auditing Standards (Goldman & Barlev, 1974). These Generally Accepted Auditing Standards require that the amount of evidence to be gathered is based on the level of risk that there is an error that matters (a material misstatement) in the financial statements (Canadian Institute of Chartered Accountants, 2008, section 5025.55 & section 5141.102). Basically, it is not a problem if there is an error of \$300 in the statements, because it is too small an amount to make a difference to those who are using the statements. For large companies, the dollar amount may be much larger, but it is always limited to the amount that would make a difference to an informed

user of the statements (Canadian Institute of Chartered Accountants, 2009, section 1000.17).

Thus one key requirement of the Generally Accepted Auditing Standards is that the auditors base their opinion on audit evidence (Canadian Institute of Chartered Accountants, 2008, section 5025.53). Another key requirement is that more audit evidence needs to be gathered for a company that has a higher risk of a material error in their financial statements than for a company that has a lower risk of a material error in their financial statements (Solomon & Shields, 1995). Generally, the inventory – the product that is ready to sell – is a significant part of the value in the financial statements of a company. This inventory may be made up of electronic equipment that could become obsolete if another company produces a better model. This inventory may also be made up of food stuffs that are perishable, like lettuce. In both these cases, there is a higher risk that the value of the inventory on the financial statements is incorrect than in the case where the inventory is made up of brooms and dustpans, which are unlikely to degrade or become obsolete. More audit evidence would be required for the firm with the electronic equipment and the firm with the perishable food stuff than for the firm with the cleaning supplies in their inventory because the risk is higher that the value of the inventory may be incorrect.

A third key requirement of the Generally Accepted Auditing Standards is that auditors are required to be skeptical (Canadian Institute of Chartered Accountants, 2008, section 5090.05). They are not supposed to believe or disbelieve, [trust or distrust] the

firms that hire them (Canadian Institute of Chartered Accountants, 2008, section 5090.07). They are supposed to base their opinion on the audit evidence they have gathered instead (Canadian Institute of Chartered Accountants, 2008, section 5025.53). If the audit evidence supports a good opinion of the financial statements (a clean opinion), then it is given (Canadian Institute of Chartered Accountants, 2008, section 5025.11). If the audit evidence does not support a good opinion, more evidence is gathered until it is clear what would have to change on the financial statements so that they would fairly represent the hiring company's financial position (Solomon & Shields, 1995). Should the hiring firm not make these changes to the financial statements, the auditor would issue a report that says the financial statements do not fairly reflect the financial reality (there is a significant departure from generally accepted accounting procedures - GAAP) (Solomon & Shields, 1995).

To recap, auditors are a group of professionals who are crucial to the smooth functioning of the capital markets (Levitt, 2000). They are required by their professional standards to be skeptical (Canadian Institute of Chartered Accountants, 2008, section 5090.05) and base their assessment on audit evidence (Canadian Institute of Chartered Accountants, 2008, section 5025.53). Thus the amount of trust they have in their client should be irrelevant to audit decisions.

2.4 Trust

Next I will address the question, “What sort of effect *could* trust have on audit decisions?” but first, I need to expand the definition of trust that I am using.

Earlier, I defined trust as an attitude that reflects a person’s beliefs about the trustworthiness of the trusted person (Govier, 1994) and I said that trust was manifested behaviorally as “...the willingness to accept vulnerability based on positive expectations about another’s intentions or behaviors...” (McEvily et al., 2003, p 92). I’m going to expand the definition of trust to “...*the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.*” (Mayer et al., 1995, p 712) for several reasons.

First, it is difficult to differentiate between the factors that contribute to trust, trust itself and the outcomes of trust (Kee & Knox, 1970; Mayer et al., 1995). The expanded definition of trust above and the associated integrated model of trust clearly differentiate between the antecedents of trust, the concept of trust itself and the outcomes of trust thus clarifying that someone’s trustworthiness is an antecedent to trust, not trust itself (Mayer et al., 1995).

Second, there is some evidence that trust depends on more than a belief about the trustworthiness of a person (S. Moore, Shaffer, Pollack, & Taylor-Lemcke, 1987). Belief in the trustworthiness of the person is important and is part of the decision to trust, but it is not the only antecedent to the decision to trust or not (Mayer et al., 1995). A general

willingness to trust, a propensity to trust, is a trait that describes a generalized expectation, not an expectation anchored to a specific individual (Mayer et al., 1995) and it may also affect the level of trust and thus risk-taking behavior (S. Moore et al., 1987), especially in cases where little or nothing is known about the trustworthiness of the person (Mayer et al., 1995).

Thirdly, trust does not have to be manifested behaviorally to exist. Because this expanded definition of trust differentiates among the antecedents of trust, trust itself and the consequences of trust, it is logical to talk about trust as a separate entity from its behavioral manifestations (Mayer et al., 1995). Trust may lead to risk-taking behavior, but it also can exist without any behavioral outcome (Mayer et al., 1995). There is a “fundamental difference” between trust and its consequences – risk-taking behavior – and this difference is that with trust one is “willing” to assume risk; whereas with risk-taking behavior, one is “actually” assuming risk (Mayer et al., 1995, p 724).

Now that we’ve made the distinctions between the antecedents, trust itself and its behavioral consequences, we need to talk about the interrelationship between risk and trust before we finally talk about the effect that trust could have on decisions.

The first thing that needs to be said is that trust is irrelevant if there is no risk (Chiles & McMackin, 1996). If you know that you can depend on someone 100%, then there is no uncertainty about whether they will do what is important to you. (The same argument applies to depending on someone to not do something to hurt you.) Since there is no

uncertainty about whether they will let you down or not, there is no need for you to be vulnerable to them. Thus there is no need for you to trust them as trust (by definition) is a willingness to be vulnerable to the actions of the other person. This argues that trust is only relevant if there is some risk in the situation.

But it is not enough for a situation to be risky. It has to be a certain type of risk – the type of risk that can be influenced by the actions of a person (Mayer et al., 1995; Zand, 1972). Some examples may make this distinction clearer. The first example is about a type of risk that will not be influenced by trust. When you are betting on the outcome of a throw of the dice, the outcome is random (assuming the dice are fair) and thus not subject to the influence of any individual. Since an individual cannot influence the throw, he or she can neither act in your interests nor against your interests. Again, since their actions have no influence on the throw, you cannot be vulnerable to them. There is no need for you to trust them as trust (by definition) is a willingness to be vulnerable to the actions of the other person. This argues that trust is only relevant if there is a certain kind of risk in the situation – a type of risk that another person can influence by his actions which could either be helpful to you or be to your disadvantage.

A second example is of a type of risk that can be influenced by the actions of another person. If you are coauthoring an article and depending on a colleague to write the literature review, you are vulnerable to their actions. If they write their section in the required time frame, then the project is on track. However, if they are late, do not write their section at all, or write something that cannot be used, then you have been

inconvenienced. You would need to delay the submission of the article, write the section yourself or ask someone else to write it. This is an example of a type of risk that will be influenced by trust. In this case you are dependent on the other person's actions and these actions are important to you. As well, the other person may live up to your expectations, or they may not. The other person has an influence on an outcome that is important to you. In this case, you may decide to trust the other person or you may not.

To summarize the relationship between risk and trust, if there is no risk in a situation (Chiles & McMackin, 1996), or the risk in a situation is unaffected by the actions of another person (Mayer et al., 1995), then trust is irrelevant. However, if the other person has an influence on the outcome and that outcome is important to you, then trust is germane (Mayer et al., 1995).

If you have had bad experiences with a particular co-author in the past, you may decide to not trust them anymore. You are unwilling to be vulnerable to their actions because they have let you down in the past. In this case, you do not trust them in a co-authoring situation.

Alternatively, you may not have any experience with this particular co-author and be willing to trust them in this situation. But will you actually invite them to co-author with you? According to the integrated model of trust, that will depend on how much risk you perceive in the situation and how much you trust the other person (Mayer et al., 1995). Basically, if the amount of trust is sufficient to overcome the amount of perceived risk in

the situation, then the outcome of this trust is an increase in the amount of risk that you will take (Mayer et al., 1995; Schoorman, Mayer, & Davis, 2007). Again, examples may help make this distinction clearer.

I'll start with a case where the perceived risk is high and the amount of trust in your colleague is high as well. To make the perceived risk inherent in the situation high, let's say that a decision about your tenure is imminent and you are one publication short of the number you need for tenure. This is a situation that is very important to you and the consequences of failing have a high cost. To make the amount of trust in your colleague high, let's say that you have worked with this person over the last five years and her work has consistently been good; high quality and on time. If the high trust you have in your colleague is higher than the perceived risk inherent in the situation, then you would invite the colleague to co-author the article. However, if the high trust you have in your colleague is lower than the perceived risk inherent in the situation, then you would not invite the colleague to co-author the article. Note that you still have high trust in this colleague, but this trust does not translate into risk taking behavior. Naturally, if you only had a low level of trust in this colleague, you would not invite her to co-author the article in this situation where the perceived risk is high.

Interestingly, you may also be influenced by your trust of another person even when that trust is not very high. Say, you have just met the new secretary for the department and she is frazzled because of her new job and forgot her wallet at home. Would you lend her five dollars for coffee? Here your trust of the new secretary is unlikely to be high

since you know very little about her. This may not stop you from lending her five dollars because your maximum potential loss is five dollars and that amount of money is not terribly important to you. So if the trust you have in the new secretary is higher than the risk you perceive in the situation, then you would lend her five dollars and risk not getting it back. Obviously, it is extremely unlikely in this low trust situation that you would lend her \$50,000 so she could start up a new business – a situation of much higher risk.

So to summarize, trust will not lead to risk-taking behavior in all situations. But if you trust another person enough to overcome the risk that you perceive in the situation, then this trust *could* be manifested as risk taking behavior by accepting some vulnerability to the actions of the other person (Mayer et al., 1995; Schoorman et al., 2007).

2.5 What do we Already Know About an Audit Professional’s Ability to Overcome Biases?

While trust could affect auditors by increasing the amount of risk that they accept in an audit, auditors are professionals and as professionals are expected to act in the best interest of those dependent on their expertise. Unfortunately, biases and attitudes may affect professionals in ways that allow them to act in their self interest, believing that they are fair, even though their decisions are significantly different from those of unbiased decision makers. For example, auditors could use trust to justify accepting the financial

statements of the firm they are auditing, even though it is risky. In this case, they are acting in their self interest since this pleases the audited firm and improves the chances of getting repeat audit business or other consulting business from the firm. Ultimately, this is an empirical question. So what evidence is available that addresses whether auditors are able to overcome the effects of biases and make objective decisions?

Sarah Bonner reviews the psychological theories on judgment and decision making and discusses the research about the effects of these biases in an accounting setting (2008). She looked at a variety of biases and reported on the research results in an accounting context. For example, she summarizes the effect of irrelevant or proscribed information on audit decisions and finds that they have the effect of moving the estimate away from the correct answer even though the information ought to have no effect. Even though this irrelevant information may have an effect, it does not always do so. Bonner describes an experiment about going concern judgments (a judgment about whether the auditor expects this firm to continue in the foreseeable future (Arens et al., 2005)) and discusses the findings that the irrelevant information only affects auditors at a certain level in the firm (“seniors”) but not at other levels (“partners” or “mangers”). She describes another experiment about the effects of irrelevant information on expectations about what caused a ratio to vary. In this experiment, “seniors” were not affected by the irrelevant information, although others were. Thus Bonner (2008) finds that auditors, like others, are affected by biases, but not consistently.

The above examples are about the effect of irrelevant information on an auditor's decision. Bonner (2008) finds auditors are also affected, although not consistently, with other types of biases. For example, auditors are affected by the repetition of the same information. It increases the perceived truthfulness of the information. They are also affected by the order in which the information is presented. The most recent information has more weight, although these effects seem to depend on the consistency of the clues, the type of judgment and the level of the auditor. Framing, whether the information is presented from a positive or a negative perspective, seems to affect auditors, but to a lesser extent than the general population. Thus there is mixed empirical evidence on whether auditors are affected by biases or whether they can overcome them (Bonner, 2008).

Switching from an empirical perspective to a theoretical perspective, Max Bazerman and his fellow researchers posit that it is not possible for auditors to be unbiased (Bazerman et al., 1997). They argue that 1) professionals are biased, 2) these biased judgments prevent them from making impartial decisions, and 3) to a large extent this bias is due to the fact that auditors are hired by the firms they audit. There is empirical support for the first two propositions; that accounting professionals are biased and these biases prevent them from making impartial decisions. Bonner's summary of the judgment and decision making research described above provides numerous examples of auditing professionals making decisions that are not impartial (Bonner, 2008).

With respect to the third proposition (that accountant's biases are largely due to the fact that they are hired by the firms that they audit), Bazerman et al. believe that the economic incentives of being hired and paid by the firm being audited creates a conflict of interest between the economic success of the audit firm and the obligation to serve the interests of those who use the financial reports that they have audited (Bazerman et al., 1997).

They argue that the firms that are audited are the ones who choose, hire, fire, and pay the auditors and thus the business success of the audit firm depends on satisfying those firms. If the auditors do not lean towards acceptance of the financial statements of the firm they are auditing (as opposed to being independent) they argue that the satisfaction of the firm being audited is damaged and that this will affect the firm's willingness to rehire the firm that audited their financial statements (Bazerman et al., 2002).

There is some empirical support for this idea that being hired by a firm influences decisions. In one experiment, professional auditors were asked to decide whether five ambiguous auditing scenarios complied with generally accepted accounting principles (GAAP) or did not comply with these standards (Bazerman et al., 2002). Half the auditors were asked to suppose that they had been hired by the company in the scenario; the other half that they had been hired by a different company, one that was doing business with the company in the scenario. If being hired by a company has no effect on audit decisions, then there would be no significant difference between the decisions of the two groups of auditors. Interestingly, the auditors who supposed that they had been hired by the company in the scenario were 30% more likely to say that the figures conformed

to the generally accepted accounting principles (GAAP). Even in a hypothetical scenario, these results support the theory that being hired by a firm influences decisions.

In another example of economic incentives affecting a decision, Babcock et al. compared the estimates of participants randomly assigned either as a plaintiff, a motorcyclist, or as a defendant, a car driver, for damages in an accident involving them both (Babcock, Loewenstein, Issacharoff, & Camerer, 1995). The participants in both the plaintiff and the defendant roles were asked to estimate what they thought a neutral third party would estimate as a fair settlement and what they thought the judge would award as a [fair] settlement. The experimental manipulation was assigning the role of plaintiff or defendant *before* the participants read the (identical) information and made the estimates or *after* they had read the material and made the estimates. When the participants did not know their roles when they made the estimates, there is no significant difference between the amounts they thought the neutral third party would estimate as a fair settlement and what they thought the judge would award as a [fair] settlement. However, when they did know they were a plaintiff or a defendant when they read the material and made the estimates, their expectations of the neutral third party and the judge were significantly different depending on their role as plaintiff or defendant. Again, participants' decisions, on average, are affected by the economic incentives of their role and this self interest shows up even in hypothetical situations.

These researchers further believe that these biases are unintentional (Bazerman et al., 1997) and must be able to be justified as fair in some way (Diekmann et al., 1997). There

is some empirical support for the fact that people may need to be able to justify a decision as fair for self serving biases to have an effect.

An experiment by Diekmann et al. (1997) was set in a bicycle manufacturing firm with two divisions. There was a bonus manipulation where 1) division A was awarded 70% of a \$100,000 bonus for its performance and division B was awarded 30% of the bonus by the president, or 2) division A was awarded 30% of a \$100,000 bonus for its performance and division B was awarded 70% of the bonus. There was also a performance manipulation of the results of two divisions. Under Case 1, both divisions had identical increases in net income (\$4.8 million) and market share (7.6%). In Case 2, division A had a higher net income than the other (\$5.33 million vs. \$4.24 million) and a lower increase in market share (6.7% vs. 8.4%). In Case 3, the results for the net income and the market share were reversed - division B had a higher net income than the other (\$5.33 million vs. \$4.24 million) and a lower increase in market share (6.7% vs. 8.4%). Participants were asked to rate the fairness of the allocation of the bonus on an eleven-point scale anchored at the midpoint as completely fair; at one end as completely unfair to one division, at the other end as completely unfair to the other division. Because of a self-serving bias, participants were expected to see the 70:30 split of the bonus as fairer when they received 70% of the bonus. The results supported this. What is interesting about these judgments of fairness is that they are more extreme when there is a basis for justifying them. When the performance results for the divisions were equal in both net income and market share, then there was less self serving bias in the rating of the fairness of the allocation of the bonus. However, when the performance results differed (and thus

could be used to support an unequal split of the bonus), the split of the bonus was rated as more fair by the division which received the 70% portion. The self serving asymmetry in the fairness rating between those who received the 70% and those who received the 30% was more extreme in Cases 2 and 3 where the difference in the results could be used to justify the unequal split. Those in Case 2 rated net income as a more important performance criterion than market share. Those in Case 3 rated market share as the more important performance criterion. In Case 1, where the equal results make it more difficult to justify an unequal split in the bonus, there was more symmetry in the fairness rating between those who received 70% of the bonus and those who received 30%. As these results show, a self serving bias has more effect when it can be justified as fair.

What is especially problematic is that self serving biases have a greater effect under certain circumstances and these circumstances are built into the structure of an auditing situation (Bazerman et al., 2002). First, it is easier to harm someone you don't know than someone that you do know. The more familiar you are with someone, the more important they seem to you (Ashcraft, 2006) and you are less likely to harm someone who is more important to you (Bazerman et al., 2002). As was discussed in the section about professional auditors, auditors have numerous dealings with the firm they are auditing and thus have an ongoing profitable relationship with them (Bazerman et al., 2002). They seldom have any relationship with those who actually use their audit report (Lawler & Rhode, 1976). As a matter of fact, they may not even be able to identify who will actually use it (Arens et al., 2005). Thus it is more difficult for an auditor to harm the firm that is being audited than to harm those who depend on their audit services.

People are more influenced by immediate results more than by effects that are delayed. (Loewenstein & Thaler, 1989). This is the classic procrastinator's problem; the immediate gratification of chatting with a colleague has more influence than the long term goal of writing an article. An audit opinion that says the client's financial statements do not fairly represent their financial position risks losing a client; at the very least it may negatively affect the relationship and this effect happens immediately (Bazerman et al., 1997; Bazerman et al., 2002). The negative consequences of saying the financial statements do fairly represent the financial position of the firm when they do not (such as loss of reputation, litigation over the quality of the audit) are much less certain, and likely to occur far in the future (Bazerman et al., 1997). This heuristic encourages biases in an audit situation.

Thirdly, people find it easier to support a biased decision that someone else has made than to make a biased decision themselves (Diekmann et al., 1997). Auditors, who are offering an opinion on the accuracy of the financial statements of the firm they are auditing, are essentially endorsing or rejecting the figures that the firm being audited has chosen. In this case, they are in the position of supporting the decision that the audited firm made (or not supporting it) and thus are more susceptible to a self serving bias (Bazerman et al., 2002).

Lastly, accounting standards are often flexible and ambiguous which allows auditors to rationalize different judgments (Bazerman et al., 2002). For example, the cost of the

goods that a retailer is selling may be validly based on 1) the price of the oldest items in the inventory, 2) the price of the newest items in the inventory, 3) on a weighted average cost of the items in inventory, or 4) on some other method (Arens et al., 2005). This allows auditors much leeway in making judgments that are biased and in justifying them as fair (Bazerman et al., 1997; Bazerman et al., 2002).

What we have seen so far is that there is a systematic conflict of interest in the audit situation because auditors are hired, paid and fired by the firms that they audit and that these circumstances encourage biases in an auditor's decisions. As Bazerman et al. (1997, p 90) state "...we maintain that audit failures are the natural product of the auditor-client relationship. Under current institutional arrangements, it is psychologically impossible for auditors to maintain their objectivity; cases of audit failure are inevitable, even with the most honest auditors."

This discussion about the effect of biases on audit decisions is heavily weighted towards the conflict inherent in the audit situation and biases based on cognitive processes as opposed to affective influences. One reason for this is that there are few studies that address affect [and attitudes] in the accounting context (Bonner, 2008).

We have also seen that one of the characteristics of self serving biases is that they are more likely to occur when they can be justified (Diekmann et al., 1997). Trust "...centrally involves an affective *attitude*...", and is "...optimism about the goodwill and *competence* of another." (Jones, 1996, p 7). It may provide the necessary justification and

allow auditors to accept a level of risk that may not be supported objectively. This level of risk may then allow the auditors to accept questionable financial statements and maintain the profitable relationship with the firm whose financial statements are being audited.

If trust does provide a mechanism that allows auditors to accept a level of risk that may not be supported objectively there may be a further problem with the objectivity of the auditor's report. Trust is expected to grow as the relationship between the parties grows (Lewicki, Tomlinson, & Gillespie, 2006). They argue that the lowest level of trust is strengthened over time as the parties interact and learn about each other so that they can predict how the other will act. The level of trust may continue to grow as the parties learn about each "...other's reputation, reliability, and integrity;..." (Lewicki et al., 2006, p 1009). Thus if trust does allow auditors to accept an unsupported level of risk, this level of unsupported risk may escalate as the business relationship continues.

To recap, it is an open question whether auditors are able to avoid the influence of self serving biases and whether trust facilitates this influence by providing a justification for the self serving decisions. This is not just an academic concern. As was mentioned earlier, billions are spent annually to provide an objective opinion on the quality of the financial statements of the firms which are being audited. If auditors are influenced by self serving biases and cannot be objective, this calls into question the usefulness of the assurance industry (Bazerman et al., 2002).

It was also mentioned earlier that professional standards require auditors to use their professional judgment, but if professionalism is not sufficient to guard against biases, then the current approach of using professional audits to protect the investing public is flawed and other alternatives need to be investigated (Bazerman et al., 2002).

Chapter 3. Research Objective

The research objective is to assess whether auditing professionals are influenced by their trust of the management of the firms they audit, an inappropriate influence on audit decisions.

Trust is generally considered to be a positive force since it has so many positive outcomes. For example, trust facilitates cooperative (vs. competitive) relationships (Deutsch, 1958), is linked to organizational outcomes such as sales and profits ((Davis et al., 2000) and trust in leadership enhances job performance, organizational citizenship behaviors, organizational commitment, job satisfaction and the amount of belief in information given by the leader (Dirks & Ferrin, 2002). However, if auditors trust client management and this deters them from gathering an adequate quantity or quality of audit evidence, then too much trust may be detrimental. Trust in this context may have serious negative effects. If trust leads to inappropriate behavior, it can become a negative factor in the business relationship between the auditor and the firm being audited. This research contributes to the trust literature by looking at an audit situation where a positive attitude

like trust may lead to negative outcomes thus answering calls by other researchers for more of this type of research (McEvily et al., 2003; Rennie et al., 2010).

Professions claim that they work for the public good instead of for the benefit of the individual professionals (Larson, 1977; Wilensky, 1964). Should this research find that professionals do not act according to their professional standards, it will contribute to the professional literature by showing that there can be a gap between what professionals espouse and what they actually do. As Johnson so clearly expressed it, “While the service ethic may be an important part of the ideology of many professional groups, it is not so clear that practitioners are necessarily so motivated.” (T. Johnson, 1972, p 25).

An answer to this research question may also help audit firms and regulators identify situations which are more vulnerable to influence and to identify regulations, selection or training that could offset these influences. Until the contexts in which auditors are affected and the mechanisms by which auditors are affected are understood, it will be more difficult to mitigate these effects. “Further research into auditor trust and professional skepticism may identify a need to augment existing guidance on professional skepticism to specifically address the trust issue.” (Rennie et al., 2010, p 290).

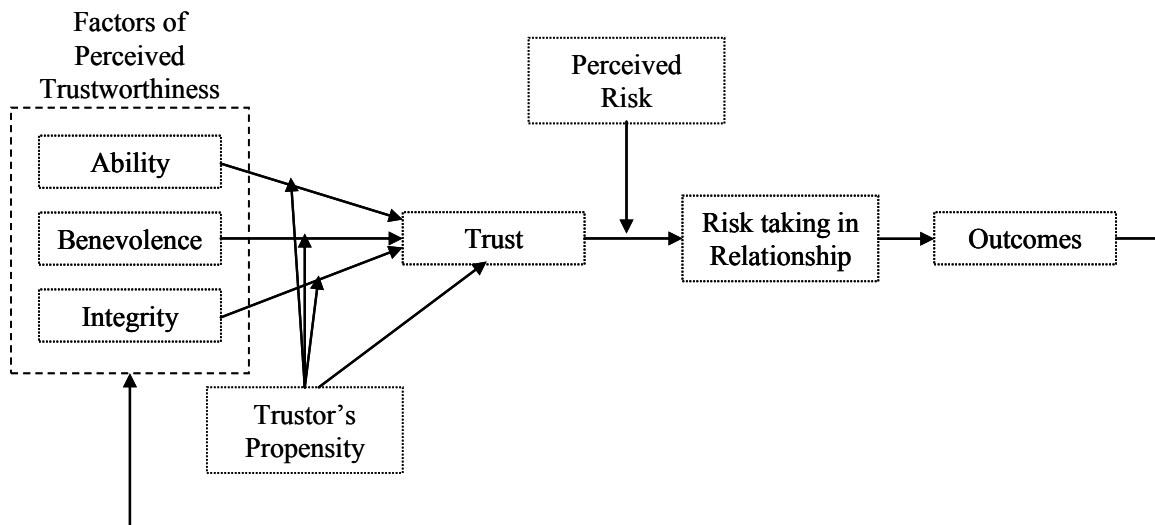
There is theory and evidence that audit professionals can be influenced by clients in inappropriate ways (Bazerman et al., 1997; Bazerman et al., 2002; Bazerman, Moore, Tetlock, & Tanlu, 2006; Heintz & White, 1989; Kennedy, 1995; D. Moore et al., 2006). Some academics perceive this as a problem and call for further investigation of the

circumstances under which auditors are influenced (Heintz & White, 1989; Hirst & Koonce, 1996). Given the importance of auditors to the smooth functioning of capital markets, and given the academic and professional concerns about the effect of trust on auditors; it is surprising that there has been so little study about the effect of trust on auditor behavior. As Gibbins and Swieringa (1995, p 238) put it “Research about how auditors make judgments about audit exposure and how these judgments influence audit process activities and audit risk could make a significant contribution to our understanding of judgments in auditing.” Thus this research could potentially contribute to the accounting literature as well.

My research model is built on two theoretical models; the integrated model of trust (Mayer et al., 1995) and the audit risk model (Arens et al., 2005). The next sections will briefly discuss the Mayer et al. model of trust, the audit risk model, and then how these two models can be integrated to extend the risk portion of the trust model for the auditing context. Once this is done, hypotheses will be developed based on this model and a research design proposed to test these hypotheses.

3.1 Trust

Figure 1. The integrated model of trust (Mayer et al., 1995).



Although there are many models of trust, I am using the Mayer et al. model shown in Figure 1 for two reasons. The first is that there is a great deal of acceptance of it in the literature (Tomlinson & Mayer, 2009). The second reason is that this model explicitly recognizes that the perceived riskiness of the situation affects whether a trusting attitude develops into trusting behavior or not. Although the model recognizes the importance of perceived risk it does not address what risks should be assessed, nor how they should be assessed, nor how risk and trust ought to interact. Thus this model lends itself to integration with the audit risk model.

Trust is “...the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to

the trustor, irrespective of the ability to monitor or control that other party. ” (Mayer et al., 1995, p 712).

Trust is an attitude, a willingness to accept risk. It is neither the behavior of actually taking the risk itself, nor the perceived trustworthiness of the other person (Mayer et al., 1995).

3.1.1 Trustworthiness. The integrated model of trust posits that one individual’s trust of another is based on his or her propensity to trust and how trustworthy he or she perceives that other to be (Mayer et al., 1995). As well, the *trustworthiness* of the other is composed of three factors; ability, integrity and benevolence (Mayer et al., 1995).

Ability is the competence and expertise that allow the trusted individual to function well in the specific situation (Mayer et al., 1995). Ability is specific to a situation because people have different levels of ability in different situations. It is difficult to see how one would trust a person who is neither capable nor competent, but it is unclear what level of ability a person must have before he or she is trusted in a specific situation (Mayer et al., 1995). In a mentoring situation, knowing the profession, the company, having social skills and political savvy would be examples of some of the needed skills (Mayer et al., 1995).

Benevolence suggests a “positive orientation” towards the trusting person (Mayer et al., 1995, p 719). It implies that the trusted person is concerned about your needs and

desires not just his or her own benefit (Mayer et al., 1995). A benevolent mentor may spend his or her time and energy to help the employee, may protect the employee from the consequences of his or her actions even though this mentoring may prevent him or her from doing other things such as putting more effort into his or her own job which may be more beneficial to the mentor (Mayer et al., 1995).

Integrity has two components. The first is that the other's values are acceptable to the trusting person. The second is that the trustworthy person adheres to those values (Mayer et al., 1995). It comprises factors like consistency, fairness, openness. An assessment of integrity may be based on personal experience, on seeing how the individual deals with others, on congruence between what he or she says and does (Mayer et al., 1995). It is not enough to know the other's values. The values need to be acceptable. In the mentoring situation, a mentor who is too straight-laced may blow the whistle for an action that is generally considered innocuous such as using the company phone for local personal calls. In this case, the mentor's values (being out of line with commonly accepted values) would be less acceptable to the trusting person than a mentor who has less stringent values and who may be a more practical choice as a mentor.

The other's perceived trustworthiness is posited to depend on some combination of these three characteristics of the other person, ability, benevolence and integrity (Mayer et al., 1995). There is empirical support for this relationship. Mayer and Davis (1999) found that implementing a more acceptable performance appraisal system increased employee's perceptions of the management's ability, integrity and benevolence and that

this increase in trustworthiness affected employee trust in management. Mayer and Gavin (2005) studied eight plants and headquarters and found that perceptions of ability, integrity and benevolence were significantly related to trust in both plant managers and the top management team (except that the integrity of the top management team was only marginally significant with respect to trust of the top management team). Davis, Schoorman, Mayer and Tan (2000) compared nine restaurants and found that employee perceptions of a general manager's integrity and benevolence were positively related to their trust of him or her. However, they did not find that the general manager's ability predicted trust (Davis et al., 2000).

3.1.2 Propensity to trust is an individual's generalized trust of others (Rotter, 1967). This personality trait may develop as the individual takes specific experiences of trusting others and generalizes them so that there is a broad trust of others that is consistent and stable across situations (Rotter, 1971). For example, a child raised by caring parents will generally develop a belief that others are trustworthy. One's propensity to trust affects how one interacts with the environment and those with a relatively low propensity to trust are at a disadvantage (Hardin, 1993). Hardin argues that people who have too high a propensity to trust take more risks than are justified in the environment. Because they are taking too many risks, they are let down by those they trust. However, this experience of being let down allows them to correct their propensity to trust downwards, until they are trusting at a level that is appropriate for their environment. By contrast, those who have too low a propensity to trust for their environment take fewer risks and thus forego opportunities for cooperative ventures. They are limited to what they can accomplish on

their own. Since they avoid the risks, they miss the chance to see the cooperative activity work out well and without this positive outcome, there is no reason to increase their propensity to trust.

Direct effects. Those with a low propensity to trust are less likely to trust another and those with a high propensity to trust are more likely to trust another leading to an expected positive relationship between propensity to trust and trust. Mayer, Davis and Schoorman (1995) posit that *propensity to trust* affects an individual's trust both directly and indirectly. They expect it to affect *trust directly* when nothing is known about the other person. If you don't know anything about the trustworthiness of the other, you cannot take it into account and thus depend on your generalized trust of others. Rotter (1971) gives several examples of how propensity to trust affects trusting behavior.

Gill, Boies, Finegan and McNally (2005) extend the Mayer et al. model of trust by hypothesizing that propensity to trust would also affect trust directly when information about the trustworthiness of the other is ambiguous. For example, they manipulated trustworthiness as high, low and mixed (some high and some low) and found that propensity to trust did not have a significant effect on trust when trustworthiness was clear (either high or low) but did have a significant effect when trustworthiness was mixed providing empirical support for their hypothesis (Gill et al., 2005). Thus propensity to trust is expected to be positively related to trust in ambiguous situations as well as in situations where nothing is known about the other person.

Indirect effects. As well as the direct link between propensity to trust and trust, Mayer, Davis and Schoorman (1995) also posit that *propensity to trust* affects an individual's *trust indirectly* by moderating the effect that the other's trustworthiness has on trust. They do not discuss why this occurs, but it may be due to attribution. If you have a higher propensity to trust, you may be more willing to give others the benefit of the doubt and interpret their ambiguous behavior generously. Lewicki and Bunker (1996) use similar logic to explain their intermediate level of trust. They use the example of A and B meeting and A being a half hour late. "...B will tolerate A's behavior to the degree that she can muster some adequate explanation for B's behavior – "he must have gotten stuck at work,"..." (Lewicki & Bunker, 1996, p 122).

There is empirical support for the theorized positive correlation between the propensity to trust and trust. There is a meta-study which finds that propensity to trust is correlated to trust in the context of trust in leadership (Dirks & Ferrin, 2002). Yamagishi, Cook and Watabe (1998) find that propensity to trust is linked to risk taking behavior. These latter studies link propensity to trust with trusting behavior, but they do not include measures of all the variables; trust, propensity to trust, and trusting behavior, so the relationships between the variables are not measured directly.

3.1.3 Risk taking behavior. Trust is not seen as a behavior, but an attitude (Mayer et al., 1995). Risk taking behavior depends on the level of trust but the relationship between trust and risk taking behavior is moderated by the trustor's perception of the level of risk in the situation (Mayer et al., 1995).

Trust is argued to lead to risk taking behavior directly or indirectly (Dirks & Ferrin, 2001). Beliefs about an individual's ability, integrity and benevolence may directly affect one's willingness to take risks. I may be more willing to share information that is potentially negative for me when I believe the other is benevolent. I am more likely to cooperate and work towards group goals when I believe the others have integrity and will reciprocate with their own efforts towards the same goals (Dirks & Ferrin, 2001).

Indirect effects. Dirks and Ferrin (2001) also argue that trust could work indirectly, by affecting either the trustor's *interpretation of past behavior* or the trustor's *expectations about future behavior*. In these cases, trust modifies the effect of other factors on risk taking behavior. Because behaviors can be ambiguous, trust "...provides a perspective from which to interpret the action." (Dirks & Ferrin, 2001, p 459). High trust increases the chances of cooperative behavior by reducing the uncertainty about the meaning of the other's actions. With low trust, more effort may be channeled into self-protective or competitive behavior and not into risk taking behavior (Dirks & Ferrin, 2001).

When an individual chooses to act on trust with risk taking behavior, there will be an outcome which will have a positive or negative effect on the trusting individual. The feedback loop in the model posits that trust is enhanced or declines indirectly through the perceived ability, benevolence and integrity, depending on whether the outcome is good or bad (Mayer et al., 1995).

3.1.4 Perceived risk. According to Baird and Thomas (1985), there is a difference between risk and uncertainty. Risk deals with cases where the consequences and the probabilities of the decision alternatives are known and uncertainty deals with cases where the problem, the consequences and the probabilities of the alternatives are not completely known. However, having made the distinction, they note that there is much overlap in the usage of the terms (Baird & Thomas, 1985). I will continue to use the term risk, even though I refer to decisions where the full consequences and probabilities are unlikely to be known.

Sitkin and Weingart (1995, p 1575) define risk perception as “...an individual’s assessment of how risky a situation is in terms of probabilistic estimates of the degree of situational uncertainty, how controllable that uncertainty is, and the confidence in those estimates (Baird & Thomas, 1985; Bettman, 1973).” Mayer, Davis and Schoorman (1995), although using the same term, do not use perceived risk in this way. They define perceived risk as “...the trustor’s belief about likelihoods of gains or losses *outside of considerations that involve the relationship with the particular trustee.*” (Mayer et al., 1995, p 726). In this way, they emphasize the difference between the effects of trust on risk taking behavior and the effects of other (non-relationship) risks on risk taking behavior.

They propose that risk taking behavior occurs when the level of trust is greater than the level of perceived risk in the situation (Mayer et al., 1995).

While this model provides a good basis for looking at how perceived risk interacts with trust and affects risk taking behavior, there has been little explanation of what types of risk should affect risk taking in the relationship, how these risks are identified and assessed and how risk and trust ought to interact. I contend that the audit risk model will help understand this process in the auditing context, thus answering the call for studies in particular contexts which better explain the antecedents and consequences of trust (Schoorman et al., 2007).

3.2 Audit Risk

An auditor looks for reasonable assurance that the firm's financial statements do not contain a material misstatement (Canadian Institute of Chartered Accountants, 2008, section 5090.09) - something that would cause a reasonable investor to change his or her investment decision (Canadian Institute of Chartered Accountants, 2008, section 5130.05). Auditors do this by assessing the risk that there are errors in the financial statements (Arens, Loebbecke, Lemon, & Spletstoesser, 2003). For example, fast changing industries or inexperienced management would increase the risk that there are errors in the financial statements. Depending on the level of risk of errors, auditors plan how much audit evidence is needed and what type of evidence is appropriate so that their risk of missing a material misstatement in the financial statements is reasonably low (Arens et al., 2003). Auditing compares what management has done when preparing the financial statements to a normative standard of what ought to have been done. This

standard is called Generally Accepted Accounting Principles (GAAP) and is documented in the handbooks of the Canadian Institute of Chartered Accountants.

3.2.1 Audit risk is the risk that an auditor says that the client's financial statements fairly represent the business when they do not (Canadian Institute of Chartered Accountants, 2008, section 5095.08). Assessing audit risk is the main method to balance the trade-off between an efficient audit and an effective audit (Dusenbury et al., 2000). If the audit risk is set too loosely, then fewer audit procedures are likely to be carried out, the audit is likely to be cheaper, but the business risks for the auditor may be higher. These include consequences such as "...litigation, sanctions imposed by regulators, insurance, and impaired professional reputations." (Beaulieu, 2001, p 86). If the audit risk is set too tightly, then more audit procedures are likely to be carried out, the audit tends to be more expensive, and the competitive risks of losing business to other audit firms could be higher (Dusenbury et al., 2000).

Audit risk is made up of two components; *client risk* (called risk of material misstatement in the auditing standards) and *detection risk* (Canadian Institute of Chartered Accountants, 2008, section 5095.10). Client risk is the risk that there is an error in the client's financial statements (Canadian Institute of Chartered Accountants, 2008, section 5095.10). This risk is related only to the client and is independent of the audit and the auditor. Or to say this in another way, client risk is assessed but not affected by the auditor (Arens et al., 2003). Detection risk is the risk that the audit procedures do not catch an error in the client's financial statements (Canadian Institute of Chartered

Accountants, 2008, section 5095.16). This risk is determined by the type of audit procedures chosen by the auditor, the amount of audit evidence and when it's acquired, and on the judgment of the auditor when interpreting the audit evidence (Canadian Institute of Chartered Accountants, 2008, sections 5095.16 and .17). In other words, auditors design their audit procedures in order to get the level of detection risk needed. And the level of detection risk that can be tolerated depends on the targeted level of audit risk given the level of client risk (Arens et al., 2003).

According to Solomon and Shields, (1995) auditing is about assessing risk. Audit risk (concluding that the financial statements do not contain errors when they actually do) is a function of three types of risk: 1) the inherent risk that misstatements will arise (a client risk), 2) the control risk that the firm's control systems will not detect the misstatement (a client risk) and 3) the detection risk that the audit does not detect misstatements (Solomon & Shields, 1995). This audit risk model is generally stated as

Audit risk = Inherent risk x control risk x (Planned) Detection risk (Arens et al., 2005).

3.2.2 Inherent risk. The inherent risk is an assessment of the risk due to factors such as:

- the nature of the client's business (e.g. loan repayment accounts are riskier when a lender makes unsecured loans than when they make only secured loans),
- the nature of the client's products and services (e.g. inventory accounts are riskier for an electronics manufacturer than for a utility),

- the nature of the data processing systems (e.g. customized software is generally more error prone than standard packaged software),
- the amount of data communications (e.g. complex, distributed data processing is generally more error prone than simple, central data processing),
- the integrity of management (e.g. a manager who may be overclaiming on expenses to reduce the firm's income taxes),
- client motivation (e.g. when a reason exists which makes it advantageous to misstate financial statements such as management bonuses based on profitability),
- results of previous audits (e.g. problem areas in the company generally had errors in previous audits, errors in prior years are considered a sign of increased inherent risk),
- nonroutine transactions (e.g. a nonroutine event such as a merger or fire damage are considered riskier because clients have less experience with them and are more likely to make errors),
- judgment required for accounting (e.g. estimates such as loss reserves and warranty liabilities are riskier since they are complex and it is easy to do them incorrectly),
- type of assets (e.g. inherent risk increases when company assets can be easily converted for personal use) (Arens et al., 2003).

3.2.3 Control risk is an assessment of the effectiveness of the firm's control systems. It is the risk that a misstatement that occurs will not be prevented, or detected and

corrected by the firm (Canadian Institute of Chartered Accountants, 2008, section 5095.14). It takes into account factors such as loopholes in the systems (e.g. passwords written down at computer terminals) or the ease with which someone can get around the control systems (e.g. the same person receives cash and records the cash). As noted by Arens, Loebbecke, Lemon and Spletstoeser (2003), control risk is a client risk since management is responsible for setting up the controls. Even in a firm with well-designed controls, control risk is not eliminated for the following reasons. First, there is a relationship between the cost of controls and their benefit and at some point, it will cost more to improve the controls than it is worth. Thus controls are not complete. Second, if controls are not carried out well, they will be ineffective. For example, well-designed control carried out by inadequately trained, incompetent or undependable employees would not be effective in terms of preventing or identifying and correcting errors in the financial statements (Arens et al., 2003).

3.2.4 Detection risk is a judgment about how much evidence is needed to be reasonably sure to detect material (significant) misstatements and where audit attention should be focused to best detect any misstatements (Solomon & Shields, 1995). Detection risk is determined by the type, timing and amount of audit procedures, and how well these procedures are carried out, and thus is controlled by the auditor (Canadian Institute of Chartered Accountants, 2008, section 5095.17). Some of the different types of audit procedures are an inspection of records or documents, an inspection of tangible assets, observation of others performing a process (such as counting inventory), asking questions, getting confirmation from 3rd parties, re-performing procedures or controls

done by the client and evaluating financial information (Canadian Institute of Chartered Accountants, 2008, section 5300.30-.42). Audit timing affects the riskiness of detecting an error that matters in the financial statement. The most reliable confirmations occur on the balance sheet date because the figures can be confirmed directly. If numbers are confirmed beforehand, the balance sheet figures need to be adjusted for events that occurred after the confirmation (Arens et al., 2003). Lastly, the number of audit procedures performed, the amount of data sampled (Canadian Institute of Chartered Accountants, 2008, section 5300.17), and the quantity of audit evidence gathered (Canadian Institute of Chartered Accountants, 2008, section 5300.07) affect the amount of detection risk.

Detection risk is also affected by how well the auditor carries out the procedure and interprets the results (Canadian Institute of Chartered Accountants, 2008, section 5095.16). One potential problem is that trust in the client may increase the amount of detection risk that an auditor is willing to take as posited by the integrated model of trust. If this is so, then auditors may reduce their judgment of the amount of audit procedures and evidence needed which would increase the risk of not detecting a misstatement that exists.

3.3 An Integrated Model of Trust and Audit Risk

3.3.1 Perceived client risk. The first step when integrating the audit risk model into the model of trust is to replace perceived risk with perceived client risk. This is the only

risk in the audit risk model that the auditor does not affect. It is related to the client and independent of the auditor and the audit. It is the situational risk in the audit and needs to be assessed by the auditor in order to plan the audit procedures. As described in the previous section, perceived client risk includes the two factors, the inherent risk that misstatements will arise and the control risk that the firm's control systems will not detect the misstatement.

The second step is to look at the relationship between the factors of perceived trustworthiness, the trustor's propensity to trust and trust itself. These relationships are expected to hold as hypothesized in the Mayer et al. (1995) model of trust. Supporting details of the integrated model of trust were described in previous section 3.1.

Hypothesis 1) Perceived trustworthiness (ability and benevolence) of the client is positively related to an auditor's trust of the client.

Hypothesis 2) Trustor's propensity to trust is positively related to an auditor's trust of the client.

Hypothesis 3) Auditors' propensity to trust moderates the relationship between the perceived trustworthiness (ability and benevolence) of the client and an auditor's trust of the client. As trustors' propensity to trust increases, so will the effect of the perceived trustworthiness factors on trust.

The third step to integrating the audit risk model into the model of trust is to look at the relationship between the factors of trustworthiness (ability, benevolence and integrity) and the perceived client risk.

3.3.2 Ability. Management's (perceived) ability is expected to influence (perceived) client risk for several reasons. First, it is management's responsibility to set up the accounts, the procedures to record business transactions against the accounts, to prepare the financial statements so that they reflect the firm's actual financial position, and to set up the internal controls to prevent or detect and correct problems with the financial statements (Arens et al., 2003). Thus management's ability will affect the quality of these procedures. For example, if a manager does not understand that employees need help to deal with a merger properly, he or she is unlikely to provide a budget for training or consultants to record the effects of the merger in the financial statements. Similarly, a manager who doesn't believe that employees can make mistakes or steal from the firm, will not appoint someone to be responsible for seeing that appropriate control procedures are in place to prevent or detect these potential problems. Secondly, when management is perceived as competent, this perception is likely to affect expectations about future behavior (cf. Dirks & Ferrin, 2001). For example, if previous audits uncovered few misstatements in past financial statements, the perceived competence of these managers leads to expectations of few misstatements in current financial statements and thus a lower inherent and control risk. Lastly, professional standards require auditors to consider management's competence when assessing client risk (Canadian Institute of Chartered Accountants, 2008, sections 5141.104, & 5135.104). Because of these expectations that

perceived management ability should affect perceived client risk, I propose a causal relationship between perceived client ability and perceived inherent and control risks.

Hypothesis 4) Perceived ability is positively related to a lower assessment of the perceived client risk.

There is very limited, mixed, confounded empirical evidence for the hypothesized relationship between perceived ability and perceived client risk. Bernardi (1994) manipulated client competence and integrity together to test what effect they have on an audit decision (whether the balance in an inventory account was fairly stated or not). In the low competence, integrity manipulation, they found that more experienced managers with high moral development were more likely to say that the inventory was not fairly stated providing limited support. Unfortunately, they also found these more experienced managers with high moral development were more likely to say that the inventory was not fairly stated in the high competence, integrity manipulation as well. The competence, integrity manipulation had no effect on the audit decision for the other subsamples of auditors. In spite of the mixed evidence, conceptually, the more capable the client management, the more likely they are to put in place effective control procedures which will reduce client risk. A research design that allows the effect of perceived ability to be separated from these other confounds, may contribute to resolving some of these problems.

3.3.3 Benevolence. Management's (perceived) benevolence is expected to influence (perceived) inherent risk because it reduces the risk of fraud with its potentially deleterious effect on the auditor's reputation and litigation exposure if not detected. Fraud is the "...intentional act...involving the use of deception to obtain unjust or illegal advantage." (Canadian Institute of Chartered Accountants, 2008, section 5135.006). Three conditions are generally present when fraud exists: "...an incentive or pressure to commit fraud, a perceived opportunity to commit fraud, and an ability to rationalize the fraudulent action." (Canadian Institute of Chartered Accountants, 2008, section 5135.051). There could be many different incentives for client management to commit fraud. Some that have been identified are management bonuses or stock options that are contingent on meeting performance targets, to avoid operating losses that could encourage a hostile takeover, the need for financing which is harder to get if profitability is falling, and the manipulation of a higher stock price so that the cost of a takeover paid for in stock is lower (Canadian Institute of Chartered Accountants, 2008, section 5135, Appendix A). Management, especially senior management, often has the opportunity to commit fraud since they can override control procedures and instruct employees to act counter to standard procedures (Canadian Institute of Chartered Accountants, 2008). Since standard control procedures are set up to prevent or detect and correct fraud, the ability to override them provides an opportunity to commit fraud. The last condition is the ability to rationalize the fraudulent action and this is where the benevolence (or more accurately the lack of benevolence) of client management may have an effect on the risk of fraud. "Benevolence reflects a belief that the other party holds the trustor's interests as important. Would the other party go out of his or her way to protect the trustor's interest

or to take care of the trustor?” (Mayer & Norman, 2004, p 228). A benevolent manager, by definition, is not expected to act in his or her self-interest only. The interests of the other are expected to be taken into account. So while a non-benevolent manager might be able to rationalize fraudulent entries in order to increase his or her bonus, a benevolent manager is less likely to be able to rationalize this same behavior because of the potential harm this action may have on other’s interests. I argue that 1) a benevolent manager is less likely to be able to rationalize a fraudulent action, 2) that the decreased ability to rationalize the fraud reduced the occurrence of fraudulent actions and 3) the reduction in fraudulent actions reduces inherent risk of a material misstatement in the financial statements.

The above argument basically says that if client management is benevolent, their benevolence will reduce the likelihood that they can rationalize fraud, and this lesser ability to rationalize fraud will reduce the likelihood that they actually commit fraud. This argument would hold when discussing client management’s benevolence towards the firm’s shareholders. Benevolent management would not commit fraud as it could harm the shareholder’s financial assets. It would also hold when discussing client management’s benevolence towards the firm’s auditors. Benevolent management would not commit fraud as it could, potentially, harm the auditor’s professional reputation and thus the auditor’s livelihood. Thus, I propose a causal relationship between perceived benevolence and perceived inherent risk.

Hypothesis 5) Perceived benevolence is positively related to a lower assessment of the perceived client risk.

3.3.4 Integrity. Management's (perceived) integrity¹ is expected to influence (perceived) client risk because it is critical for the financial reporting process. "Honesty and integrity on the part of management and of those charged with governance are critical for the effective operation of the financial reporting process." (Canadian Institute of Chartered Accountants, 2008, section 5090.07). Management honesty and integrity are considered so basic to audit risk that if there is an insignificant misstatement in the financial statements that may involve fraudulent actions by higher-level management, the auditor is to 1) reevaluate client risk, 2) reconsider the reliability of evidence that has already been gathered and 3) reassess the adequacy of the type, timing and amount of audit procedures (Canadian Institute of Chartered Accountants, 2008, section 5135.088). Integrity is also considered one of the "essential elements that influence the effectiveness of the design, administration and monitoring of controls." (Canadian Institute of Chartered Accountants, 2008, section 5141.069). In extreme cases of concern about client management integrity, auditors may decline to audit the client since the client risk is too high (Canadian Institute of Chartered Accountants, 2008, section 5141.108). Because of these expectations that perceived management integrity should affect perceived client risk, I propose a causal relationship between perceived client integrity and perceived inherent and control risks. In summary, the audit risk model supports a causal relationship between perceived trustworthiness (ability, benevolence and integrity) and perceived client risk.

¹ I assume that perceived integrity includes honesty as one of the acceptable values.

3.3.5 Relationship and Non Relationship Risk. This perceived client risk, as described earlier, includes both relationship type risks (such as the integrity of management) and non relationship types of risks (such as the stability of the industry and absence of control procedures) (Canadian Institute of Chartered Accountants, 2008). However, perceived risk in the Mayer, Davis and Schoorman (1995) model is limited to non relationship risks in order to separate out the effects of trust on risk taking behavior. In order to integrate these two models, either client risk could be split into relationship and non relationship risk in order to show their effects separately or both relationship and non relationship risk could be left in client risk, noting that the effect of trust on risk taking behavior may be reduced because of the indirect effect of relationship risk through client risk.

I have chosen to leave the relationship and non relationship risks in the perceived client risk for several reasons. First, inherent risk and control risk are defined in the auditing standards to include both types of risk and they have a legal standing in terms of defining a proper audit because they are part of the generally accepted auditing standards (GAAS). Secondly, trust is separated out in the model and so its incremental effect can be assessed even though client risk includes relationship type risks. Thirdly, non relationship risks are included in perceived client risk and these can continue to drive the moderating effect of perceived risk. Lastly, the inclusion of relationship risk with non relationship risk in client risk will work against the additional effect of trust on risk taking and so will be a stricter test of the hypothesized results.

3.3.6 Audit Plan. The fourth step to integrating the audit risk model into the model of trust is to replace the risk taking behavior in the Mayer, David and Schoorman (1995) model with the extent of audit testing in the audit plan. The audit plan in this model is defined as the nature, timing and extent of the auditor's procedures. As described earlier, the nature, timing and extent of audit procedures directly affect the detection risk - the risk that the audit procedures do not detect a material misstatement in the financial statement. The audit plan is the only part of the audit risk that the auditor controls and, as such, determines the range of risk taking behavior that the auditor can take in the audit context.

Hypothesis 6) Trust in client management is negatively related to the extent of audit testing. (Normative audit standards prohibit this effect.)

There appears to be little direct evidence supporting a relationship between trust in client management and the extent of audit procedures planned. However, in an audit context (when evaluating the accuracy of the explanation that a client gave for a change in finances), "Eight auditors [out of nineteen] indicated that they would reduce the amount of corroboration for an explanation as long as they had an indepth knowledge of the business and trusted the client." (Hirst & Koonce, 1996, p 473). Although trust in this research is confounded by knowledge of the business, these results are consistent with the hypothesized relationship between trust and the amount of audit procedures planned.

Additionally, there is considerable evidence in other contexts supporting the idea that trust increases the amount of risky behavior an individual is willing to take. For example, perception of the accuracy of a partner's information was affected by how much he or she was trusted (Dirks & Ferrin, 2001; Roberts & O'Reilly, 1974). Similarly, when clients trusted a researcher, his or her recommendations affected the client's decision (Moorman et al., 1992) and when employees trusted their supervisors, they were more likely to accept their decision in conflict situations (Tyler & Degoey, 1996). In the context of group problem solving, Zand (1972) found that groups with high levels of trust disclosed more accurate and complete data, were more influenced by others about goals and methods, and were more willing to be interdependent and less controlling. In each of these situations, the research finds that trust of the other increases the amount of risk the individual is willing to assume.

For each desired level of audit risk, the level of detection risk (and thus audit plan) should be determined by the amount of client risk. Or to put it another way, the auditor uses client risk to solve for the amount of detection risk that can be tolerated, given the targeted audit risk level (Dusenbury et al., 2000). As the client risk increases the extent of audit testing should increase in order to keep the risk of not detecting a material misstatement at an acceptable level (Canadian Institute of Chartered Accountants, 2008, section 5095.17 & 5141.102). Thus a causal relationship is expected between perceived client risk and the audit plan.

Hypothesis 7) Perceived client risk is positively related to the extent of audit testing.

The empirical evidence for the expected relationship between perceived client risk and the amount of audit procedures is mixed. Some research finds this relationship holds. For example, Libby, Artman and Willingham (1985) find that auditors take the features of controls into account and place less reliance on them as the control risk increases. However, other research finds that there is no relationship between client risk and the extent of audit testing (Wright & Bedard, 2000) or that there is a relationship for some risk factors and the nature and extent of audit plans but not for other risk factors (Mock & Wright, 1999). Research also shows that the relationship between perceived client risk and the planned audit procedures can be moderated by competitive pressure on audit fees (Houston, 1999) and by the use of or type of decision aid used in assessing risk factors (Eining, Jones, & Loebbecke, 1997).

Mayer et al. (1995) propose that the effect of trust on risk taking behavior is moderated by the amount of perceived risk in the situation and I keep this expected relationship in my theoretical model as well.

Hypothesis 8) Perceived client risk moderates the relationship between trust and the extent of audit testing. As client risk increases, so will the extent of audit testing required.

3.3.7 Effect of Ability, Integrity and Benevolence on the Audit Plan. Here, I'd like to summarize what the auditing standards say about the effects of ability, integrity and

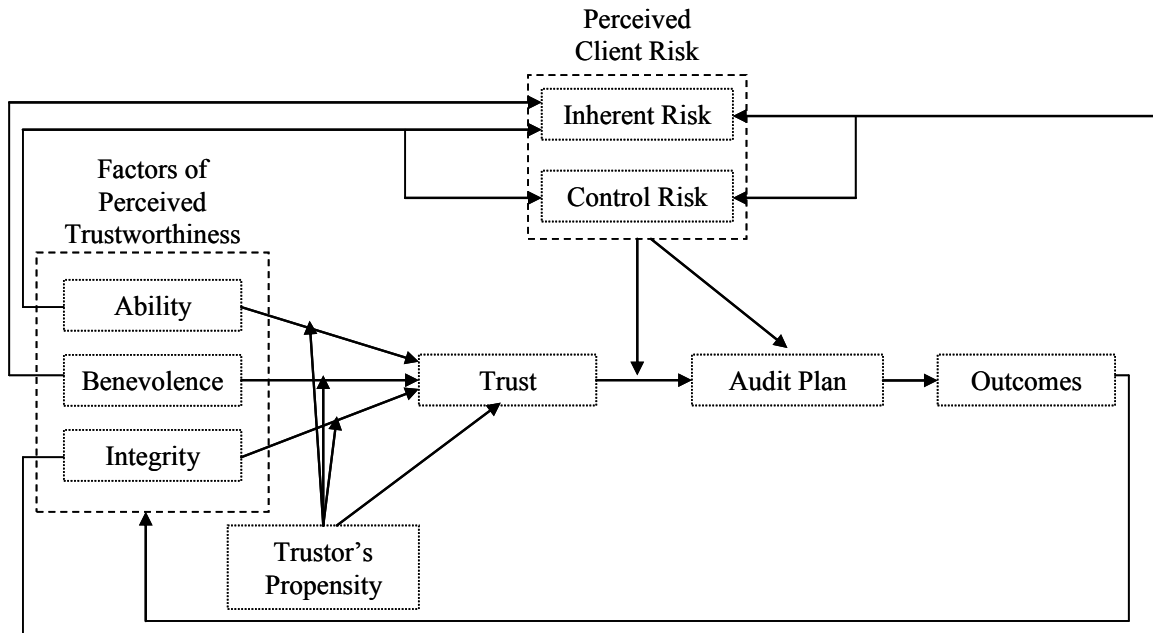
benevolence on the extent of audit testing and contrast that with my model's predictions about their effects.

Auditing standards require auditors to take the ability and integrity of the management of the firm being audited into account when assessing the risk of a material misstatement in the financial statements (Canadian Institute of Chartered Accountants, 2008, section 5135.088 & 104, section 5141.069, 104 & 108). The benevolence of the management is not directly mentioned in these standards. Auditors are also required to base the extent of audit testing they do on the amount of risk of a material misstatement in the financial statements (Canadian Institute of Chartered Accountants, 2008, section 5025.55). Lastly, the auditing standards require auditors to ignore irrelevant attitudes to clients – such as trust – and to base their findings on the audit evidence (Canadian Institute of Chartered Accountants, 2008, section 5025.53 & 5090.05). Thus the normative standards say that ability and integrity ought to affect the level of risk and thus the extent of audit testing through risk; however, trust is not supposed to affect the level of audit testing so their effect on trust should not be carried through to the extent of audit testing. In other words, trust should have no additional effect on the extent of audit testing once risk has been taken into account.

Contrast this with my research model developed in section 3.3 and diagramed below in Figure 2. I expect ability, benevolence and integrity to affect both risk and trust. I also expect the level of risk to affect the extent of audit testing. Unlike the normative

standards, I expect trust to have an effect on the extent of audit testing over and above the effect of risk.

Figure 2. An integrated model of trust and audit risk.



Chapter 4. Overview of Research

4.1 Research Choices

So far, the audit risk model has been integrated into Mayer, Davis and Schoorman's (1995) model of trust creating a combined model of trust and risk that may be more appropriate to the auditing context. However, not all these relationships will be tested in this research project. Looking at the factors of perceived trustworthiness in the audit context, there has been some research on client integrity. For example, Beaulieu (2001)

found that client integrity affected the assessment of client risk when accepting a new client. He also found that auditors compensated for this risk by increasing the amount of audit evidence gathered which created a small but significant increase in the audit fees. Interestingly, client risk fully mediated the influence of integrity on the amount of audit evidence (Beaulieu, 2001). Kizirian, Mayhew and Sneathen (2005) did some research which combined management integrity and their attitude towards reporting, controls and audits. They found that management integrity and attitude towards reporting, controls and audits did not affect client risk when errors in prior years' statements were taken into account. However, even though client risk was not affected, when management integrity was low, auditors used more reliable types of audit procedure, over and above what was explained by the client risk.

Anderson and Marchant (1989) looked at both client integrity and ability. Their research goal was to understand how auditors integrated evidence about the integrity and ability of the people in the firm being audited because "... a critical aspect of the audit social context is in the forming of impressions about auditees. These impressions then influence auditors' evaluations of risk, the selection of audit strategies, and the allocation of audit resources." (Anderson & Marchant, 1989, p 3). Anderson and Marchant did not look at the effect that these impressions about the people in the firm being audited had on the auditor's actual evaluations of risk; however, they did identify behaviors that auditors assessed as extremely honest and dishonest (integrity behaviors) and extremely competent and incompetent (ability behaviors).

In the audit context, there has been less research on client ability (Bernardi, 1994) and no research that I know of on client benevolence. *Thus these two trustworthiness factors, ability and benevolence, will be studied in this research.* This will answer Bernardi's (1994) call for more research on the effect of client competence on audit detection of fraud. Client ability and benevolence are not expected to be restricted by the auditor's client acceptance procedures because these procedures focus mainly on the auditor's ability to actually complete the work. Of the twelve articles covering the Acceptance and Continuance of client relationships and specific assurance engagements (Auditing and Assurance Standards Board, 2008, sections .029 to .040) only two articles refer to the integrity, reputation and attitude of the client firm. Most of the concerns when accepting clients have to do with the ability of the audit firm to do the work in an acceptable way. These other concerns have to do with understanding the client's business and legal environment, having audit staff that are experienced and have the time available for the audit, avoiding conflicts of interest and other topics not dealing with the client's characteristics directly. Also, there is evidence that firms believe that they "...only accept clients with high management integrity..." (Kizirian et al., 2005, p 65), whereas in actual fact "...auditors nevertheless retain clients with a spectrum of management integrity that must be managed within the audit process." (Kizirian et al., 2005, p 65). Client management's ability and benevolence are covered by the same standards as their integrity and so a similar range of client competence and benevolence is expected.

The perceived ability and benevolence of the client management has the potential to affect the inherent and control risk of many financial figures (Canadian Institute of

Chartered Accountants, 2008, section 5141.104 and 5135.019). So the effect of client management ability and benevolence should be detectable at the overall financial statement level and at the level of individual financial figures. I have chosen to look at the effect of client management ability and benevolence at the overall financial statement level in this research. Heintz and White (1989) had already developed a test scenario that assessed the extent of audit testing at the overall financial statement level. Because I chose to work at the overall financial statement level, I can use this Heintz and White test scenario as it is at a compatible level.

4.2 Hypothesis Summary

At this stage I would like to summarize the hypotheses that have been developed. First, I expect auditors to be affected by their trust of the management of the firm they are auditing. When clients have been competent and helpful, I expect auditors to trust them more.

Hypothesis 1) Perceived trustworthiness (ability and benevolence) of the client is positively related to an auditor's trust of the client.

I also expect the auditor's propensity to trust to directly affect their trust because auditing is inherently an ambiguous situation which allows scope for an auditor's propensity to have an effect.

Hypothesis 2) Trustor's propensity to trust is positively related to an auditor's trust of the client.

Hypothesis 3 is described after hypothesis 7.

Second, I expect the ability and benevolence of the management of the firm being audited will affect the auditor's assessment of the riskiness of the audit engagement. The ability of management should make the accounting procedures and controls more effective and their benevolence should reduce the risk of fraud. Thus, as the ability and benevolence increase, the risk of a material misstatement will decrease.

Hypothesis 4) Perceived ability is positively related to a lower assessment of the perceived client risk.

Hypothesis 5) Perceived benevolence is positively related to a lower assessment of the perceived client risk.

Auditors' decisions about the extent of audit testing are supposed to be based on risk not on trust. As the risk of the audit increases, the extent of the audit testing should increase. But I expect that auditors will not be able to "unknow" that they trust the client and thus I expect trust to have an effect on the auditor's decision about the extent of audit testing.

Hypothesis 6) Trust in client management is negatively related to the extent of audit testing. (Normative audit standards prohibit this effect.)

Hypothesis 7) Perceived client risk is positively related to the extent of audit testing.

I expect that the auditor's propensity to trust will moderate the relationship between the trustworthiness of the client and the amount they trust the client. More trusting auditors will interpret the client's actions more generously and thus the client behaviors, especially ambiguous ones, will have more effect on the auditor's trust of the management of the firm being audited.

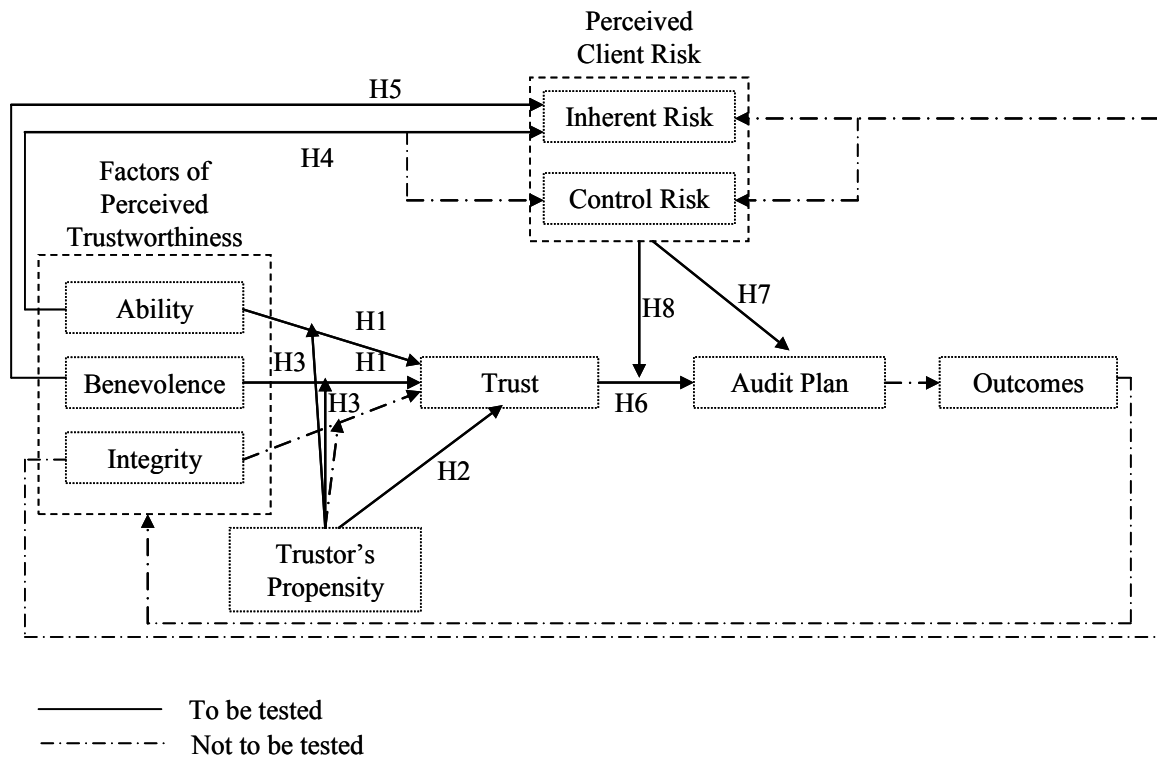
Hypothesis 3) Auditors' propensity to trust moderates the relationship between the perceived trustworthiness (ability and benevolence) of the client and an auditor's trust of the client. As trustors' propensity to trust increases, so will the effect of the perceived trustworthiness factors on trust.

Lastly, I expect that as the risk of accepting the audit engagement increases, the amount of trust needed to overcome this higher risk will increase. The auditors of a large public company with many shareholders would need to trust the management much more than the auditors of a small privately held grocery store when they are deciding how much audit testing to do.

Hypothesis 8) Perceived client risk moderates the relationship between trust and the extent of audit testing. As client risk increases, so will the extent of audit testing required.

Figure 3 shows the hypotheses developed on the integrated model of trust and audit risk

Figure 3. Theoretical model and summary of hypotheses.



Having developed the hypotheses, I will next describe the proposed research design.

4.3 Overview of Studies

I collected quantitative and qualitative data to build experimental materials and then tested whether auditing professionals were influenced by their trust of clients. First I interviewed five experienced auditors and asked them questions about their experiences with their clients, specifically what factors caused them to trust and distrust clients. It included questions such as “Please think of the client that you trusted the most....I’m interested in how you would describe this client as a person?” and “How would you describe the difference between trust and risk?” See Appendix A for a list of the questions asked. The goal of this process was to verify that the model and developed hypotheses were pertinent to practicing auditors and to uncover additional factors that were significant to practicing auditors to ensure they would not be neglected. These interviews confirmed that the model was appropriate and that additional factors would come to light with the planned qualitative questions.

Studies 1 through 5 dealt with building and testing the materials needed to manipulate the ability and benevolence of the management of the firm being audited for the four experimental scenarios. Study 6 tested whether audit professionals were influenced by their trust of the management of the firm being audited.

Study 1 was used to identify client behavior that would be considered high benevolence and low benevolence by external auditors. These behaviors were needed in order to manipulate the trustworthiness of the client managers and had not already been identified in existing research. I used qualitative data from interviews with three practicing auditors to identify behaviors that they considered benevolent and non-

benevolent in an external auditing context. I then asked 100 business students and 26 auditing students to rate these behaviors as benevolent and non-benevolent and identified the behaviors that were classified most consistently as high benevolence and low benevolence.

Study 2 was used to identify which client behaviors would be used to manipulate ability and benevolence in four experimental scenarios. Benevolence, ability and integrity are conceptually very different (Mayer et al., 1995). Theory posits that each of these dimensions affects one's trust (Mayer et al., 1995). Unfortunately, there is little knowledge about how benevolence, ability and integrity interact, either with one another or in terms of their combined effect on trust. Since my aim was to experimentally induce perceived high benevolence, low benevolence, high ability and low ability in the participants, I needed to assess how the identified behaviors acted along these three dimensions of trustworthiness. Thus I measured each behavior on each of the dimensions of trustworthiness. One hundred students classified 114 behaviors, an additional 100 students classified 114 other behaviors, and an additional 100 students classified another 120 behaviors to verify that people can distinguish behaviors along the three dimensions of trustworthiness – benevolence, ability and integrity.

Study 3 tested the four scenarios that had been written to see whether they successfully manipulated the perceived benevolence and ability of the client. Twenty-five auditing students assessed the benevolence and ability of the clients based on four written scenarios including four of the behaviors identified in Study 2.

The results of Study 3 suggested the need for revisions to the experimental material, so the scenarios were rewritten and retested in Study 4. Seventy-two auditing students assessed the benevolence and ability of the clients based on four written scenarios including eight of the behaviors identified in Study 2. Study 4 showed that the perceived benevolence and ability of the client had been manipulated successfully, so four videos were made of these scenarios to be used as the experimental material.

Study 5 was used to assess that the videos filmed from the written scenarios in Study 4 were also successful in manipulating the perceived benevolence and ability of the client. One hundred and twenty auditing students assessed the benevolence and ability of the clients after viewing the four video scenarios. I also pilot tested the measures that would be used to test the main research question with the experienced auditors.

Study 6 was the major test of the research question, “Are auditing professionals influenced by their trust of clients?”. Twenty six experienced external auditors were shown the four experimental videos and then provided quantitative and qualitative data on whether auditing professionals were influenced by their trust of clients. For 6A, Consequences of Trustworthiness, the research goal was to assess the effect of trustworthiness on trust and on risk and to see if these different levels of trust and risk affected an audit decision. 6B, effect of trustworthiness on risk, explored qualitatively the ways that trustworthiness affected an auditor’s assessment of risk. 6C, verbal protocol analysis, explored how auditors made and justified their estimate for the audited gross

profit margin and their extent of audit testing decision by asking them to say their thoughts out loud (a “think-aloud” protocol) while deciding. 6D, interviews with auditors on trust in client management, looked at how well the integrated theory of trust applied in a situation where trust was proscribed by professional standards. The experienced auditors were interviewed about their experience with a client that they trusted extensively and one that they did not trust.

Chapter 5. Study 1 – Identification of Benevolent Behaviors

Study 1 was used to identify client behavior that would be considered high benevolence and low benevolence by external auditors. These behaviors were needed in order to manipulate the trustworthiness of the client managers. High and low ability behaviors and high and low integrity behaviors had already been identified in existing research (Anderson & Marchant, 1989), but high and low benevolence behaviors had not yet been identified. I was looking for two high benevolence behaviors and two low benevolence behaviors in order to manipulate the trustworthiness of managers of the firms being audited in the experimental scenarios and these had not already been identified in existing research. I used qualitative data from interviews with practicing auditors to identify behaviors that they considered benevolent and non-benevolent in an external auditing context. I then asked 100 business students and 26 auditing students to rate these behaviors as high benevolence and low benevolence and identified the behaviors that were classified most consistently as high benevolence and low benevolence.

5.1 Method

5.1.1 Participants. I first talked with three experienced external auditors and asked them to tell me the types of behavior that they would deem high benevolence or low benevolence if done by the management of a firm that they were auditing. These were informal interviews whose main function was to generate as extensive a list as possible of these behaviors. I took brief notes of the behaviors that they discussed and created a list of 75 behaviors based on these interviews. Some examples of benevolent behaviors were *Is forthcoming about financial distress* or *Goes out of their way to respond to on-site auditors*. Some examples of non-benevolent behaviors were *Takes pleasure in making the auditor wait when auditor is under time pressure* or *Gives requests from auditors lower priority than their own work*. For a complete list of the behaviors generated from these interviews, see appendix B.

Two groups were asked to rate the benevolence of these 75 behaviors. The first group was 100 business students who participated for course credit. Their ages range from 18 to 34 with an average of 21. Forty-six were male; 54 were female. The majority of students were in accounting (36) or finance (29). The remainder were in marketing (10), management (9), international business (6), human resource management (5), economics (3) and management information systems (1) with one unknown major. Their years of work experience ranged from no experience (42%) to 13 years with an average of one and a half years of work experience.

The second group was 26 auditing students who participated for a chance to win \$50. Their ages ranged from 21 to 55 with an average of 29 years. Their years of work experience ranged from none (23%) to 30 years with an average of five and a half years.

5.1.2 Procedures and measures. The 100 business students filled in an online survey for class credit. They were asked to put themselves in the shoes of an auditor on site at a firm they were auditing and then to rate the 75 listed behaviors as benevolent, non-benevolent or neither. We developed this procedure by using the same approach as a similar study by Anderson and Marchant (1989), who assessed how auditors perceived various behaviors along an honest-dishonest continuum and along a competent-incompetent continuum. The procedures in this study replicated this approach but assessed various behaviors along a benevolent-non-benevolent continuum. The ratings used a 9-point scale and were anchored at 1 = extremely benevolent, 3 = moderately benevolent, 5 = neither, 7 = moderately non-benevolent and 9 = extremely non-benevolent. Participants were also asked for demographic data.

The 26 auditing students were given the same instructions, but they filled in a pen and pencil survey rating the 75 behaviors and providing demographic data. See appendix C for the full instructions.

5.2 Results

For the business student sample, the means ranged from 2.4 *Employees explain the situation in several ways in order to make it clear* to 7.8 *Takes pleasure in making the auditor wait when the auditor is under time pressure* with an average of 4.6; the standard deviations ranged from 1.1 *Employees check that their explanation is understandable* to 2.7 *Conceals information useful to the auditor* with an average of 1.7.

For the auditing student sample, the means ranged from 2.2 *Employees explain the situation in several ways in order to make it clear* to 8.4 *Takes pleasure in making the auditor wait when the auditor is under time pressure* with an average of 4.8; the standard deviations ranged from 1.0 *Tries to clear up an auditor's misunderstanding* to 2.6 *Expects auditors to prepare schedules on their own* with an average of 1.6.

The data were analyzed based on a combination of the approaches of Beaulieu (2001) and of Anderson and Marchant (1989). Beaulieu selected behaviors if the following conditions held; 1) the standard deviation of the rating was less than one, 2) if the average of the rating was more than five (out of seven), and 3) if the average of the rating was less than three (out of seven). Unlike Beaulieu (2001) who selected only the most extreme behaviors, Anderson and Marchant (1989) selected both extreme behaviors and moderate behaviors.

I used the Anderson and Marchant (1989) approach to select behaviors that were, on average, equidistant from a neutral rating. I selected four behaviors that were rated as extremely benevolent, four behaviors that were rated as moderately benevolent, four

behaviors that were rated as moderately non-benevolent and four behaviors that were rated as extremely non-benevolent. I selected behaviors that had a standard deviation of less than one and a half since all my standard deviations were more than one.

I selected two behaviors that were rated as neutral with respect to benevolence and non-benevolence. I did not use the above procedures to select the neutral behaviors because there were very few behaviors that were rated as neutral (close to 5). Behaviors were chosen as neutral if more than 11 of the 26 auditing students rated them at 5 (neither benevolent nor non-benevolent).

Table 1 shows the behaviors chosen for each of the extreme, moderate, benevolent, non-benevolent and neutral categories. The average rating is given for the auditing students and for the business students, as well as the standard deviations. Note that the theme of the behaviors is to be helpful to the auditor. Note also the contrast in the apparent severity of the non-benevolent behavior. *Threatens to replace auditors* and *Provides auditors with a small, uncomfortable room to work in* are both rated as extremely non-benevolent. Recall that low ratings signify benevolence and high ratings signify non-benevolence.

Table 1. Behaviors rated as extremely and moderately benevolent and non-benevolent.

Category	Behavior	Ratings			
		Auditing Student		Business Student	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Extremely benevolent	Responds quickly to requests for documents.	2.3	1.2	2.5	1.5
	Employees are quick to answer auditor's questions.	2.4	1.5	2.7	1.5
	Volunteers information useful to	2.5	1.3	2.4	1.6

	the auditor.				
	Employees make an effort to provide a good explanation for complex situations.	2.5	1.4	2.4	1.3
Moderately benevolent	Tries to clear up an auditor's misunderstanding.	2.8	1	3.2	1.5
	Accesses records (e.g. sales invoices) when needed by auditors.	3.1	1.4	3	1.3
	Respects auditor's professionalism.	3.2	1.5	2.7	1.5
	Gathers control documentation when asked.	3.3	1.4	3.4	1.6
Neutral	Prepares tax return for tax provision.	4.2	1.8	3	1.4
	Argues for capitalizing research and development.	5.7	1.5	5.1	1.8
Moderately non-benevolent	Employees are slow to answer auditor's questions.	6.5	1.3	6.5	1.5
	Employees are reluctant to answer auditors' questions.	6.7	1.2	6.9	1.7
	Doesn't listen to accounting treatment.	6.9	1.3	7	1.7
	Responds slowly to requests for documents.	7	1.2	6.8	1.7
Extremely non-benevolent	Provides auditors with a small, uncomfortable room to work in.	7.2	1.4	6.6	2.0
	Says nothing about lawsuits.	7.3	1.5	6.1	1.9
	Employees make no effort to provide a good explanation for complex situations.	7.3	1.4	6.9	1.9
	Threatens to replace auditors.	8.2	1.3	7.6	1.9

Ratings use a 9-point scale; 1 = extremely benevolent, 5 = neither, 9 = extremely non-benevolent

Once the behaviors were categorized as extremely, moderately, benevolent, non-benevolent, or neutral, these categories were tested with a one-way ANOVA to verify that the means in each category were significantly different for both the auditing students and the business student groups. The one-way ANOVA verified that the means in each category were significantly different for both the auditing students ($F_{4,13} = 121.527$,

$p < .001$) and the business students ($F_{4,13} = 55.716, p < .001$). The Tamhane post hoc analysis showed a significant difference between a benevolent group (extreme or moderate) and a non-benevolent group (extreme or moderate) for both groups of participants, indicating that these ratings successfully differentiate between benevolent and non-benevolent behaviors.

The Tamhane post hoc analysis showed a significant difference between the extreme benevolent behavior and the moderate benevolent behavior for the auditing student sample, but not for the business student sample. Nor did these tests significantly differentiate between extreme and moderate non-benevolent behavior; nor between neutral behaviors and benevolent (or non-benevolent) behaviors.

5.3 Discussion

These ratings successfully differentiated between benevolent and non-benevolent behaviors allowing them to be used to manipulate perceived benevolence in future studies. However, the ratings did not differentiate between extreme and moderate levels of behavior thus the manipulation can only be between benevolence and non-benevolence not between the extremeness and moderateness of benevolence or non-benevolence.

An individual's trustworthiness is based on their ability, benevolence and integrity (Mayer et al., 1995). This study contributes to the trust literature by identifying behaviors that auditors find benevolent and non-benevolent. It complements Anderson and

Marchant's previous work (1989) which identifies behaviors that auditors find competent or incompetent, and honest or dishonest.

There is not much understanding of how these three trustworthiness factors (benevolence, ability and integrity) interact and how they affect trust, either individually or in concert. My aim was to experimentally induce perceived high and low benevolence, high and low ability in the participants, so I needed to assess that these identified behaviors actually did affect the appropriate dimension of trustworthiness.

Chapter 6. Study 2 – Classification of Behaviors Along the Three Dimensions of Trustworthiness – Ability, Benevolence and Integrity

The goal was to choose a total of eight behaviors that would be effective at influencing perceived benevolence and perceived ability in an auditing scenario. Said another way, the aim was to identify two behaviors which were perceived differently and could be used as a manipulation for each of the high benevolence, low benevolence, high ability, and low ability scenarios.

The benevolence behaviors identified in Study 1 as well as the competent – incompetent behaviors and honest – dishonest behaviors found in Anderson and Marchant study (1989) were validated for their effect on perceived trustworthiness in Study 2. The behaviors that I planned to use for the ability manipulation were established in 1989. I needed to verify that they were still perceived in the same way as attributions

can change over time. For example, in 1989 *Smoking in the office* was considered a neutral behavior. I would be surprised if that were still true.

6.1 Method

6.1.1 Participants. Two hundred and ninety-nine business students rated how likely it was that a certain type of manager (for example, a competent manager) would behave in a certain way (for example, *provide adequate support for on-site auditors*). All 299 students were business students who participated for course credit.

Their ages ranged from 18 to 50 with an average of 23. One hundred and fifty seven were female; 139 were male; 3 unknown. Their years of full time work experience ranged from no experience to 23 years with an average of two years of full time experience. One hundred and fifty nine (slightly over half) have no full time experience at all. Their years of part time work experience ranged from no experience to 10 years with an average of three years of part time experience. Forty one have no part time experience at all. The majority of students were in accounting (107) or finance (61). The remainder were in management (34), international business (32), marketing (31), economics (9), management information systems (9), human resource management (7), operations management (1) with eight unknown majors.

6.1.2 Procedures and measures. The 299 business students filled in an online survey for class credit. They were asked to put themselves in the shoes of an auditor on site at a

firm they were auditing. Fifty eight behaviors were rated along three dimensions. Eighteen of the behaviors were based on the benevolent – non-benevolent behaviors chosen in Study 1. Twenty of the behaviors were based on the competent – incompetent behaviors found in Anderson and Marchant study (1989). The final 20 behaviors were taken from the honest – dishonest behaviors also found in the same study. Appendix D contains a list of these 58 behaviors.

Benevolence, ability and integrity are conceptually very different (Mayer et al., 1995). Theory posits that each of these dimensions affects one's trust (Mayer et al., 1995) and there are empirical results to back this up (Davis et al., 2000; Mayer & Davis, 1999; Mayer & Gavin, 2005). Nevertheless, there is little knowledge about how benevolence, ability and integrity interact, either with one another or in terms of their combined effect on trust. Since my aim was to experimentally induce trust using perceived high benevolence, low benevolence, high ability and low ability in the participants, I needed to assess how the identified behaviors affected each of these three dimensions of trustworthiness. I measured each behavior on each of the dimensions of trustworthiness in order to identify behaviors that affected one dimension of trustworthiness only and to weed out behaviors that affected several dimensions of trustworthiness.

Each of the fifty eight questions was asked in six ways; Would a benevolent manager [*respond quickly to a request for documents*]?, Would a non-benevolent manager [*be forthcoming about any lawsuits*]?, Would a competent manager [*threaten to replace auditors*]?, Would an incompetent manager [*take advantage of an auditor's*

misunderstanding]?, Would an honest manager [*give requests from auditors higher priority than their own work*]?, Would a dishonest manager [*argue for capitalizing research and development*]?. Appendix E contains all 348 questions.

There were so many questions that it would have been onerous for the students to rate them all. So the questionnaire was randomly split into three sections and rated by three different groups of students. One hundred students answered 114 questions, an additional 100 students answered 114 other questions, and an additional 99 students answered another 120 questions to help identify which behaviors would be used to manipulate ability and benevolence in the experimental scenarios.

The responses used a 9-point scale anchored at 1 = extremely unlikely, 3 = moderately unlikely, 5 = neither unlikely nor likely, 7 = moderately likely, 9 = extremely likely. This approach follows that used by Anderson and Marchant (1989) who assessed how auditors perceived various behaviors along an honest-dishonest continuum and along a competent-incompetent continuum.

6.1.3 Analysis. The goal was to choose eight behaviors, two for each of the high benevolence, low benevolence, high ability and low ability manipulations, which were perceived differently and could be used as a manipulation. I sorted the behaviors by their mean likelihood scores for benevolence, non-benevolence, competence and incompetence and chose two behaviors that were high on one score and low on the other scores. I also considered how easily the behaviors could be incorporated into a scenario.

6.2 Results

6.2.1 Benevolence – non-benevolence. The ranking of the likelihood of a benevolent manager behaving in this way ranged from a high of 6.9 *Takes time to teach subordinates* to a low of 3.2 *Smokes in the office* and *Blames subordinates for the manager's mistakes* and *Reads other people's mail* with an average of 5.1. The standard deviations ranged from 1.5 to 2.4 with an average of 1.9.

Benevolent behaviors (those ranked above the neutral 5 ranking) ranged from 5.1 to 6.9 with a median of 6.2. All eight of the behaviors identified in Study 1 as benevolent were rated above this median of 6.2. They are shown in Appendix D.

The ranking of the likelihood of a non-benevolent manager behaving in this way ranged from a high of 6.1 *Threatens to replace auditors* and *Responds slowly to requests for documents* to a low of 3.5 *Takes time to teach subordinates*. The standard deviations ranged from 1.5 to 2.3 with an average of 1.9.

Non-benevolent behaviors (those ranked above the neutral 5 ranking) ranged from 5.1 to 6.1 with a median of 5.5. Five of the eight behaviors identified in Study 1 as non-benevolent were rated above this median of 5.5. They are presented in Appendix D.

6.2.2 Competence – incompetence. The ranking of the likelihood of a competent manager behaving in this way ranged from a high of 7.2 *Makes an effort to provide a good explanation for complex situations* to a low of 2.9 *Makes no effort to provide a good explanation for complex situations*. The standard deviations ranged from 1.5 to 2.3 with an average of 1.9.

In Study 2, competent behaviors (those ranked above the neutral 5 ranking) ranged from 5.3 to 7.2 with a median of 6.65. Six of the eight behaviors identified by Anderson and Marchant (1989) as competent were rated above this median of 6.65. They are shown in Appendix D. For example, both Study 2 and the Anderson and Marchant (1989) study found *Finished report on time* and *Is innovative* to be behaviors likely for a competent manager to exhibit.

The ranking of the likelihood of an incompetent manager behaving in this way ranged from a high of 6.5 *Blames subordinates for the manager's mistakes* and *Responds slowly to requests for documents* and *Is slow to answer the auditor's questions* to a low of 3.1 *Returns phone calls promptly*. The standard deviations ranged from 1.6 to 2.4 with an average of 1.9.

Incompetent behaviors (those ranked above the neutral 5 ranking) ranged from 5.1 to 6.5 with a median of 5.8. Six of the eight behaviors identified by Anderson and Marchant (1989) as incompetent were rated at or above this median of 5.8. They are presented in Appendix D. For example, both Study 2 and the Anderson and Marchant (1989) study

found *Cannot explain budget variances* and *Blames subordinates for manager's mistakes* to be behaviors likely for an incompetent manager to exhibit. One of the behaviors rated by Anderson and Marchant (1989) as neutral *Makes an error on an expense account report* was above the median of the incompetent behavior ratings.

6.2.3 Honest – dishonest. In Study 2, honest behaviors (those ranked above the neutral 5 ranking) ranged from 5.2 to 7.3 with a median of 6.15. Only five of the eight behaviors identified by Anderson and Marchant (1989) as honest were rated above this median of 6.15. They are shown in Appendix D. For example, both Study 2 and the Anderson and Marchant (1989) study found *Returns phone calls promptly* and *Returns a lost wallet intact* to be behaviors likely for an honest manager to exhibit.

Dishonest behaviors (those ranked above the neutral 5 ranking) ranged from 5.1 to 7.2 with a median of 5.7. Seven of the eight behaviors identified by Anderson and Marchant (1989) as dishonest were rated above this median of 5.7. They are presented in Appendix D. For example, both Study 2 and the Anderson and Marchant (1989) study found *Promised a report for a specific date knowing it will not be finished* and *Reads other people's mail* to be behaviors likely for a dishonest manager to exhibit.

6.2.4 Behaviors chosen. Table 2 shows the behaviors chosen for the high benevolence, low benevolence, high ability and low ability experimental manipulations. The mean and standard deviation for the behavior is also given. Recall that on the 9-point scale, 9 was anchored as extremely likely to exhibit the behavior.

Table 2. Eight behaviors chosen as manipulations for benevolence and ability.

Manipulation	Behavior	Average	Std Dev
High benevolence	Takes the time to teach subordinates.	6.9	2.2
	Provides auditors with a small, uncomfortable room to work in. Reverse coded.	5.7	1.9
Low benevolence	Threatens to replace auditors.	6.1	1.7
	Provides auditors with a small, uncomfortable room to work in.	5.9	1.7
High ability	Keeps up to date with professional developments.	7.1	1.4
	Is innovative.	7.1	1.9
Low ability	Makes an addition error on an expense account report.	6.4	2.0
	Is unable to explain budget variances.	5.9	2.4

6.2.5 Behavior overlap. The behavior rating also showed that there is a fair amount of overlap between behaviors rated as high benevolence and behaviors rated as high ability. I looked at the behaviors with the ten highest means for benevolence and the ten highest means for ability. Six of these behaviors were common to both top ten lists. There is a similar, but less severe amount of overlap between behaviors rated as low benevolence and behaviors rated as low ability. Four of these behaviors were common to the top ten lists for low benevolence and low ability behaviors.

6.2.6 Confirmation of the behaviors chosen. Once the behaviors were chosen for the high benevolence, low benevolence, high ability and low ability manipulations, these categories were tested with a one-way ANOVA to verify that the means in each category were significantly different. Each behavior had a benevolence score, a non-benevolence

score, a competence score and an incompetence score. Recall that I assessed how the identified behaviors acted along the three dimensions of trustworthiness because there is little knowledge about how benevolence, ability and integrity interact, either with one another or in terms of their combined effect on trust.

Comparing the *benevolence* means, the categories were significantly different ($F_{3,4} = 14.509, p=.013$). The LSD post hoc analysis showed that the benevolence means for the high and low benevolence categories were significantly different. Unfortunately, the LSD post hoc analysis showed that there was not a significant difference between the benevolent means for the high benevolence and high ability categories. This was not surprising given the overlap between the high benevolence behaviors and the high ability behaviors discussed above. The Tamhane post hoc analysis shows there was no significant difference between any of the categories taken pair by pair.

Comparing the *non-benevolence* means, the categories were significantly different ($F_{3,4} = 34.667, p=.003$). The LSD post hoc analysis of the non-benevolence means showed a significant difference between each of the pairs of categories i.e. the non-benevolence means for the high benevolence and low benevolent categories were significantly different. The Tamhane post hoc analysis showed there was no significant difference between any of the categories taken pair by pair.

Comparing the *competence* means, the categories were significantly different ($F_{3,4} = 19.793, p=.007$). The LSD post hoc analysis showed the competence means for the high

and low ability categories were significantly different. Unfortunately, the LSD post hoc analysis showed that there was not a significant difference between the competence means for the high benevolence and high ability categories. This was not surprising given the overlap between the high benevolence behaviors and the high ability behaviors discussed above. The Tamhane post hoc analysis showed there was no significant difference between any of the categories taken pair by pair.

Comparing the *incompetence* means, the categories were significantly different ($F_{3,4} = 46.899, p=.001$). The LSD post hoc analysis showed the incompetence mean for the high and low ability categories were significantly different. The Tamhane post hoc analysis shows there was no significant difference between any of the categories taken pair by pair except for a significant difference in the incompetence mean between the low ability category and the low benevolence category.

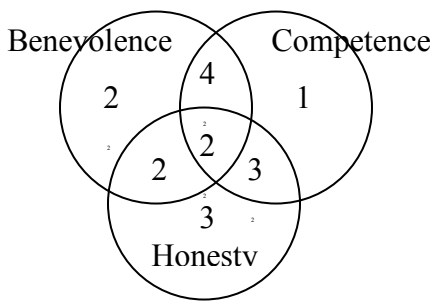
6.3 Discussion

On the whole, this study affirmed the behaviors that Anderson and Marchant (1989) identified as competent, incompetent, honest and dishonest.

This study contributed to the trust literature by showing there is a lot of interaction among the three factors of trustworthiness; ability, benevolence and integrity. The behavior rating showed a fair amount of overlap among behaviors rated as benevolent, behaviors rated as competent and behaviors rated as honest. I looked at the behaviors

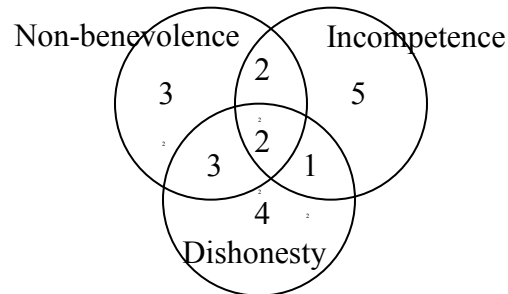
with the ten highest means for benevolence, the ten highest means for competence and the ten highest means for honesty. Of these 30 behaviors, only six (20%) did not overlap. The two behaviors that rated high on all three dimensions (benevolence, competence and honesty) are *Returns phone calls promptly* and *Respects auditor's professionalism*. The four behaviors that rate high on benevolence and competence are *Employees make an effort to provide a good explanation for complex situations*, *Keeps up to date with professional developments*, *Finished report on time* and *Responds quickly to requests for documents*.

Figure 4. Amount of interdependence among behaviors rated high on benevolence, competence and honesty.



There is a similar, but less severe amount of overlap among the top ten behaviors rated as non-benevolent, top ten behaviors rated as incompetent, and top ten behaviors rated as dishonest. Of these 30 behaviors, only 12 (40%) did not overlap. The two behaviors that rated high on all three dimensions (non-benevolence, incompetence and dishonesty) are *Blames subordinates for manager's mistakes* and *Takes credit for report written by subordinate*. The two behaviors that rate high on non-benevolence and incompetence are *Responds slowly to requests for documents* and *Provides auditors with a small uncomfortable room to work in*.

Figure 5. Amount of interdependence among behaviors rated high on non-benevolence, incompetence and dishonesty.



Notice that the majority of behaviors overlap. This implies that it will be difficult to manipulate the three factors of trustworthiness independently. It also means that any manipulation of these factors will need to be tested in a pilot study to ensure that the manipulation is effective.

Chapter 7. Study 3 – Test of the Written Scenarios

A scenario was written which asked whether an external auditor should accept an audit engagement with a firm to be audited – Geo. Williams Lighting. Some background information was given about the firm and the industry. The behaviors identified in Study 2 were incorporated into this base to create four scenarios containing different experimental manipulations. Study 3 tested these four scenarios to assess whether they successfully manipulated the perceived benevolence and ability of the management of the firm being audited.

7.1 Method

7.1.1 Participants. Twenty-five auditing students assessed the benevolence and ability of the clients based on these four scenarios. The experiment was built into a class lesson which showed the effect that planning had on the assessment of the risk of accepting an audit engagement. To encourage participation, there was a draw for \$50 which was awarded to one of the participants. The participants' ages ranged from 21 to 40 with an average of 25.5 years. Eleven were female; 13 were male; one did not report his or her gender. Their years of full time work experience ranged from none to 11 years with an average of 3.5 years. Their years of part time work experience ranged from none to seven years with an average of three years. One participant (4%) had no work experience at all.

7.1.2 Procedures. Participants were asked to act the part of an auditor who was assessing whether to accept an audit engagement in the context of accepting a new client as described in a brief scenario. The industry was portrayed as risky because there is a lot of technological change in the production of lightbulbs and because governmental environmental policy affects the industry. The firm was portrayed as risky because it is starting to manufacture its lightbulbs overseas, a new venture for them. On the other hand, the firm had a history of success in this industry and was financially sound. This scenario was the base for the experimental manipulation of the behavior of the managers at Geo. Williams Lighting.

The 2 x 2 experiment manipulated the behaviors of the management of the firm being audited. The two high benevolence behaviors, the two low benevolence behaviors, the two high ability behaviors and the two low ability identified in Study 2 (see Table 2) were combined into the base scenario creating four experimental conditions. Scenario 1 included two high benevolence and two high ability behaviors. Scenario 2 included two high ability behaviors and two low benevolence behaviors. Scenario 3 included two low ability and two high benevolence behaviors. Scenario 4 included two low ability behaviors and two low benevolence behaviors. These experimental manipulations for each scenario are shown graphically in Figure 6.

Figure 6. Experimental manipulation for each scenario.

Benevolence	High	Scenario 3	Scenario 1
	Low	Scenario 4	Scenario 2
		Low	High
		Ability	

Scenario	High Ability	Low Ability	High Benevolence	Low Benevolence
Scenario 1	2 behaviors		2 behaviors	
Scenario 2	2 behaviors			2 behaviors
Scenario 3		2 behaviors	2 behaviors	
Scenario 4		2 behaviors		2 behaviors

See Table 2 for the behaviors that were manipulated in these scenarios.

Appendix F contains the full text of the four scenarios with the experimental manipulations italicized.

Participants were randomly assigned to one of the four scenarios. First they read the scenario which briefly described the firm to be audited. It had the client managers discussing what they needed to tell the new audit firm that they wished to hire. The scenarios were identical except that they contained the behaviors appropriate to one of the four experimental conditions.

Second, they assessed the risk of accepting an audit engagement with the firm described in the scenario. This is a very standard audit decision. As described in chapter 1, auditors are supposed to base the extent or amount of audit testing on the amount of risk there is of a material misstatement in the financial reports and so they routinely assess this risk (Canadian Institute of Chartered Accountants, 2008, section 5141.102).

The third task was to make a decision about the extent of the audit testing. The basic decision is whether to do more testing or not. Auditors use analytical procedures to make this type of decision (Solomon & Shields, 1995). This involves making an estimate of the correct value and assessing whether the firm's value is "close enough" to the auditor's estimated correct value. If it is "close enough" auditors accept the value and do not do additional tests. If it is not "close enough" then the auditors do more investigation. So the range of acceptable values is key and affects how much testing the auditor will do (Biggs & Wild, 1985). This is the decision that I am asking auditors to make about the extent of audit testing. Appendix G contains the full text of the risk and extent of audit testing decisions.

The last task was to fill in a questionnaire about their trust of the firm's management, the three dimensions of management's trustworthiness (benevolence, ability and integrity), the participant's propensity to trust, manipulation checks and demographic questions. Appendix H contains the complete questionnaire.

7.1.3 Measures. Independent variables. The independent variable was the *scenario* number or the presence or absence of the specific behaviors used in the manipulation. Scenario 1 contained high ability behaviors (such as *Keeps up to date with professional developments*) and high benevolence behaviors (such as *Provides auditors with a large, comfortable room to work in*). Scenario 4 contained low ability behaviors (such as *Is unable to explain budget variances*) and low benevolence behaviors (such as *Provides auditors with a small, uncomfortable room to work in*). Figure 6 shows the experimental manipulation for each scenario and Table 2 lists the manipulated behaviors included in each.

Dependent variables. Client behaviors (high and low ability; high and low benevolence) were embedded in the scenarios and used to manipulate the level of trustworthiness of the management of the firm being audited. Once the scenario was read, the client's ability and benevolence were rated by the participants using the following measures.

Client ability was measured with an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Some examples of items in this

scale are “Client management is known to be successful at the things it tries to do.” and “Client management is very capable of performing its job.”

Client benevolence was measured using an established 5-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Some examples of the items in this scale are “Client management will go out of its way to help me.” and “Client management really looks out for what is important to me.”

Benevolence, in a general context, means showing a concern for others; not just focusing on one’s own benefit. It was difficult to find a useful measure of benevolence for the audit context. Many of the questions used to measure benevolence seemed inappropriate (such as “Top management would not knowingly do anything to hurt me.” and “Top management will go out of its way to help me.” (Mayer & Davis, 1999 p 136)). This type of benevolence question seemed more applicable in an interdependent relationship with a degree of emotional involvement than to an auditor who is required to be objective and independent. However, these measures have the advantage of being validated scales. Because of these concerns about its content validity in the auditing context, benevolence was measured using two scales. The first was the established scale described above. The second was a new scale created by taking four items that seemed more suited to the audit context from other scales and combining them into a second measure of benevolence. These four items were “I think that client management takes advantage of our problems” (reverse coded) (Cummings & Bromiley, 1996), “Client management keeps my interests in mind when making decisions” (Ballinger, Schoorman,

& Lehman, 2009), “In general, I believe client management’s motives and intentions are good” (Robinson, 1996), and “My needs are taken into account when client decisions are made.” (Tyler, 2003).

Other variables. Auditor’s *trust* of the client was measured by an established 4-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). An example item from this scale is “I really wish I had a good way to keep an eye on client management.” (reverse coded).

It was also difficult to find a useful measure of trust for the audit context. Trust is a “...willingness ... to be vulnerable...” (Mayer et al., 1995, p 712) and auditing is about reducing risk [of saying the financial statements fairly represent the business when they do not] to an acceptably small amount (Dusenbury et al., 2000). In the audit context, many of the questions used to measure trust seemed inappropriate (such as “I would be willing to let my supervisor have complete control over my future in this company.” (Schoorman and Ballinger (2006) as cited in Schoorman et al., 2007, p 352) and “I would be comfortable giving top management a task or problem which is critical to me, even if I could not monitor their actions.” (Mayer & Davis, 1999, p 136)). However, these measures have the advantage of being validated scales. Because of these concerns about the content validity in the audit context, trust was measured using two scales. The first was the established scale described above. The second was a new scale created by taking three items that seem more suited to the audit context from other scales and combining them into a second measure of trust. The three items in this new scale are “I trust client

management” (Brockner, Siegel, Daly, Tyler, & Martin, 1997), “If a client asked why a problem occurred, I would speak freely even if I were partly to blame” (Schoorman & Ballinger (2006) as cited in Schoorman et al., 2007), and “I would share my opinion about sensitive issues with client management even if my opinion were unpopular.” (Schoorman & Ballinger (2006) as cited in Schoorman et al., 2007).

Participant’s *propensity to trust* was measured with an established 8-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). “Most salesmen are honest in describing their products” is one of the items on this scale.

Client integrity was measured with an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). “Sound principles seem to guide client management’s behavior.” and “Client management tries hard to be fair in dealings with others” are two of the items on this scale.

Appendix I contains a list of the items for the trust scales, the ability, benevolence and integrity scales, and the propensity to trust scales. These are established measures based on scales developed by Schoorman, Mayer, and Davis (1996, as cited in Mayer & Davis, 1999) and were altered slightly to refer to the management of the client being audited. The 1996 study reported acceptable to excellent internal consistencies ($\alpha = .93$ for ability; .95 for benevolence; .96 for integrity; .82 for trust; .71 for propensity to trust). The internal consistencies in the 1999 study were good ($\alpha = .85$ & .88 for ability; .87 & .89 for benevolence; .82 & .88 for integrity), except for trust and propensity to trust ($\alpha =$

.59 & .60 for trust; .55 & .66 for propensity to trust). The lower alphas for trust did not overly concern them as they expected trust to fluctuate over time and they were satisfied with the test-retest reliability coefficients (Mayer & Davis, 1999).

7.1.4 Analysis. The perceived benevolence and ability of the managers in the firm to be audited were analyzed using an analysis of variance (ANOVA).

7.2 Results

7.2.1 Internal consistency of measures. The internal consistencies of the established scales were disappointing ($\alpha = .770$ for ability; .690 for benevolence; .609 for integrity; .267 for trust; .690 for propensity to trust). Although the Cronbach's alphas for benevolence, integrity and propensity to trust were questionable, it was felt that they would likely improve with a larger sample size so these scales were kept. The internal consistency of the established trust scale was so poor, that it was decided to replace this scale with a more robust measure.

The Cronbach's alphas of the modified measures were also inadequate ($\alpha = -.020$ for benevolence; -.080 for trust). These scales were dropped.

7.2.2 Manipulation check. To see whether including high ability behavior in an experimental scenario increased the rating of the ability of the managers, and whether including low ability behavior in an experimental scenario decreased the rating of the

ability of the managers, a one-way ANOVA compared the ability scores for scenarios which included high ability behaviors with scenarios including low ability behaviors. The results were marginally significant ($F_{1,23} = 3.276, p = .083$). Thus the ability manipulation was marginally successful.

To see whether including high benevolence behavior in an experimental scenario increased the rating of the benevolence of the managers, and whether including low benevolence behavior in an experimental scenario decreased the rating of the benevolence of the managers, a one-way ANOVA compared the benevolence scores for scenarios which included high benevolence behaviors with scenarios including low benevolence behaviors. The results were not significant for measure 1, the established measure of benevolence ($F_{1,23} = .051, p = .824$). Thus the benevolence manipulation was unsuccessful.

7.3 Discussion

7.3.1 Internal consistency of measures. The alpha measures of several of the scales were inadequate. Both the modified benevolence scale and the modified trust scale suffered from this problem. Neither of these modified scales will be used further in the analysis.

Surprisingly, the established trust scale also had an inadequate alpha value. The internal consistency of the established trust scale was so poor, that it was decided to replace this scale with a more robust measure.

Although the Cronbach's alphas for benevolence, integrity and propensity to trust were questionable, it was felt that they would likely improve with a larger sample size so these scales were kept.

7.3.2 Manipulation check. A comparison of the ability scores for the scenarios including high ability behaviors with those including low ability behaviors showed that the manipulation was marginally significant. Thus behaviors can affect perceptions about others and it should be possible to manipulate behaviors and induce differences in the levels of trust as required for this experimental research. Unfortunately, including only two behaviors for each manipulation did not produce significant results. Thus the experimental scenarios need to be strengthened so that the effects are significant.

Chapter 8. Study 4 – Test of the Enhanced Written Scenarios

The results of Study 3 suggested the need for revisions to the experimental material, so the scenarios were rewritten and retested in Study 4. There were two research goals. The first was to identify a better, more reliable measure for trust, given the poor Cronbach's alpha score of the trust measures used in Study 3. The behaviors used in Study 3 produced, at best, a marginal effect on the manipulated variables and this effect

needed to be strengthened in the scenarios. The second research goal was to assess the effect of these strengthened experimental manipulations on perceived ability and benevolence of the managers of the firm to be audited.

8.1 Expansion of the Behavioral Manipulations

Using the approach as described in Study 2, an additional two behaviors were chosen for high benevolence, two additional behaviors for low benevolence, two additional behaviors for high ability and two additional behaviors for low ability. I sorted the behaviors by their mean likelihood scores for benevolence, non-benevolence, competence and incompetence and chose two additional behaviors that were high on one score and low on the other scores.

Table 3 shows the behaviors chosen for the high benevolence, low benevolence, high ability and low ability experimental manipulations. The mean and standard deviation for the behavior is also given. Recall that on the 9-point scale, 9 was anchored as extremely likely to exhibit the behavior.

Table 3. Sixteen behaviors chosen as manipulations for benevolence and ability.

Manipulation	Behavior	Average	Std Dev
High benevolence	Takes the time to teach subordinates.	6.9	2.2
	Provides auditors with a small, uncomfortable room to work in. Reverse coded.	5.7	1.9
	Volunteers information useful to the auditor.	6.8	2.0
	Responds quickly to an auditor's requests for documents.	6.8	1.8

Low benevolence	Threatens to replace auditors.	6.1	1.7
	Provides auditors with a small, uncomfortable room to work in.	5.9	1.7
	Responds slowly to requests for documents.	6.1	1.8
	Blames subordinates for the manager's mistakes.	6.0	2.0
High ability	Keeps up to date with professional developments.	7.1	1.4
	Is innovative.	7.1	1.9
	Finishes a report on time.	7.1	2.1
	Returns phone calls promptly.	7	1.9
Low ability	Makes an addition error on an expense account report.	6.4	2.0
	Is unable to explain budget variances.	5.9	2.4
	Promised a report for a specific date knowing it would not be finished.	6.2	2.0
	Is slow to answer auditor's questions.	6.5	2.0

8.1.1 Confirmation of the behaviors chosen. Each behavior had a benevolence score, a non-benevolence score, a competence score and an incompetence score. Unfortunately, there is little knowledge about how benevolence and ability interact, either with one another or in terms of their combined effect on trust. Since my aim was to experimentally induce perceived high benevolence, low benevolence, high ability and low ability in the participants, I needed to assess how the identified behaviors acted along these dimensions of trustworthiness. Thus I measured each behavior on each of the dimensions of trustworthiness. The categories were compared with a one-way ANOVA for each of these scores to see if the categories were significantly different.

Comparing the *benevolence* means, the categories were significantly different ($F_{3,11} = 66.095, p < .001$). The Tukey HSD² post hoc analysis showed that the benevolence means for the high benevolence and low benevolence categories were significantly different.

² Tukey HSD post hoc analysis was used when the variances were equal. Tamhane was used when they were unequal.

Comparing the *non-benevolence* means, the categories were significantly different ($F_{3,11} = 31.575, p < .001$). The Tamhane² post hoc analysis showed that the non-benevolence means were significantly different for the high and low benevolence categories.

Comparing the *competence* means, the categories were significantly different ($F_{3,11} = 147.662, p < .001$). The Tamhane² post hoc analysis showed a significant difference between the competence means for the high ability and low ability categories.

Comparing the *incompetence* means, the categories were significantly different ($F_{3,11} = 118.936, p < .001$). The Tukey HSD² post hoc analysis showed that the incompetence means for the high ability and low ability categories were significantly different.

The above analysis showed that there was a significant difference between the means for the high and low categories as desired so the manipulations were effective. Unfortunately, the post hoc analyses also showed that there was not always a significant difference between the means for other categories. For example, there was not a significant difference between the benevolent means for the high benevolence and high ability categories. This is unsurprising given the overlap between the high benevolence behaviors and the high ability behaviors discussed in the report of Study 2 but will make it more difficult to assess the independent impacts of the individual trustworthiness factors.

The four high benevolence behaviors, the four low benevolence behaviors, the four high ability behaviors and the four low ability behaviors identified in Table 3 were combined into the base scenario creating four experimental conditions. Scenario 1 included four high benevolence and four high ability behaviors. Scenario 2 included four high ability behaviors and four low benevolence behaviors. Scenario 3 included four low ability and four high benevolence behaviors. Scenario 4 included four low ability behaviors and four low benevolence behaviors. These enhanced experimental manipulations are shown graphically in Figure 7.

Figure 7. Enhanced experimental manipulation for each scenario.

Benevolence	High	Scenario 3	Scenario 1
	Low	Scenario 4	Scenario 2
		Low	High
		Ability	

Scenario	High Ability	Low Ability	High Benevolence	Low Benevolence
Scenario 1	4 behaviors		4 behaviors	
Scenario 2	4 behaviors			4 behaviors
Scenario 3		4 behaviors	4 behaviors	
Scenario 4		4 behaviors		4 behaviors

Table 3 lists the behaviors that were manipulated in these scenarios.

Appendix J contains the full text for the enhanced scenarios with the experimental manipulations in italics. These enhanced scenarios were then tested to assess whether

they successfully manipulated the perceived benevolence and ability of the management of the firm being audited.

8.2 Method

8.2.1 Participants. Seventy-two auditing students assessed the benevolence and ability of the clients based on these four scenarios. The experiment was built into a class lesson which showed the effect that planning had on the assessment of the risk of accepting an audit engagement. To encourage participation, there was a draw for \$50 which was awarded to one of the participants.

The participant's ages ranged from 21 to 45 with an average of 25.9 years. Their years of full time work experience ranged from none to 18 years with an average of 2.9 years. Their years of part time experience ranged from none to ten years with an average of 2.9 years. Thirteen (18%) had no work experience at all. Thirty-six of the participants were female, 34 were male and two did not report their gender.

8.2.2 Procedures. Participants were randomly assigned to one of the four experimental conditions as shown in Figure 7. After reading the scenario, they acted the part of an auditor assessing whether to accept an audit engagement from the described firm and estimating the risk of accepting the audit engagement with this new firm. Next, the participants filled out a questionnaire about their trust in the management of the firm to be audited and the management's trustworthiness. Appendix K contains the risk and

extent of audit testing questionnaire and Appendix L contains the trust and trustworthiness questionnaire.

8.2.3 Measures. Independent variable. The independent variable was the *scenario* number or the presence or absence of the specific behaviors used in the manipulation as listed in Table 3. Figure 7 shows the experimental manipulation for each scenario.

Dependent variables. *Client ability* was measured with an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Its internal consistency improved over the results in Study 3 to a good level ($\alpha = .845$). *Client benevolence* was measured with an established 5-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Its internal consistency also improved to a good level ($\alpha = .816$).

Other variables. Auditor's *trust* of the client. The Cronbach's alpha of the established trust measure in Study 3 was .267. Permission was requested from Nicole Gillespie to use her established 10-item scale anchored at 1 = not at all willing and 7 = completely willing (Gillespie, 2003). Some example questions are "How willing are you to rely on the client manager's task related skills and abilities?" and "How willing are you to depend on the client manager to handle an important issue on your behalf?"

This measure trust has two dimensions; reliance which measures the willingness to rely on others (5-items) and disclosure which measures the willingness to share

privileged information with others (5-items) (Leck & Robitaille, 2011). Both dimensions have reported acceptable internal consistency measures ($\alpha = .84$ for reliance and $.76$ for disclosure) (Leck & Robitaille, 2011). I changed the wording slightly to refer to the management of the client being audited instead of referring to a team member. Appendix M contains the complete list of items.

Client integrity was measured with an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Its internal consistency improved over the results in Study 3 to an acceptable level ($\alpha = .748$).

8.2.4 Analysis. The perceived benevolence and ability of the managers in the firm to be audited were analyzed using an analysis of variance (ANOVA).

8.3 Results

The internal consistencies of the Gillespie trust scale were acceptable. The Cronbach's alpha for the reliance dimension was $.766$; for the disclosure dimension it was $.820$. I wanted an overall measurement of an auditor's trust of the client management, so I combined these two dimensions. The internal consistency of the combined measure of trust was good ($\alpha = .823$).

To assess whether including high ability behaviors in an experimental scenario increased the rating of the ability of the managers, and whether including low ability

behaviors in an experimental scenario decreased the rating of the ability of the managers, a one-way ANOVA compared the ability scores for scenarios which included high ability behaviors with scenarios including low ability behaviors. The results were statistically significant ($F_{1,70} = 4.50, p=.037$). Thus the ability manipulation was successful.

To assess whether including high benevolence behaviors in an experimental scenario increased the rating of the benevolence of the managers, and whether including low benevolence behaviors in an experimental scenario decreased the rating of the benevolence of the managers, a one-way ANOVA compared the benevolence scores for scenarios which included high benevolent behaviors with scenarios including low benevolent behaviors. The results were significant ($F_{1,70} = 4.470, p=.038$). Thus the benevolence manipulation was successful.

8.4 Discussion

These findings affirmed that the perceived benevolence and ability of the client had been manipulated successfully using the modified scenarios. Additionally the alpha measures of the scales are now acceptable.

Chapter 9. Study 5 – Pilot Test of the Video Scenarios

The results of Study 4 showed that the written scenarios were effective in manipulating the perceived ability and benevolence of the management of the firm being

audited. Videos were made based on these scenarios and these videos were used as the experimental manipulation. Study 5 was the final pilot test of the research materials. The research goal was to assess whether these videos were also successful in manipulating the perceived benevolence and ability of the management of the firm being audited as well as to ensure that the measures continued to have satisfactory levels of reliability.

9.1 Method

9.1.1 Participants. Prior research has shown that experience affects auditors' decisions (for example, Bonner, 1990). Solomon and Shields (1995) suggest that students can be used to provide a baseline for the effect of experience on decisions. In this study, I used first-year auditing students to pilot test the effect of auditors' trust of the management of the firm they were auditing. All 183 of the auditing students at Concordia in the fall term for 2010 were offered a bonus mark for taking part in this study. One hundred and twenty-five of them (68%) participated. Only 120 of these 125 responses were used. Three participants were dropped because they had participated in Study 3 or 4 in a previous class. The debriefing after their participation in these earlier studies would have informed them of the research question and thus confounded these results. Two other participants were dropped because their estimates of the range for the gross profit margin were more than three standard deviations from the mean which casts doubt on the validity of their answers.

The participant's ages ranged from 20 to 39 with an average of 24.6 years. Their years of full time work experience ranged from none to 15 years with an average of 2.4 years. Their years of part time experience ranged from none to 12 years with an average of 3.9 years. Four (3%) had no work time experience at all. Seventy five of the participants were female, 45 were male.

9.1.2 Procedures. Participants were shown one of four videos of a client meeting and asked to assess the risk of accepting an audit engagement with the client in the video. The videos included the manipulations for high and low ability and high and low benevolence behaviors by the clients. For example, in the high ability scenarios the previous auditor described the Chief financial officer (CFO) as keeping up to date with professional developments and knowing the new reporting standards; in the low ability scenarios the previous auditor mentioned that the CFO had trouble explaining why the actual figures varied from the budget; in the high benevolence scenarios the previous auditor talked about the large comfortable room the firm set aside for the auditors; and in the low benevolence scenarios the CFO alluded to a threat to replace previous auditors when they disagreed with the client firm. Participants signed up for one of 12 sessions and the four videos shown were randomly assigned to the sessions. After seeing the video and assessing the risk, participants filled in a questionnaire about their trust of the management of the firm to be audited, the trustworthiness of the management and the participants' propensity to trust. Complete details about the experimental manipulations were listed in Figure 7 and Table 3. The entire questionnaires are contained in Appendices N and O.

9.1.3 Measures. *Independent variables.* The independent variable was the *scenario* number or the presence or absence of the specific ability and benevolence behaviors used in the manipulation.

Dependent variables. *Client ability* was measured using an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Its internal consistency in this sample was good ($\alpha = .850$). *Client benevolence* was measured using an established 5-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Its internal consistency in this sample was also good ($\alpha = .844$).

9.1.4 Analysis. The perceived benevolence and ability of the managers in the firm to be audited was analyzed using an analysis of variance (ANOVA).

9.2 Results

To assess whether including high ability behaviors in an experimental scenario increased the rating of the ability of the managers, and whether including low ability behaviors in an experimental scenario decreased the rating of the ability of the managers, a one-way ANOVA compared the ability scores for scenarios which included high ability behaviors with scenarios including low ability behaviors. The results were significant ($F_{1,118} = 13.405, p < .001$). Thus the ability manipulation was successful.

To assess whether including high benevolence behaviors in an experimental scenario increased the rating of the benevolence of the managers, and whether including low benevolence behavior in an experimental scenario decreased the rating of the benevolence of the managers, a one-way ANOVA compared the benevolence scores for scenarios which included high benevolence behaviors with scenarios including low benevolence behaviors. The results were significant ($F_{1,118} = 13.577, p < .001$). Thus the benevolence manipulation was successful.

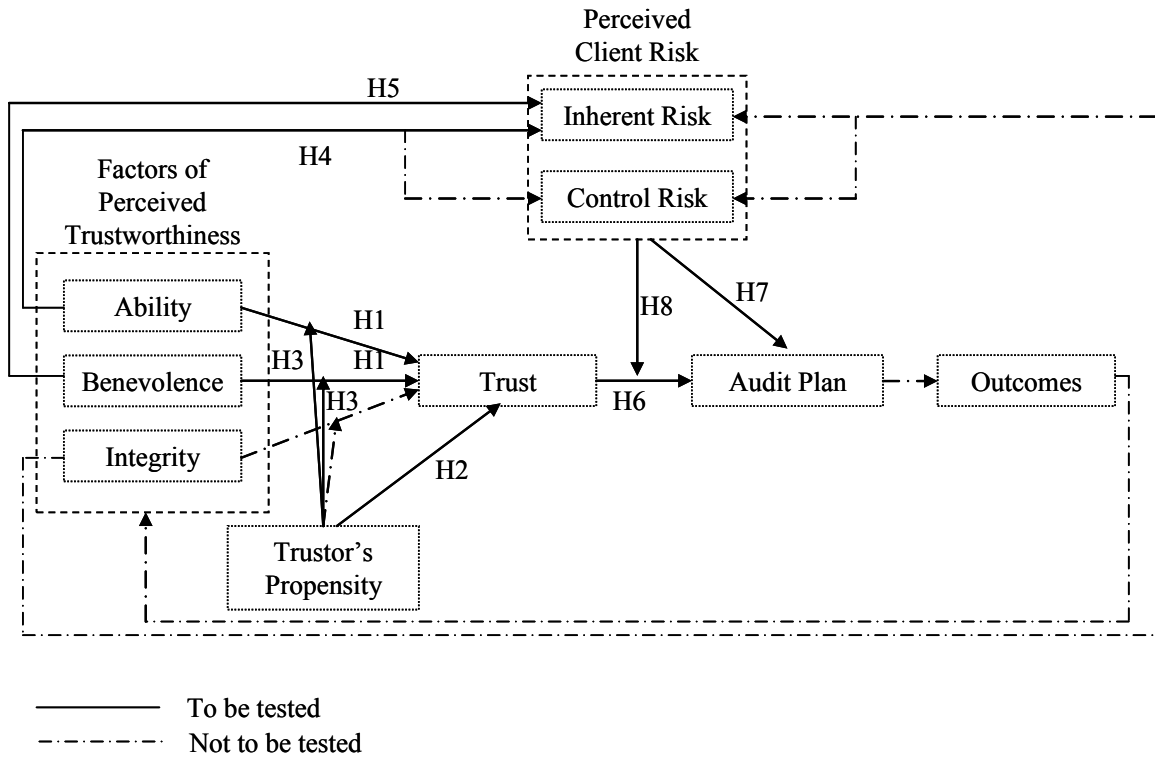
9.3 Discussion

These findings affirmed that the perceived benevolence and ability of the client had been manipulated successfully using the videos created from the written scenarios. I continued the pilot test by looking at the main research question with this sample of audit students.

9.4 Pilot Test of the Main Research Question

This pilot test was the first to deal with the main research question; to assess whether auditing professionals are influenced by their trust of the management of the firms they audit. The eight hypotheses are summarized here again, for convenience.

Figure 8. Summary of hypotheses



To test these eight hypotheses, I needed to use the actual level of ability and benevolence as the independent variables, not the manipulations themselves. The variables used to test the hypotheses are described below.

9.4.1 Measures. Independent variables. *Client ability* was measured using an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). *Client benevolence* was measured using an established 5-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). *Propensity to trust* was measured using an established 8-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Its internal consistency in this sample is acceptable ($\alpha = .777$).

Dependent variables. Auditor's *trust* was measured using an established 10-item scale anchored at 1 = not at all willing and 7 = completely willing. Its internal consistency in this sample is good ($\alpha = .830$).

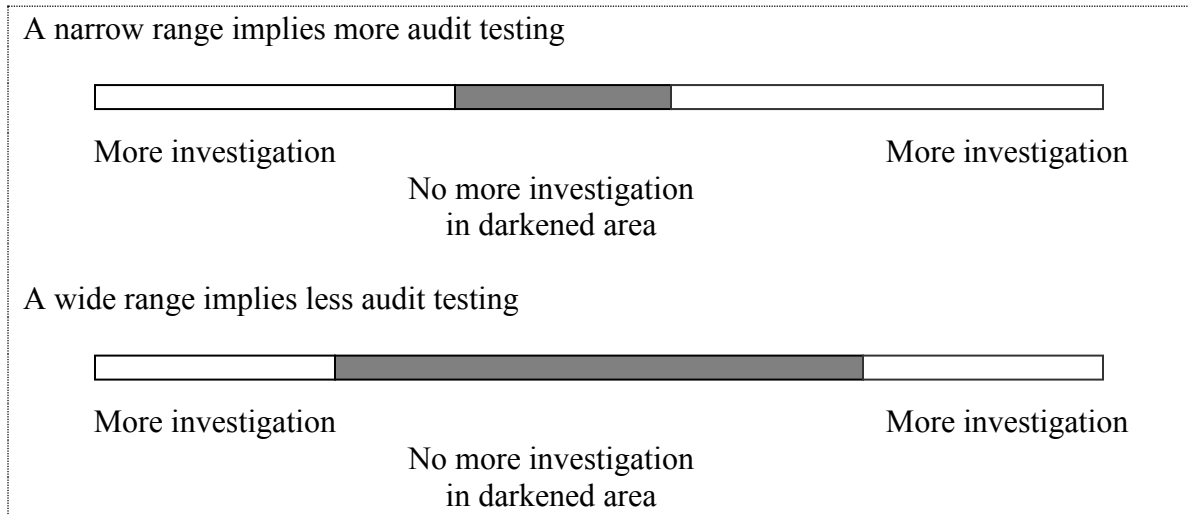
Perceived client risk was measured using a 3-item scale anchored at 1 = high risk, 4 = moderate risk and 7 = low risk. "What is the likelihood that the client's financial statements would contain a material misstatement?" was one of the items on this scale. See appendix N for a list of the questions. These items were modified from the 2009 Professional Engagement Manual (PEM) forms (PEM Forms³ – Audits, New engagement – Acceptance form 405, p 4 of 4) (PEM Forms – Overall audit strategy form 400, p 3 of 4) and previous research (Pratt & Stice, 1994). The Cronbach's alpha for this measure is good ($\alpha = .852$).

Audit plan, the amount of risk that the auditor was willing to take in the audit, was proxied by the width of the acceptable range (the range of gross profit margins where no more investigation will be conducted). It was the difference between the upper bound of the acceptable gross profit margins and the lower bound of the acceptable gross profit margins. If the range was wide, then many values were acceptable and the extent of audit testing was lower (there was a higher risk that the audit procedures would not detect an error that matters in the financial statements). If the range was narrow, then fewer values were acceptable and the extent of audit testing was higher (there was a lower risk that the

³ The Professional Engagement Manual (PEM) forms mentioned are produced by the Canadian Institute of Chartered Accountants (CICA) and used by auditors to document the evidence that supports a client risk assessment.

audit procedures would not detect an error that matters). Figure 9 depicts this relationship.

Figure 9. Relationship between the width of the range and the extent of audit testing.



These decisions are collectively known as analytical procedures and are a routine part of an audit (Solomon & Shields, 1995). The width and placement of this range has been called the “ultimate decision” when planning an audit because it defines the extent of the audit or how much investigation will be done (Biggs & Wild, 1985, p 616; Solomon & Shields, 1995, p 149) and has been used as a measure of the extent of the audit in prior research (for example, Heintz & White, 1989).

Control variables. *Client integrity* was measured using an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly. Its Chronbach’s alpha is good ($\alpha = .844$). Integrity is included as a control variable since it is an antecedent of trust in the integrated model of trust (Mayer et al., 1995). If it were not included, some of the

effects attributable to integrity may be attributed to ability or benevolence because there is some correlation among the three dimensions of trustworthiness.

9.4.2 Analysis. A linear regression was used to assess whether there was a relationship between ability, benevolence and propensity to trust and trust itself. Integrity was controlled for as it is part of the integrated model of trust. This regression was first run without the moderators (excluding the interaction terms propensity to trust times ability, propensity to trust times benevolence, propensity to trust times integrity) to see the direct effects. Then these interaction terms were included in the regression to see if they improved the explanatory power of the model.

A linear regression was also used to assess whether there was a relationship between ability and benevolence and perceived client risk. Integrity was controlled for as it is also one of the trustworthy factors.

Lastly, a linear regression was used to assess whether there was a relationship between trust, risk and the audit plan. This regression was first run without the moderator (excluding the interaction term trust times risk) to see the direct effects. Then the interaction term was included in the regression to see if it improved the explanatory power of the model.

9.5 Results

9.5.1 Internal consistency. All the Chronbach's alpha scores were good except for the *propensity to trust* scale which was in the acceptable range.

9.5.2 Scenario effects. The *scenario* number had a significant effect on *perceived client risk* ($F_{1,118} = 17.320, p < .001$) and a marginally significant effect on auditor *trust* ($F_{1,118} = 3.166, p = .078$). These results appear to be driven by the *ability* manipulation instead of the *benevolence* manipulation. The *ability* manipulation had a significant effect on *perceived client risk* ($F_{1,118} = 17.590, p < .001$) and a non-significant effect on auditor *trust* ($F_{1,118} = 2.698, p = .103$). The *benevolence* manipulation was non-significant for *perceived client risk* ($F_{1,118} = 0.655, p = .420$) and for auditor *trust* ($F_{1,118} = 0.427, p = .515$).

9.5.3 Correlation matrix in Table 4 shows that ability, benevolence and integrity are weakly positively correlated as expected because of the overlap discovered in Study 2 – classification of behavior along the three dimensions of trustworthiness. Trust is weakly positively correlated with ability, benevolence and integrity as expected based on the theoretical model. Also as expected, risk is weakly positively correlated with ability, benevolence and integrity. Lastly, risk and trust are weakly positively correlated; however, this means that as trust increases, risk decreases because a numerically high score of risk is anchored at low risk.

Table 4. Pearson Correlation Matrix.

Measure	1	2	3	4	5	6	7
1. Ability							
2. Benevolence	.458**						
3. Integrity	.573**	.659**					
4. Propensity	.074	.022	-.005				
5. Trust	.357**	.494**	.561**	.013			
6. Risk	.368**	.307**	.449**	-.045	.268**		
7. Audit plan	-.025	.068	.066	-.025	-.024	.121	
8. Ability x propensity	-.223*	-.168	-.233*	-.022	-.204*	-.014	.121
9. Benevolence x propensity	-.145	-.171	-.097	.008	-.079	.095	.077
10. Integrity x propensity	-.212*	-.103	-.199*	-.104	-.137	-.015	.006
11. Trust x risk	-.045	-.092	-.022	.046	.066	.133	.050

Measure	8	9	10	11	M	SD
1. Ability					.000	.670
2. Benevolence					.000	.792
3. Integrity					.000	.765
4. Propensity					.000	.589
5. Trust					.000	1.004
6. Risk					.000	1.145
7. Audit plan					.004	4.323
8. Ability x propensity					.029	.403
9. Benevolence x propensity	.613**				.010	.552
10. Integrity x propensity	.634**	.732**			-.002	.504
11. Trust x risk	.105	.172	.142		.306	1.220

* p<.05 ** p<.01

9.5.4 Trustworthiness and trust model tested the effects of ability, benevolence and propensity to trust by regressing them on trust, controlling for integrity. The expanded model added the interaction terms as moderators.

The model was significant ($F_{4,115} = 14.991, p < .001$). The standardized coefficient for benevolence was positive and significant (.216, $p = .036$); however, the standardized coefficient for ability was non-significant (.026, $p = .778$). Thus hypothesis 1 was only partially supported. An increase in the level of perceived benevolence that the auditors attributed to the management of the firm being audited led to a higher level of trust in those managers. A higher level of perceived ability did not lead to a higher level of trust by the auditors. The standardized coefficient for propensity to trust was non-significant (.008, $p = .915$). Thus hypothesis 2 was not supported. The auditors' propensity to trust did not affect their level of trust in the management of the firm being audited.

The expanded model included the interaction terms *propensity to trust times ability*, *propensity to trust times benevolence* and *propensity to trust times integrity*. The model was significant ($F_{7,112} = 8.653, p < .001$). The standardized coefficient for benevolence was significant (.232, $p = .030$); the standardized coefficient for ability was non-significant (.018, $p = .850$); the interaction terms were also non-significant (.088, $p = .473$ for *propensity to trust times benevolence* and $-.109, p = .297$ for *propensity to trust times ability*) Thus hypothesis 3 was not supported. An auditor's propensity to trust did not moderate their perceptions of the ability and benevolence of the management of the firm being audited. These results are summarized in Table 5.

Table 5. Regression estimates for the effects of ability, benevolence and propensity to trust on trust controlling for integrity.

Predictor	Predictors of trust	
	ΔR^2	beta
Step 1	.315 ***	
C: Integrity \rightarrow Trust		.561 ***
Step 2	.028	
H1: Ability \rightarrow Trust		.026
H1: Benevolence \rightarrow Trust		.216 *
H2: Propensity \rightarrow Trust		.008
Step 3	.001	
C: Integrity*Propensity \rightarrow Trust		-.029
Step 4	.007	
H3: Ability*Propensity \rightarrow Trust		-.109
H3: Benevolence*Propensity \rightarrow Trust		.088
Total R ²	.351 ***	
<i>n</i>	120	

* $p < .05$ ** $p < .01$ *** $p < .001$

9.5.5 Trustworthiness and risk model tests the effects of ability and benevolence on risk controlling for integrity.

Ability and benevolence were regressed onto risk and the model was significant ($F_{3,116} = 10.898, p < .001$). Nevertheless, the standardized coefficient for benevolence was non-significant ($-.005, p = .965$); the standardized coefficient for ability was non-significant ($.165, p = .105$). Thus hypotheses 4 and 5 were not supported. The perceived level of benevolence and ability that the auditors attributed to the management of the firm being audited did not affect the auditors' assessment of the risk of a material misstatement in the financial reports. See Table 6 for a summary of these results.

Table 6. Regression estimates for the effects of ability and benevolence on risk controlling for integrity.

Predictor	Predictors of risk	
	ΔR^2	beta
Step 1	.202 ***	
C: Integrity \rightarrow Risk		.449 ***
Step 2	.018	
H4: Ability \rightarrow Risk		.165
H5: Benevolence \rightarrow Risk		-.005
Total R^2	.220 ***	
<i>n</i>	120	

* $p < .05$ ** $p < .01$ *** $p < .001$

9.5.6 Trust, risk and audit plan model tests the effects of risk and trust by regressing them on the extent of the audit testing. The expanded model added the interaction term as a moderator.

The model was non-significant ($F_{2,117} = 1.083, p = .342$). Thus hypothesis 6 and 7 were not supported. When auditors trusted the management of the firm being audited, they did not reduce the amount of audit tests. Nor did the auditors increase the amount of audit tests when they assessed a higher risk of material misstatement in the financial statements.

When the interaction term, *trust times risk*, was added to expand the model, the results were also non-significant ($F_{3,116} = .768, p = .514$). Thus hypothesis 8 was not supported. The amount of risk of a material misstatement in the financial statements did

not change the way that trust affected the amount of audit tests. These results are listed in Table 7.

Table 7. Regression estimates for the effects of risk and trust on the extent of audit testing.

Predictors of audit plan extent		
Predictor	ΔR^2	beta
Step 1	.018	
H6: Trust \rightarrow Audit Plan		-.061
H7: Risk \rightarrow Audit Plan		.138
Step 2	.001	
H8: Trust*Risk \rightarrow Audit Plan		.036
Total R^2	.019	
<i>n</i>	120	

* $p < .05$ ** $p < .01$ *** $p < .001$

9.6 Discussion

This study was a pilot test of the main research question with auditing students as participants instead of experienced auditors.

9.6.1 Trustworthiness and trust model. The results for the antecedents of trust in the model with no moderators were somewhat surprising. As theorized, benevolence and integrity affected trust. Propensity to trust did not. There are several potential explanations for this. First, the participants had some knowledge of the management of the firm they were assessing based on the video and this knowledge of the specific

individuals may have overridden their general propensity to trust (Mayer et al., 1995). Second, their professional training may be preparing them to treat the acceptance of an audit engagement as an unambiguous situation and thus their personality traits have less scope to affect their actions (Gill et al., 2005). Lastly, this professional training may allow them to compensate for their natural tendencies by being professionally skeptical as required by their professional standards (Canadian Institute of Chartered Accountants, 2008, section 5090.05).

That ability did not affect trust was a surprise, but one of the professional auditors interviewed to verify the appropriateness of the model (Jennifer) offered a potential explanation. She noted that one of the clients she trusted was not very competent, but was motivated to record the financial statements correctly. "...this one client that I was telling you, I trust her integrity. I do not trust their accounting records...Just because they don't have the competence in house." The client she described as untrustworthy was very competent but was also motivated to achieve specific financial results. She noted that competence in these circumstances actually leads to less trust. "...think about an audit client who actually...is quite competent with their accounting records...But they have a motivation to meet a certain budgeted target...But I find that can be a concern, because there is a really big bias to meeting that target." Her idea was that the intention of the auditor was more important to trust than their ability.

To explore whether this could be a potential explanation, I did a post hoc analysis of the interaction terms (ability times integrity, ability times benevolence, integrity times

benevolence, propensity to trust times ability, propensity to trust times benevolence, propensity to trust times integrity) as well as the direct terms (ability, benevolence and integrity) on risk. Again, the model was significant ($F_{10,109} = 6.049, p < .001$); however, none of the interaction terms were significant. Thus the data, shown in Table 8, do not seem to support this explanation.

Table 8. Post hoc regression estimates for the effects of ability, benevolence and propensity to trust on trust controlling for integrity.

Predictor	Predictors of trust	
	ΔR^2	beta
Step 1	.315 ***	
C: Integrity \rightarrow Trust		.561 ***
Step 2	.028	
H1: Ability \rightarrow Trust		.026
H1: Benevolence \rightarrow Trust		.216 *
H2: Propensity \rightarrow Trust		.008
Step 3	.001	
C: Integrity*Propensity \rightarrow Trust		-.029
Step 4	.007	
H3: Ability*Propensity \rightarrow Trust		-.109
H3: Benevolence*Propensity \rightarrow Trust		.088
Step 5	.006	
Ability*Benevolence \rightarrow Trust		-.131
Ability*Integrity \rightarrow Trust		.054
Benevolence*Integrity \rightarrow Trust		.117
Total R ²	.357 ***	
n	120	

* p<.05 ** p<.01 *** p<.001

Adding propensity to trust as a moderator of the effects of the trustworthiness factors on trust did not change the results significantly. Benevolence and integrity continued to

be positively correlated to trust; ability remained non-significant. Surprisingly, none of the interaction terms achieved significance.

9.6.2 Trustworthiness and risk model. The results of the effect of ability, benevolence and integrity on perceived client risk were interesting. As expected, as integrity increased, the assessment of risk decreased (recall that a high numerical risk score means lower risk). Benevolence did not appear to influence the assessment of perceived client risk at all. Counterintuitively, ability did not appear to affect the amount of perceived client risk. This may be explained by Jennifer's reasoning that clients who are motivated to bias their financial statements are only a problem if they are competent to do so and thus ability does not affect risk directly but in combination with benevolence or with integrity.

9.6.3 Trust, risk and audit plan model. The non-significant effects of trust and risk on the audit plan are also interesting. One potential explanation for trust not affecting the audit plan is that the auditing student's professional training is having an effect and thus their norm of professional skepticism has a stronger effect than their trust. The non-significance of the effect of risk on the audit plan is far more surprising. An assessment of the risk of a significant error in the financial statements is supposed to be the underpinning of all audit decisions on the type and extent of audit tests and thus risk should have a significant effect on the audit plan (Canadian Institute of Chartered Accountants, 2008, section 5025.55 & 5141.102). This lack of applying professional

standards of risk assessment to their decision is at odds with the above explanation of professional training having a strong effect and overcoming the effect of trust.

Study 5 showed that the videos successfully manipulated the perceived ability and benevolence of the management of the firm being audited and that the scales used were reliable.

Chapter 10. Study 6 – Participants and Common Procedures

With the successful pilot test of the expanded experimental materials, I am now ready to address the research question, “Are auditing professionals influenced by their trust of clients” using experienced auditors. Four approaches were used. First, there was a quantitative analysis similar to that used in Study 5. The research goal here was to assess the effect of trustworthiness on trust and on risk and to see if these different levels of trust and risk affected an audit decision. Secondly, the experienced auditors were interviewed about their experience with a client that they trusted extensively and one that they did not trust. The research goal here was to explore how well the integrated theory of trust applied in a situation where trust was not supposed to affect decisions. Thirdly, auditors were asked to list the risk factors that they considered when they were estimating the risk of an audit engagement with the new client shown in the video. The research goal was to explore the ways that trustworthiness affected an auditor’s assessment of risk. Lastly, the experienced auditors were asked to say their thoughts out loud (a “think-aloud” protocol) while estimating the audited gross profit margin and making the extent of audit testing

decision. The goal was to explore how auditors justified their audit decision, especially if it was found that trust affected this decision.

10.1 Method

10.1.1 Participants. Twenty six experienced auditors participated in this study. Those who participated between Jan. and Apr. 30th, 2011 were offered a chance to win \$500 as an incentive to participate. Their ages ranged from three in their twenties, six in their thirties, four in their forties, ten in their fifties to three in their sixties. Twelve participants were female; fourteen were male. Most (seventeen) were Chartered Accountants (CAs). Two were in the final stages of becoming CAs. Three were CAs and Certified Professional Accountants (CPAs). Three were Certified General Accountants (CGAs). One was a CPA. Most (eleven) were at the partner level in their firms. Five were at the manager level; five at the senior auditor level; two were at the junior auditor level and three did not specify their level in their firm. Most (ten) worked for a firm with over five partners. Six worked for a “big 4” accounting firm; six worked in firms with up to five partners and four were individual professionals.

10.1.2 Procedures. Once again, the participants were asked to role-play an auditor who was deciding whether to accept an audit engagement with the firm shown in the experimental video. The experimental manipulation was to include high or low ability behaviors in the scenario and to include high or low benevolence behaviors in the scenario resulting in one high trustworthiness scenario, one low trustworthiness scenario

and two moderate trustworthiness scenarios. Participants were randomly assigned to one of the four experimental conditions by asking them to choose one of four unmarked envelopes containing the experimental videos. To protect their anonymity participants were asked to provide an alias and an abbreviation of this alias is used to identify all of their comments.

An additional question was added to the risk assessment asking participants to identify key risks and other factors contributing to the risk of a material misstatement at the financial statement level which allowed an analysis of these factors. Participants were asked to use a “think aloud” verbal protocol while deciding the extent of audit testing providing data on this decision. Lastly, two interview questions were added which asked about their experience with a client that they trusted and one they did not trust. Appendix P contains the risk and extent of audit testing questionnaire. Appendix Q contains the trust, trustworthiness and propensity to trust questionnaire.

Chapter 11. 6A – Consequences of Trustworthiness

The research goal here was to assess the effect of trustworthiness on risk and on trust and to see if these different levels of trust and risk affected an audit decision.

11.1 Method

11.1.1 Measures. Independent variables. *Client ability* was measured with an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). *Client benevolence* was measured with an established 5-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). The auditor's *Propensity to trust* was measured with an established 8-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). The internal consistency values for these scales are at or above acceptable levels (ability $\alpha = .842$; benevolence $\alpha = .811$; propensity to trust $\alpha = .791$).

Dependent variables. Auditor's *trust* was measured by an established 10-item scale anchored at 1 = not at all willing and 7 = completely willing (Gillespie, 2003). Its internal consistency was good ($\alpha = .822$) and in line with the scores for Study 4 and 5. *Perceived client risk* was measured by a 3-item scale anchored at 1 = high risk and 7 = low risk. Its internal consistency was good ($\alpha = .899$) and was better than the score for the auditing student sample in Study 5 ($\alpha = .852$). *Audit plan* was measured by the width of the range of gross profit margins where no more investigation will be conducted. Counterintuitively, when the range was wide, then the extent of audit testing was lower. When the range was narrow, the extent of audit testing was higher.

Control variables. *Client integrity* was measured with an established 6-item scale anchored at 1 = disagree strongly and 5 = agree strongly (Mayer & Davis, 1999). Its internal consistency is good ($\alpha = .832$).

11.2 Results

11.2.1 Manipulation checks. To check the *high benevolence* manipulation, the experienced auditors were asked the following questions at the end of the questionnaire. How likely or unlikely a benevolent manager was to *take the time to socialize with subordinates, provide auditors with a large comfortable room to work in, volunteer information useful to the auditor* and *respond quickly to an auditor's request for documents*. The scale was anchored at 1= extremely unlikely and 7= extremely likely. The scores were all above the midpoint (four). They ranged from a minimum of five to a maximum of seven with a mean of 5.38 and a standard deviation of .666.

To check the *low benevolence* manipulation, the experienced auditors were asked how likely or unlikely a non-benevolent manager was to *threaten to replace the auditors, provide auditors with a small, uncomfortable room to work in, respond slowly to an auditor's request for documents, and blame subordinates for the manager's mistakes*. The scale was anchored at 1= extremely unlikely and 7= extremely likely. Most of the scores were above the midpoint (four). They ranged from a minimum of 1.75 to a maximum of 6.5 with a mean of 4.96 and a standard deviation of 1.27.

To check the *high ability* manipulation, the experienced auditors were asked how likely or unlikely a competent manager was to *keep up to date with professional developments, be innovative, finish a report on time, and return phone calls promptly*. The scale was anchored at 1= extremely unlikely and 7= extremely likely. The scores

were all above the midpoint (four). They ranged from a minimum of 4.25 to a maximum of 6.50 with a mean of 5.66 and a standard deviation of .633.

To check the *low ability* manipulation, the experienced auditors were asked how likely or unlikely an incompetent manager was to *promise a report for a specific date knowing it would not be finished, make an addition error on an expense account report, be unable to explain budget variances, and be slow to answer an auditor's questions*. The scale was anchored at 1= extremely unlikely and 7= extremely likely. The scores were all at or above the midpoint (four). They ranged from a minimum of four to a maximum of 6.75 with a mean of 5.45 and a standard deviation of .786. Table 9 shows these results.

Table 9. Descriptive statistics for the manipulation checks.

Type of manipulation	minimum	maximum	mean	standard deviation
High benevolence	5.00	7.00	5.38	.666
Low benevolence	1.75	6.50	4.96	1.270
High ability	4.25	6.50	5.66	.633
Low ability	4.00	6.75	5.45	.786

Scores rated as 1= extremely unlikely 4 is the midpoint 7= extremely likely

The manipulation checks show that, on average, experienced auditors thought that the behavior used in the manipulation was likely for the type of manager in the scenario.

As a further check to assess whether including high ability behaviors in an experimental scenario increased the rating of the ability of the managers, and whether including low ability behaviors in an experimental scenario decreased the rating of the ability of the managers, a one-way ANOVA compared the ability scores for scenarios

which included high behaviors with scenarios including low ability behaviors. The results were marginally significant ($F_{1,24} = 3.157, p = .088$). Thus the ability manipulation was marginally successful.

As a further check to assess whether including high benevolence behaviors in an experimental scenario increased the rating of the benevolence of the managers, and whether including low benevolence behaviors in an experimental scenario decreased the rating of the benevolence of the managers, a one-way ANOVA compared the benevolence scores for scenarios which included high benevolence behaviors with scenarios including low benevolence behaviors. The results were marginally significant ($F_{1,24} = 2.918, p = .100$). Thus the benevolence manipulation was marginally successful.

11.2.2 Scenario effects. The *scenario* number did not have a significant effect on *perceived client risk* ($F_{1,24} = 0.661, p = .424$) but had a marginally significant effect on *auditor trust* ($F_{1,24} = 2.956, p = .098$). These results appear to be driven by the *ability* manipulation instead of the *benevolence* manipulation. The *ability* manipulation had a non-significant effect on *perceived client risk* ($F_{1,24} = 0.802, p = .380$) and a marginally significant effect on *auditor trust* ($F_{1,24} = 4.195, p = .052$). The *benevolence* manipulation was non-significant for *perceived client risk* ($F_{1,24} = 0.001, p = .974$) and for *auditor trust* ($F_{1,24} = 0.022, p = .882$).

11.2.3 Correlation matrix in Table 10 shows that ability, benevolence and integrity are weakly positively correlated as expected because of the overlap discovered in Study 2

– classification of behavior along the three dimensions of trustworthiness. In this sample of experienced auditors, propensity to trust is weakly positively correlated with their perceptions of the ability, benevolence and integrity of the client. Trust and risk are weakly positively correlated with ability, but not with benevolence nor with integrity. The extent of the audit plan is weakly negatively correlated with risk. This means that low risk is positively correlated with more audit testing.

Table 10. Pearson correlation matrix.

Measure	1	2	3	4	5	6	7
1. Ability							
2. Benevolence	.450*						
3. Integrity	.574**	.588**					
4. Propensity	.488*	.526**	.479*				
5. Trust	.409*	.053	.318	-.003			
6. Risk	.396*	.161	.295	.101	.318		
7. Audit plan	-.353	-.210	-.262	-.201	.253	-.402*	
8. Ability x propensity	-.494*	-.056	-.196	-.171	-.492*	-.338	-.016
9. Benevolence x propensity	-.076	.124	-.109	.095	-.076	-.051	-.125
10. Integrity x propensity	-.263	-.108	-.195	-.266	.047	-.014	-.084
11. Trust x risk	-.010	.052	.139	.028	-.045	-.141	-.119

Measure	8	9	10	11	M	SD
1. Ability					.000	.621
2. Benevolence					.000	.786
3. Integrity					.000	.744
4. Propensity					.000	.577
5. Trust					.000	.901
6. Risk					.000	.971
7. Audit plan					.000	3.284
8. Ability x propensity					.168	.345
9. Benevolence x propensity	.273				.229	.323
10. Integrity x propensity	.438*	.530**			.198	.307
11. Trust x risk	.216	.276	.330		.267	.855

* p<.05 ** p<.01

11.2.4 Tests of the models. *Trustworthiness and trust model* tested the effects of ability, benevolence and propensity to trust by regressing them on trust, controlling for integrity. The expanded model added the interaction terms as moderators.

The model was not significant ($F_{4,21} = 1.942, p = .141$). Thus neither hypothesis 1 nor hypothesis 2 was supported. An auditor's perception of the ability and benevolence of the management of the firm being audited did not affect how much the auditor trusted them. Nor did the auditor's propensity to trust affect how much the auditor's trusted the management. Nevertheless, the standardized coefficient for ability was marginally significant (.453, $p = .072$) opening up the possibility that with more participants, the model would become significant.

When the interaction terms *propensity to trust times ability*, *propensity to trust times benevolence* and *propensity to trust times integrity* were added to the model it was marginally significant ($F_{7,18} = 2.098, p = .097$). The interaction term *ability times propensity to trust* was significant ($-.507, p = .036$). None of the other relationships were significant (.205, $p = .435$ for *ability*, $-.117, p = .630$ for *benevolence*, $.323, p = .208$ for *integrity*, $-.189, p = .424$ for *propensity to trust*). Nor were the other interaction terms significant ($-.036, p = .872$ for *propensity to trust times benevolence* and $.342, p = .162$ for *propensity to trust times integrity*). Thus hypothesis 3 was partially supported. An auditor's propensity to trust affects how much the auditor's perception of management's ability affects their trust of the management of the firm being audited. It does not affect

how much the auditor's perception of management's benevolence affects their trust of the management of the firm being audited. See Table 11 for a list of these results.

Table 11. Regression estimates for the effects of ability, benevolence and propensity to trust on trust controlling for integrity.

Predictor	Predictors of trust	
	ΔR^2	beta
Step 1	.101	
C: Integrity \rightarrow Trust		.318
Step 2	.169	
H1: Ability \rightarrow Trust		.453
H1: Benevolence \rightarrow Trust		-.182
H2: Propensity \rightarrow Trust		-.269
Step 3	.020	
C: Integrity*Propensity \rightarrow Trust		.147
Step 4	.160	
H3: Ability*Propensity \rightarrow Trust		-.507*
H3: Benevolence*Propensity \rightarrow Trust		-.036
Total R^2	.449	
n	26	

* $p < .05$ ** $p < .01$ *** $p < .001$

Trustworthiness and risk model tests the effects of ability and benevolence on risk controlling for integrity.

The model was non-significant ($F_{3,22} = 1.475, p = .249$). Thus hypotheses 4 and 5 were not supported. How an auditor perceived the ability and benevolence of the management of the firm being audited had no effect on their assessment of the risk of a material misstatement in the financial reports.

Table 12. Regression estimates for the effects of ability and benevolence on risk controlling for integrity.

Predictor	Predictors of risk	
	ΔR^2	beta
Step 1	.087	
C: Integrity \rightarrow Risk		.295
Step 2	.081	
H4: Ability \rightarrow Risk		.351
H5: Benevolence \rightarrow Risk		-.080
Total R^2	.167	
<i>n</i>	26	

* $p < .05$ ** $p < .01$ *** $p < .001$

Trust, risk and audit plan model tested the effects of risk and trust on the extent of the audit plan. The expanded model added the interaction term as a moderator.

The model was significant ($F_{2,23} = 5.475, p = .011$). The standardized coefficient for trust was significant (.424, $p = .028$) which means that hypothesis 6 is supported. As trust increased, the range of figures that were accepted also increased, which means that the extent of the audit testing was lower, as hypothesized. Higher trust; less audit testing. The standardized coefficient for risk was negatively significant (-.536, $p = .007$) which means that hypothesis 7 is not supported. Hypothesis 7 posits that more perceived risk means more audit testing. A high numerical score for risk is anchored as low risk. A higher range means that more numbers are accepted and thus the extent of audit testing is lower. The standardized coefficient for risk was negative so as the numerical score for risk increases, the range of figures that are accepted decreases. Equivalently, as the risk is

lowered, the extent of the audit testing gets bigger. This is the opposite of hypothesis 7 where more perceived risk means more audit testing.

When the interaction term *trust times risk* was added, the model was significant ($F_{3,22} = 4.019, p = .020$). The standardized coefficient for trust was significant (.424, $p = .029$). The standardized coefficient for risk was significant (-.562, $p = .005$). The interaction term risk times trust was non-significant (-.179, $p = .312$). Thus hypothesis 8 was not supported. The degree of risk of a material misstatement in the financial statements did not change the effects of trust on the amount of audit testing. Table 13 summarizes these relationships.

Table 13. Regression estimates for the effects of risk and trust on the extent of the audit testing.

Predictor	Predictors of audit plan extent	
	ΔR^2	beta
Step 1	.323 *	
H6: Trust \rightarrow Audit Plan		.424 *
H7: Risk \rightarrow Audit Plan		-.536 **
Step 2	.031	
H8: Trust*Risk \rightarrow Audit Plan		-.179
Total R ²	.354 *	
n	26	

* p<.05 ** p<.01 *** p<.001

11.3 Discussion

11.3.1 Manipulation checks. The manipulation checks showed that the manipulations had the desired effects. The effect of the videos on the ratings of ability and benevolence were marginally significant and thus not as strong as in the previous studies. This may be due to the manipulation not being as effective with the experienced auditors. It could also be due to the small sample size.

11.3.2 Tests of the models. The results for *trustworthiness and trust model* were unexpected as there were no direct effects of ability, benevolence, integrity nor propensity to trust on trust. It is tempting to say that a larger sample size would make the model significant, especially since the standardized coefficient of ability was marginally significant in the small sample. Unfortunately, the expanded trustworthiness and trust model with the interaction terms was marginally significant with the same small sample size so there may be some other explanation. Moreover, only the interaction term ability times propensity to trust had an effect in the expanded model. Thus although the expanded model explained more of the variability in the results than the direct model, only one of the seven terms was significant. I will attempt to explain these results by exploring how the integrated theory of trust applies in this situation where trust having an effect was proscribed by professional standards in 6D, interviews with auditors on trust in client management.

The results for *trustworthiness and risk model* were also unexpected as the model was not significant. Recall that auditing standards call for ability and integrity to affect the level of risk and that the amount of audit testing is to be based on this level of risk

(Canadian Institute of Chartered Accountants, 2008). Trust is supposed to have no additional effect on the extent of audit testing once ability and integrity have been taken into account through risk (Canadian Institute of Chartered Accountants, 2008). This was described earlier in section 3.3.7 and contrasted with my model where both risk and trust were expected to affect the extent of audit testing. In 6B, effect of trustworthiness on risk, I will explore qualitatively what factors (such as ability, benevolence and integrity) affected an auditor's assessment of risk.

The direct effects for *trust, risk and audit plan model* were partially supported. As hypothesized, when trust increased, the amount of audit testing decreased. On the other hand, when risk increased, the extent of audit testing unexpectedly decreased. When the interaction term was added to the model, the effect of trust and risk on the extent of audit testing was virtually unchanged. The interaction between trust and risk was non-significant. A verbal protocol analysis in 6C will analyze qualitatively how auditors justified their audit decision on the extent of audit testing in an attempt to explain these anomalies.

Chapter 12. 6B – Effect of Trustworthiness on Risk

Auditors were asked to list the risk factors that they considered when they were estimating the risk of an audit engagement with the new client shown in the video. The research goal was to explore the ways that ability and benevolence affected an auditor's assessment of risk. Not much is known about how different types of risk affect the extent

of audit testing (Rennie et al., 2010), an important problem since the type and amount of audit testing is supposed to be based on the level of risk (Canadian Institute of Chartered Accountants, 2008, section 5025.55 & 5141.102). This research, which manipulates the levels of ability and benevolence, creates different levels of risk and different types of risk because of these manipulations and provides an opportunity to address this gap.

12.1 Method

12.1.1 Participants. These twenty-two experienced external auditors are a subset of the auditors who participated in the quantitative study. They participated between January 2011 and July 2011 and included 12 women and 10 men. Their years of work experience averaged 16.5 years and ranged from 1 year to 57 years. Twenty of them were Chartered Accountants (CAs) and the other two were a Certified General Accountant (CGA) and a Certified Professional Accountant (CPA). Of the 20 CAs, 3 were also CPAs, 1 had a CBV also and 2 were “almost CAs” – they had to get more experience before they were officially recognized. In terms of ages, 3 were in their 20s, 6 in their 30s, 3 in their 40s, 8 in their 50s and 2 were over 60. With respect to where they were employed, 6 worked for a “big 4” accounting firm, 6 were in a firm with over 5 partners, 6 were in a firm of up to 5 partners, and 4 were individual practitioners. In terms of their titles, 6 were partners or managing and senior partners, 8 were senior managers, senior auditor, senior accountant or sole practitioner, 2 were managers, 1 was an auditor, 2 were staff accountants and 3 had unknown titles.

12.1.2 Procedures. The last question on the risk assessment asked the auditors to “Identify key risks and other factors contributing to the risk of a material misstatement at the financial statement level.” (modified from the 2009 Professional Engagement Manual (PEM) forms (PEM Forms⁴ – Summary of assessed risks form 590, p 1 of 3). These data were the basis for the following analysis.

12.1.3 Analysis. These risk factors included factors that were inherent to the case and common to all scenarios as well as risk factors that were manipulated to create high and low levels of trustworthiness (high ability, low ability, high benevolence, low benevolence). Some examples of the risk factors inherent to the case are the expansion into China and foreign exchange risk. Some examples of the manipulated risk factors are the competence of the client manager in terms of keeping up with professional standards and being able to explain unusual results or variances.

I refer to the reasons that the auditors listed in answer to this question as *free response risk factors*.

I typed all these free response risk factors into a word document without any identifying data – only the free response risk factors were included. Thus, I was blind to the experimental condition. While being blind to the experimental condition, I coded the free response risk factors in two ways. The first way of coding the free response risk factors was to group them by the category of risk. Is this a foreign exchange risk? A

⁴ The Professional Engagement Manual (PEM) forms mentioned are produced by the Canadian Institute of Chartered Accountants (CICA) and used by auditors to document the evidence that supports a client risk assessment.

management integrity risk? A technological risk? The second way of coding the free response risk factors was to group them as triggered by things that were inherent to the case and common to all scenarios or as triggered by behavior that was manipulated in the experiment.

Coding the free response risk factors by category of risk. First, I discuss grouping the free response risk factors by the type of risk. Professional standards require auditors to base their audits on the riskiness of the engagement (Arens et al., 2005) and thus there is a lot of professional knowledge about the types of risk that auditors need to take into account. The free response risk factors were categorized based on factors recognized as business risk such as the competence of the management and the nature of the operations and factors recognized as inherent risk such as the integrity of the management and that judgment is required to record the transactions correctly (Arens et al., 2005). The following list of the risk categories that I used is based on Arens et al. (2005).

1) *Nature of the client's business.* The risk of accepting an audit engagement from this client is affected by the nature of the client's business. For example, there is a greater risk that the client's inventory is obsolete when the client is an electronics manufacturer than when the client makes sheet steel. There is more room for error when the inventory is more likely to be obsolete. Another example is the comparison between a small start-up technology company with one product and a large established and diversified food manufacturer. There is a much greater risk of bankruptcy for the start-up technology company. This increases the chances that the client will have financial problems after the

auditors have finished their audit and makes it more likely that the auditors will have to defend against a charge of not having performed a good audit.

2) *Nonroutine transactions*. When a client firm does not have a lot of experience with a situation, they are less likely to know how to document them correctly in the financial records. Few firms have a lot of experience with losses from a hurricane or with launching a major new product line. This increases the risk of an error in the financial statements and thus, the risk of accepting an audit engagement from this client.

3) *Judgment required to record transactions correctly*. The greater the degree of estimation and management judgment in the amount that are recorded in the financial records, the greater leeway there is for them to be incorrect. Take the case of a multi-year construction project for a large engineering firm. In each year, the engineering firm recognizes revenue from the project based on the percentage of the project that has been completed. This is a far more subjective figure for revenue than in a bookstore where revenue is the actual receipts from the sales of books for the year. High amounts of estimation and judgment increase the risk of an error in the financial statements and thus, the risk of accepting an audit engagement from this client.

4) *Management's integrity*.⁵ If the client firm is dominated by a few managers who lack integrity, there is a higher likelihood that there is an error in the financial statements. Clients with low integrity may be more likely to have conflicts with regulators and

⁵ Recall that auditing standards call for ability and integrity to affect the level of risk and that the amount of audit testing is to be based on this level of risk. Trust is supposed to have no additional effect on the extent of audit testing once ability and integrity have been taken into account through risk.

customers. If these conflicts affect the shareholder's assessment of the quality of the audit, it can result in lawsuits against the auditing firm.

5) *Competence of management.*⁵ When client management is capable, they are more likely to see and minimize potential operating and financing problems. This reduces the chances that the client will have financial problems after the auditors have finished their audit and makes it less likely that the auditors will have to defend against a charge of not having performed a good audit.

6) *Client motivation to manipulate the financial results.*⁶ If client management sees an advantage in misstating the financial statements then there may be a higher risk that there will be an error in them. For example, management bonuses tied to financial results could lead to overstatements of net income. Similarly, a desire to reduce taxes could lead to an intentional understatement of income.

7) *Reliance on the financial statements.* This is a combination of *Distribution of ownership, Nature and amount of liabilities* and *Client size* in Arens et al. (2005). The more users there are of the financial statements of the client, the more the auditor is exposed (for example to lawsuits) if there is a significant error in the financial records that the audit does not detect. A firm like Bell Canada, with numerous individual conservative shareholders would be a higher risk to auditors than a family owned firm like H Imbleau and Son, or William H Kaufman Inc. where there were far fewer

⁶ This motivation to manipulate the financial results exists regardless of which particular client is involved. This category of risk would not be a part of trust because it is a factor "...outside of the relationship [with the trustee] that make the decision significant and uncertain." (Mayer et al., 1995, p 726).

shareholders. As well, if users place a lot of reliance on the financial statements, it is more likely to harm the auditors' reputation should an error be uncovered later. Take the case where a company is issuing stock and it appears to be a good buy based on the company's recent financial statements. If a lot of shareholders buy the stock and the stock price falls because the company has problems, there is more likely to be fallout for the auditing firm because of the many losses suffered by people who relied on the financial statements.

8) *Financial risk*. This is a combination of *Liquidity position*, *Profits and losses in previous years* and *Method of financing growth* in Arens et al. (2005). Should a client be short of cash or working capital, then they may have difficulty paying their bills in the future. When a client's profits are declining (or losses are increasing), this may be symptomatic that there will be future problems with profitability or solvency. If debt is used by the client to finance its growth, then a downturn in its profits may cause problems with the amount of interest that needs to be paid. It may also trigger a requirement to repay loans in cases where sustained profitability is required in the terms of the loan. This increases the chances that the client will have financial problems after the auditors have finished their audit and makes it more likely that the auditors will have to defend against a charge of not having performed a good audit.

9) *First time client for the auditor*. Once an auditor has experience auditing a client, they have more knowledge about the likelihood of incorrect financial statements for this

client. This increased knowledge gives auditors more confidence in their assessment of the risk of accepting an audit engagement from a repeat client.

10) *Reliance on technology and its complexity*. If clients are very dependent on hardware and software, and they have inadequate maintenance, backup, or recovery plans, their operations may be shut down in case of problems or errors which could affect their profitability. This increases the chances that the client will have financial problems after the auditors have finished their audit and makes it more likely that the auditors will have to defend against a charge of not having performed a good audit.

11) *Results of previous audits*. If there were errors in previous audits, they may recur because errors are often systemic in nature and clients can be slow to make the needed changes. This increases the risk of an error in the financial statements until there is evidence that the deficiency has been corrected.

12) *Related parties*. If the parties in a transaction are not independent and dealing at “arm’s length”, then there is the potential for collusion to manipulate the financial data. For example, the goods sold to a subsidiary by the parent company may be sold at a price that is higher than the usual market price in order to improve the profitability of the parent company. This increases the risk of an error in the financial statements and makes it more likely that the auditors will have to defend against a charge of not having performed a good audit.

13) *Assets susceptible to misappropriation.* Some assets, such as money, stamps, liquor, ipods, may be more vulnerable to theft because they are very salable or useful to the person who steals them. If this type of asset is not closely controlled, it increases the chances that the client will have financial problems after the auditors have finished their audit and makes it more likely that the auditors will have to defend against a charge of not having performed a good audit.

14) *Type of items to be audited.* Some types of items are more risky than others. For example, accounts receivable are riskier when they are overdue than when they are recent. Generally, the older accounts receivables are less likely to be collected. Inventory is riskier when the items are years old than when they are weeks old. Older inventory is more at risk of damage, loss, theft, and obsolescence. Accounts payable are riskier when they are paid to cash rather than paid to a traceable person or firm. This increases the risk of an error in the financial statements and makes it more likely that the auditors will have to defend against a charge of not having performed a good audit.

In addition to the above categories that are based on the expected risk factors covered in Arens et al. (2005), two other categories emerged from the analysis. I have labeled these categories *Client's relationship with preceding auditors* and *Suitability of relationship of new auditor with client* and will describe them in the results section.

Coding the free response risk factors as triggered by behaviors that were inherent to the case and common to all scenarios or as triggered by behavior that was

manipulated in the experiment. The second way of coding the free response risk factors was to group them as risks that are inherent to the case and included in every scenario (not based on manipulated behavior) or as risks that are based on behavior that was manipulated to create high and low levels of trustworthiness (high ability, low ability, high benevolence, low benevolence).

Coding the free response risk factors that were triggered by behavior that was manipulated in the experiment. The manipulations of the client managers as high ability, low ability, high benevolence and low benevolence were achieved by including various behaviors into the scenarios (or not including them). For example, in the high ability scenarios, the Chief financial officer (CFO) referred to the company as *being innovative* and having 355 patents; in the low ability scenarios, the chief operating officer (COO) made an *addition error in an expense account*; in the high benevolence scenarios, the managers *volunteered information useful to the auditor*; and in the low benevolence scenarios, the client managers *blamed subordinates for the manager's mistakes*. If I saw the word “blame” in the free response risk factor, I coded the free response risk factor as manipulated due to a manipulated low benevolence behavior (The preceding auditor says “I’ll have to tell them that you *blame your staff* whenever they are late with something even if you don’t give them enough time to do the job.”).

Coding the free response risk factors that were triggered by behaviors that were inherent to the case and common to all scenarios. Many of the free response risk factors were not due to the manipulated behavior but were included in all of the experimental

conditions. For example, free response risk factors that dealt with the expansion into China or the potential obsolescence of the lighting technology were coded as not manipulated. Other examples of risks that were inherent to the case were the fact that the government was involved and could change the rules legislatively thus forcing the industry to drastically change its strategies. Another example was that the industry was dealing with a new and evolving technology and there was a risk that it would be made obsolete by new discoveries.

The free response risk factors were coded sentence by sentence (or point by point) as they generally contained one type of risk per sentence. Whenever I coded one free response risk factor into two categories, I included the entire sentence, but I underlined the phrase that was coded into the category.

Analysis of the free response risk factors once they were coded for category of risk and trigger. Once the free response risk factors were coded while I was blind to the experimental condition, I went back and added the aliases of the experienced auditors and the experimental condition to the file of coded free response risk factors. This allowed me to do the following analyses.

Free response risk factors for each experimental condition. Firstly, I counted the free response risk factors by each experimental condition and used a chi squared test to see if the counts were lower for the high ability, high benevolence scenario. This count was expected to be lower than the other scenarios because this scenario contained fewer

risk factors than the other scenarios. The experimental manipulation for low ability and low benevolence client managers should have provided more risk factors to be considered than the experimental condition for high ability and high benevolence managers. This is because high ability client managers are less likely to ignore potential operating and financing problems and high benevolence client managers are less likely to put their own interests above those of the external auditors. They are more likely to be helpful and volunteer information. Low ability managers, on the other hand, provide more risk factors such as not being able to explain variances and providing information to the auditors later than it is needed. Low benevolence managers also provide more risk factors such as providing limited resources and arguing with the auditors about how certain items should be included in the financial statements. This means that there are more risk factors available to be considered in the experimental conditions when the client management is either low ability, low benevolence or both.

Risk factors common to all scenarios. Secondly, I looked only at the free response risk factors that were triggered by behaviors that were inherent to the case and common to all the scenarios. I counted these free response risk factors by each experimental condition and used a chi square test to see if the counts were the same for all the scenarios. Since the same number of risk factors were common to all the scenarios, I expected these counts to be the same.

Risk factors triggered by an experimental manipulation. Thirdly, I looked only at the free response risk factors that were triggered by behavior that was manipulated in the

experiment. I counted these free response risk factors by each experimental condition and used a chi square test to see if the counts for the low ability, low benevolence scenario were higher than the other scenarios. I expected the count for this scenario to be higher because it had the additional risk factors due to the low ability manipulation as well as the additional risk factors due to the low benevolence risk factors.

Comparison of risk factors by category of risk factors. Fourthly, I looked at all the counts of free response risk factors by category to see if some categories of risk were given more weight by the experienced auditors than other categories.

Comparison of risk factors by category of risk factors per experimental manipulation. Fifthly, I looked at the counts of free response risk factors by category of risk and by experimental condition to see if the experimental manipulation influenced the relative importance of the various categories of risk. Again, I used a chi square test to assess whether the differences in the counts by categories and experimental manipulation were significant.

Risk factors triggered by an experimental manipulation – positive manipulation vs. negative manipulation. Lastly, I looked at the counts of the free response risk factors by whether it was triggered by a positive manipulation (high ability or high benevolence) or a negative manipulation (low ability or low benevolence). I used a chi square test to see if the positive and negative manipulations had significantly different effects.

12.2 Results

Twenty-two experienced auditors listed 90 sentences containing the risk factors they considered. The majority of these factors contained a single risk, but nine of them combined two risks, thus the total number of free response risk factors was 99. Appendix R describes the risk factors that combined two risks. When a free response risk factor contained two risks, the entire sentence was written, but the pertinent part was underlined. The minimum number of free response risk factors by one auditor was zero, the maximum was 11 and the mean was 4.5.

12.2.1 Free response risk factors for each experimental condition. The most interesting finding was that there was no significant difference in the number of risk factors which were considered for each of the experimental manipulations. Table 14 shows an almost even split between the counts of free response risk factors in the high and low ability scenarios and the high and low benevolence scenarios.

Table 14. Count of the number of free response risk factors by experimental condition.

	High Benevolence	Low Benevolence	Total
High Ability	21 (3.5)	29 (4.8)	50 (4.2)
Low Ability	27 (5.4)	22 (4.4)	49 (4.9)
Total	48 (4.4)	51 (4.6)	99 (4.5)

The number in parenthesis is the average number of free response risk factors per auditor.

The significance of the differences among the total number of free response risk factors was tested with a chi square test. There was no significant difference among the

four experimental conditions ($\chi^2 = 1.808, p = .613$); nor between the most disparate totals – 21 for high ability and high benevolence client management and 29 for high ability and low benevolence client management ($\chi^2 = 1.280, p = .258$); nor between the most disparate averages – 3.5 for high ability and high benevolence and 5.4 for low ability and high benevolence ($\chi^2 = .750, p = .386$). Nor were there significant differences between the number of free response risk factors for high ability client management vs. low ability client management ($\chi^2 = .010, p = .920$); nor for high benevolence client management vs. low benevolence client management ($\chi^2 = .091, p = .763$).

This was surprising since the scenarios contained an identical number of risk factors except for the experimental manipulations. The experimental manipulation for low ability and low benevolence client managers should have provided more risk factors to be considered than the experimental condition for high ability and high benevolence managers. This means that there were more risk factors available to be considered in the experimental conditions when the client management was either low ability, low benevolence or both.

I expected that more risk factors would be considered for the low ability and low benevolence scenarios since more risk factors were available in these scenarios. This was not supported by the data implying that the 22 auditors did not consider all the available risk factors. Amongst themselves, they identified 21 different risk factors inherent to the case and common to every scenario. They identified an additional 18 different risk factors

that were based on various of the experimental manipulations. On average, the auditors identified 4.5 risk factors – less than 25% of the risk factors inherent to the case.

I did further analysis to try to understand why there was no significant difference in the counts of risk factors by experimental condition.

12.2.2 Comparison of risk factors common to all scenarios with risk factors based on an experimental manipulation. First, I split the free response risk factors into two groups; 1) those risk factors inherent to the case and common to all the scenarios and 2) those risk factors that were triggered by behaviors that were part of an experimental manipulation. Appendix S contains details of the coding for risk factors inherent to the case vs. risk factors triggered by the manipulated behaviors. Once the coding was complete, the 99 free response risk factors had been split into 47 free response risk factors that were common to all the scenarios, 45 free response risk factors that were triggered by manipulated behaviors, and 7 that were unknown as is shown in Table 15.

Table 15. Count of free response risk factors by source of the triggering behavior.

Triggered by behaviors common to all scenarios	47
Triggered by manipulated behaviors	45
Unknown whether triggered by manipulated behavior or not manipulated behavior	7
Total	99

12.2.3 Risk factors common to all scenarios. First, I considered the 47 risk factors that were triggered by behavior that was common to all scenarios. These are the risk factors that are identical in every experimental condition. I expected that there would be

no significant differences among their counts for each of the experimental conditions.

This expectation was not borne out. In Table 16, note the low count of free response risk factors for the low ability, low benevolence scenario.

Table 16. Count of free response risk factors which were common to all scenarios.

	High Benevolence	Low Benevolence	Total
High Ability	19 (3.2) ¹	15 (2.5) ²	34 (2.8) ³
Low Ability	9 (1.8)	4 (0.8) ^{1,2}	13 (1.3) ³
Total	28 (2.5)	19 (1.7)	47 (2.1)

¹ different at the 1% level

^{2,3} different at the 5% level

The number in parenthesis is the average number of free response risk factors per auditor.

Chi squared tests were used to assess whether these counts were significantly different one from the other. When the counts were compared across the 4 experimental conditions, significant differences were found ($\chi^2 = 8.151, p = .043$). There was also a significant difference when counts for high ability manipulations were compared with counts for low ability manipulations ($\chi^2 = 5.710, p = .017$). There were no significant differences between the counts for high benevolence vs. low benevolence manipulations. It appears that the low count for the low ability and low benevolence experimental condition was driving these results as this condition was significantly different from two of the other experimental conditions ($\chi^2 = 4.402, p = .036$ for the low ability and low benevolence condition vs. the high ability low benevolence condition; $\chi^2 = 7.083, p = .008$ for the low ability and low benevolence condition vs. the high ability and high benevolence condition). The chi squared tests are not significant for all the other pair wise combinations of experimental conditions.

So despite there being the same number of risk factors common to all scenarios, significantly fewer were considered by the experienced auditors in the low ability, low benevolence scenario.

12.2.4 Risk factors triggered by an experimental manipulation. As I mentioned earlier, I expected a higher count of the free response risk factors for the low ability and low benevolence manipulation than for the high ability and high benevolence manipulation. This is because the low ability and low benevolence manipulation provides additional risk factors that the high ability and high benevolent manipulation does not.

This expectation is borne out when looking at the free response risk factors that were triggered by the experimental manipulations. In Table 17, note how few free response risk factors were triggered by the manipulations for the high ability, high benevolence scenario.

Table 17. Count of free response risk factors which were triggered by behaviors manipulated in the experimental conditions.

	High Benevolence	Low Benevolence	Total
High Ability	2 (0.3) ^{1,2,3}	13 (2.2) ¹	15 (1.3) ⁴
Low Ability	14 (2.8) ²	16 (3.2) ³	30 (3.0) ⁴
Total	16 (1.5) ⁵	29 (2.6) ⁵	45 (2.0)

^{1,2,3,4} different at the 1% level

⁵ different at the 10% level

The number in parenthesis is the average number of free response risk factors per auditor.

Chi squared tests were used to assess whether these counts were significantly different one from the other. When the counts were compared across the 4 experimental conditions, significant differences were found ($\chi^2 = 12.910, p = .005$). There is also a significant difference when counts for high ability manipulations are compared with counts for low ability manipulations ($\chi^2 = 8.535, p = .003$). There were differences between the counts for high benevolence vs. low benevolence manipulations; however, these were only marginally significant ($\chi^2 = 3.756, p = .053$). It appears that the low count for the high ability and high benevolence experimental condition is driving these results as this condition is significantly different from all the other experimental conditions ($\chi^2 = 8.067, p = .005$ for the high ability and high benevolence condition vs. the high ability and low benevolence condition; $\chi^2 = 11.677, p = .001$ for the high ability and high benevolence condition vs. the low ability and high benevolent condition; $\chi^2 = 14.009, p < .001$ for the high ability and high benevolence condition vs. the low ability and low benevolence condition).

In the high ability, high benevolence scenario significantly fewer risk factors were considered that were triggered by the manipulated behavior.

Comparing the free response risk factors that were triggered by behaviors common to all the scenarios with the risk factors triggered by the manipulated behaviors, it appears that the two extreme cases drive the results. The high ability, high benevolence scenario drives the results (by being so few) for the risk factors that were triggered by the manipulated behavior. The low ability, low benevolence scenario drives the results (by

being so few) for the risk factors that are common to all the scenarios. When the two types of risk factors are added together, (those that were triggered by the manipulated behavior and those risk factors that are common to all the scenarios) these significant differences were masked. But it is still not clear what caused the low counts in the two extreme cases. So further analysis was done which looked at the categories of risk

12.2.5 Comparison of risk factors by category of risk factors. The 99 free response risk factors were coded into 16 categories of risk. Fourteen of these categories were based on the business and inherent risk described in Arens et al. (2005). The other two categories emerged from the data. For the details of the coding of the free response risk factors for each category of risk see Appendix T.

This coding is summarized in Table 18. Note that more than two thirds of the free response risk factors were in four categories; *Competence of management* (21 free response risk factors), *Nonroutine transactions* (19 free response risk factors), *Management's integrity* (16 free response risk factors) and *Client's relationship with preceding auditors* (11 free response risk factors). This suggests that these are the most important categories of risk factors, in these particular scenarios.

Table 18. Count of free response risk factors by category of risk.

Category of Risk Factor	Examples of Free response risk factors	Count
Competence of management	“CEO limited knowledge” (Ricardo) “Poor internal production of figures (accuracy)” (4480XYZ)	21
Nonroutine transactions	“High risk – entering international market – no experience” (18121972) “New venture” (Ricardo)	19
Management’s integrity	“Personnel seem to be “shady”” (Adbills) “Complicity of exec to withhold info” (Ricardo)	16
Client’s relationship with preceding auditors	“Sway company has on current auditor” (Barney) “Questionable audited F/S [financial statements] / lack of reliance on past data” (Grump)	11
Judgment required to record transactions correctly	“Operating in foreign market – foreign exchange risk” (Stuart) “Patents (lots of estimates)” (Julie)	9
Client motivation to manipulate the financial results	“May be biased to show positive results (statement of earnings) in order to obtain government grants (manipulate bottom line)” (Jane) “Shift in industry due to energy / environmental pressures – therefore higher risk and pressure to maintain historical profitability” (John)	8
Nature of the client’s business	“Huge changes and uncertainty in the industry.” (Barney) “Uncertainty re best new lighting to replace incandescent bulbs – may never collect re sales.” (Wolfgang)	5
Financial risk	“Lower the risk – <u>good</u> CFO and <u>financial situation</u> ” (18121972) “Low capital” (4480XYZ)	4
Suitability of relationship of new auditor with client	“Cost benefit – may not be worth the risk because is a small company with low audit fees” (Julie81) “We may not have the knowledge of this industry” (Julie81)	3
Reliance on the financial statements	“Gov’t incentives / grants? – likely reliance on F/S [financial statements] / special audit work” (Wolfgang) “Size of operations” (John)	3
First time client for the auditor		0
Reliance on technology &		0

its complexity		
Results of previous audits		0
Related parties		0
Assets susceptible to misappropriation		0
Type of items to be audited		0
Total	Of all categories	99

12.2.6 Comparison of risk factors by category of risk factors per experimental manipulation. The counts of free response risk factors were split by experimental condition and these results were summarized in Table 19. Some interesting patterns emerged. First note that the total risk factors for high and low ability scenarios were almost identical as were the total risk factors for the high and low benevolence scenarios. By contrast, when the scenario included a high ability client manager, the experienced auditors emphasized risk factors that were common to all the scenarios, such as nature of the client’s business, nonroutine transactions, client motivation to manipulate the financial results, and the suitability of relationship of new auditor with the client. When the scenario included a low ability client manager, the experienced auditors emphasized risk factors that were manipulated, such as management’s integrity and competence of management.

A similar pattern, though not as pronounced, occurred with benevolence. When the scenario included a high benevolence client manager, the experienced auditors emphasized risk factors that were common to all the scenarios, such as nonroutine transactions and the client’s relationship with the preceding auditors. When the scenario

included a low benevolence client manager, the experienced auditors emphasized risk factors that were manipulated, such as management's integrity and competence of management.

It appeared that categories like management's integrity and competence of management were more obvious and were considered first. When these more obvious categories were not germane (because the client management were high ability or high benevolence), then the less obvious categories, such as nature of the client's business and nonroutine transactions were considered.

Table 19. Count of number of times a free response risk factor was given - by category of free response risk factor and by experimental condition.

Category of Free response risk factor	Type of client manager			
	Ability		Benevolence	
	High	Low	High	Low
Nature of the client's business	4	1	2	3
Nonroutine transactions	13	6	12	7
Judgment required to record transactions correctly	6	3	6	3
Management's integrity	6	10	5	11
Competence of management	3***	18***	8	13
Client motivation to manipulate the financial results	7*	1*	4	4
Reliance on the financial statements	2	1	2	1
Financial risk	1	3	1	3
First time client for the auditor	0	0	0	0
Reliance on technology & its complexity	0	0	0	0
Results of previous audits	0	0	0	0
Related parties	0	0	0	0
Assets susceptible to misappropriation	0	0	0	0
Type of items to be audited	0	0	0	0
Client's relationship with preceding auditors	5	6	7	4
Suitability of relationship of new auditor with client	3	0	1	2
Total	50	49	48	51

*** Significantly different at the 1% level.

* Significantly different at the 10% level.

The significance of the differences among the number of free response risk factors was tested with a chi square test for each category of risk factor. There were no significant differences between the number of free response risk factors for high ability client management vs. low ability client management for any risk factor category except for competence of management and client motivation to manipulate the financial results. There were no significant differences between the number of free response risk factors for high benevolence client management vs. a low benevolence client management for any risk factor category.

Risk factors in the competence of management category were mentioned 18 times in the experimental conditions that included low ability behavior and only three times in the experimental conditions that included manipulated high ability behavior. This is significant ($\chi^2 = 14.065, p < .001$). It seems that with low ability client management the competence of the client management was pertinent. It is less so when client management was high ability.

Risk factors in the client motivation to manipulate financial results were mentioned 7 times in the experimental conditions that included high ability behavior and only once in the experimental conditions that included manipulated low ability behavior. This is marginally significant ($\chi^2 = 3.414, p = .065$). Thus it appears that with high ability client management, auditors looked at their motivations to manipulate financial results. When client management was low ability, this type of risk did not seem as important.

The competence of management category and the client motivation to manipulate financial results category have significantly or marginally significant differences in the counts of free response risk factors based on whether the experimental condition included high or low ability client management behavior. It appears that although the total number of free response risk factors is not significantly different across the experimental conditions, some categories of free response risk factors are significantly or marginally significantly different for the high and low ability experimental conditions and these differences cancel each other out when all the categories of risk factors are totaled.

12.2.7 Risk factors triggered by an experimental manipulation – positive manipulations vs. negative manipulations. While analyzing the risk factors based on an experimental manipulation, an unexpected pattern appeared. Table 20 summarizes the count of free response risk factors and the type of manipulated behavior that triggered them. Note that the experienced auditors considered risk factors that were triggered or caused by negative behavior significantly more often than risk factors that were triggered by positive behavior.

Table 20. Count of free response risk factors by the type of manipulated behavior that triggered them.

Type of manipulated behavior	Count
Triggered by <i>high ability</i> behaviors only	3
Triggered by <i>low ability</i> behaviors only	12
Triggered by <i>high benevolence</i> behaviors only	5
Triggered by <i>low benevolence</i> behaviors only	15
May be triggered by <i>low ability</i> and/or <i>low benevolence</i> behaviors	5
Trigger unknown	5
Total	45

Only three free response risk factors were based on the manipulated high ability behaviors. It was interesting to note that these three risk factors dealt with patents and affected the audit negatively because patents require more work in an audit since they require more judgment. Five free response risk factors were based on the manipulated high benevolence behavior and all five of these were interpreted negatively in terms of a bias, incentive or influence. The remaining free response risk factors were triggered by the manipulated low ability behaviors (twelve factors), by manipulated low benevolence behavior (fifteen factors), by either manipulated low ability or low benevolence behaviors (five factors), or were too general to be tied back to a specific trigger behavior (five factors).

As shown in Table 21, the negative manipulated behaviors, low ability and low benevolence behaviors, triggered far more free response risk factors (32) than the positive manipulated behaviors, high ability and high benevolent behaviors (8).

Table 21. Count of the free response risk factors that were triggered by positive and negative manipulated behaviors.

Type of manipulated behavior	Count
Triggered by positive behaviors	8***
Triggered by negative behaviors	32***
Trigger unknown	5
Total	45

*** Significantly different at the 1% level.

This difference is significant ($\chi^2 = 14.4, p < .001$) and suggests that negative behaviors had more of an effect on an auditor's assessment of risk than positive behaviors did.

In summary, the average number of free response risk factors was 4.5 - less than 25% of the included risk factors. This leads me to conclude that experienced auditors do not consider all the risk factors when assessing risk. They appear to stop considering additional risk factors once they have listed "enough".

The counts of the free response risk factors for each experimental condition were the same. When this was broken out into risk factors that are common to all scenarios and risk factors that were manipulated by the experimental condition, there were significant differences in the counts of risk factors.

For the low ability, low benevolence condition, there were significantly fewer free response risk factors that are common to all the scenarios when compared to most of the other experimental conditions. Thus I conclude that the risk factors triggered by the low ability and low benevolence behaviors were given more weight and when they were present they were the first risk factors to be considered.

For the high ability, high benevolence scenario, there are significantly fewer free response risk factors that were triggered by manipulated behavior when compared to all of the other experimental conditions. This reinforced the idea that the risk factors

triggered by the low ability and low benevolence behaviors were given more weight. When they were not present other risk factors were considered.

Four categories of risk factors contained the majority of the free response risk factors; *management integrity*, *competence of management*, nonroutine transactions, and *client's relationship with preceding auditors*. The counts in these categories appear to differ based on the experimental manipulation. However, this difference was only significantly different between the high and low ability manipulation for the competence of management category. These results are also consistent with the idea that the risk factors triggered by the low ability and low benevolence behaviors were given more weight and when they were present they were the first risk factors to be considered.

Lastly, the experienced auditors considered risk factors that were triggered or caused by negative behavior significantly more often than risk factors that were triggered by positive behavior.

12.3 Discussion

The research goal was to explore the ways that ability and benevolence affected an auditor's assessment of risk.

Low ability and low benevolence appeared to directly affect the assessment of risk. When these behavior manipulations were included in the scenario, the free response risk

factors were more likely to be in the categories *management's integrity* and *competence of management*. The behavioral manipulation (ability and benevolence) and the category of risk (competence and integrity⁷) were directly linked. Other categories of risk seemed less salient.

High ability and high benevolence appeared to relate to the assessment of risk indirectly. They did not provide new risks that needed to be considered as in the case of low ability and low benevolence. However, when these behavior manipulations were included in the scenario, the risk factors were not reduced. The other categories of risk (categories that were inherent in the case and common to all the scenarios) appeared to become salient although not directly linked to the behavioral manipulation.

This was troublesome since it appeared to contravene the auditing standard that the amount of audit testing is to be based on the amount of risk. These results showed that when management integrity and competence types of risk were present, other types of risk were not given as much weight as when they were not present.

This analysis provided a basis for understanding why ability and benevolence were not correlated with risk in 6A, consequences of trustworthiness. As ability and benevolence increased, a different type of risk factor was considered. So the overall risk level stayed relatively constant although the ability and benevolence levels were varying.

⁷ Recall that some of the behaviors that manipulated high ability and high benevolence were also correlated with a high integrity manipulation.

Chapter 13. 6C – Verbal Protocol Analysis

The research goal was to explore how auditors made their audit decision about the extent of audit testing. When looking at the consequences of trustworthiness in 6A, I found that the amount of audit testing decreased when trust increased. This is problematic as the auditors' professional standards require them to be professionally skeptical and neither trust nor distrust their audited clients (Canadian Institute of Chartered Accountants, 2008, section 5090.07). I also found that when risk increased, the extent of audit testing unexpectedly decreased. This result is also a problem because the extent of audit testing is supposed to be based on risk and increase as risk increases (Canadian Institute of Chartered Accountants, 2008, section 5025.55 & 5141.102). Neither of these problems can be addressed without an understanding of how auditors make these decisions, the goal of this study.

13.1 Method

13.1.1 Procedures. To gain insight into the decision process underlying the extent of audit testing, concurrent verbal protocols were obtained from the 26⁸ auditors. Verbal protocol analysis asks participants to verbalize their thoughts as they perform the task (Ericsson & Simon, 1984). The experienced auditors were asked to estimate the audited gross profit percentage for 2010 and then to set the boundaries beyond which they would look for an explanation (if the firm gave them a percentage outside these boundaries).

⁸ One auditor's response was not audible enough to be transcribed, so only 25 verbal protocols were analyzed.

The auditors were asked to verbalize their thoughts as they made these estimates, these thoughts were recorded and transcribed and were used to capture the reasoning and judgment process used by the auditors (Ericsson & Simon, 1984). This included their information acquisition and evaluation processes, their decisions and judgments, and the reasoning and rationale for the judgments and decisions made (Biggs, Mock, & Watkins, 1989).

13.1.2 Analysis. The aim of this analysis was to understand how auditors made their decision on the extent of the audit testing. I looked at the verbal protocol data in two ways. The first approach was geared to understanding the process used to make the decision and looked at the type of operator that was applied when making it. The second approach was geared to understanding what types of factors were considered when making this decision and looked at the focus of the auditor's attention with respect to the themes of risk and trust.

Operators applied when making the point estimate and extent of audit testing decision. Understanding the process used involved choosing which operators were applied to input data to arrive at an output. I used operators which had already been established in the literature. Based on Newell and Simon's information processing theory, Einhorn and Hogarth (1981) suggest that there are four phases to decision making; information acquisition, information evaluation, action/choice and feedback. Biggs, Mock and Watkins (1989) expanded these categories and defined the operators used for decision making in an auditing context. They modified it to fit an analytical review

process. They added a “set goal” operation “which takes place after a preliminary information search, and provides direction for the remaining operations executed by the auditor” (Biggs et al., 1989, p 19). They also dropped the feedback phase (Biggs et al., 1989) since auditors typically do not get feedback at this point in an analytical review. Table 22 contains the operators used, their code and a brief description of the operation (Biggs et al., 1989). I read the transcripts of the auditors making their decision about the extent of audit testing and assigned the appropriate code to all segments of the verbal protocols.

Table 22. Operators used to code the decision making protocols.

Operator Code Definition

Task Structuring Operator

Set Goal	SG	Participant specifies a goal or subgoal to be accomplished in performing the task.
----------	----	--

Information Acquisition Operators

Information Search	IS	Participant searches the case material for specific pieces of information (directed search) or searches using a systematic pattern (usually a sequential search).
Reading	R	Participant reads directly from the case materials.
Algebraic Calculation	AC	Participant makes a mathematical calculation in order to obtain new information about the task.
Information Retrieval	IR	Participant retrieves a previously stored piece of information from external memory (i.e. notes, calculations) or internal memory.

Information Evaluation Operators

Assumption	AS	Participant generates an arbitrary (unspecified) fact about the case.
Conditional Judgment	CJ	Participant draws a conclusion (prediction) which is speculative or predictive in nature. These are tentative judgments not resolute ones.

Evaluation	E	Participant makes a definite judgment about the task based on some conditional criterion (no uncertainty).
Comparison	CN	Participant compares two items, such as a comparison of account balances between years.
Decision Support	DS	Participant provides a rationale to support a decision, recommendation or alternative.
Generate Query	GQ	Participant raises a question.

Action/Choice Operators

Generate Alternative	GA	Participant generates an optional decision to be considered (an audit or other decision).
Audit Decision	AD	Participant reaches a definite decision concerning the specific audit task. Either estimated the expected gross profit margin or the upper and lower bounds of the expected gross profit margin.
Decision Rule	DR	Participant specifies a method of reaching a decision. Could be a heuristic.
Other Decisions	OD	Participant reaches a definite decision that is not the specific audit task (not AD).

Auditors' focus with respect to risk and trust when making the point estimate and extent of audit testing decision. The preceding analysis looked at the process or how the auditors made the audit decisions. The verbal protocols were also analyzed to see if they included references to any of the risk categories that were used and described in 6B, effect of trustworthiness on risk. I analyzed the verbal protocols looking for references to risk and trustworthiness. For example, did the experienced auditors refer to *nonroutine transactions* such as beginning to manufacture the light bulbs in China? Did they refer to a *client motivation to manipulate the financial results*? These risks were also looked at to see if they contained any references to the trustworthiness (ability, benevolence or integrity) of the management of the firm being audited.

13.2 Results

13.2.1 Operators applied when making the point estimate and extent of audit

testing decision. Four hundred and ninety operators were used by the 25 auditors to estimate the audited gross profit margin and to make the decision on the extent of audit testing. Table 23 shows the counts of the times the operators were used and the average per auditor for each of the operators.

Table 23. Number of times the auditors used each type of operator.

Operator	Estimate Gross Profit Margin		Extent of audit testing decision		Total	
	Count	Average	Count	Average	Count	Average
Task Structuring Operator						
Set Goal	2	.08	0	0	2	.08
Information Acquisition Operators						
Information Search	0	0	1	.04	1	.04
Reading	6	.24	18	.72	24	.96
Algebraic Calculation	4	.16	3	.12	7	.28
Information Retrieval	6	.24	8	.32	14	.56
Subtotal	16	.64	30	1.20	46	1.84
Information Evaluation Operators						
Assumption	3	.12	3	.12	6	.24
Conditional Judgment	65	2.60	27	1.08	92	3.68
Evaluation	108	4.32	27	1.08	135	5.40
Comparison	29	1.16	2	.08	31	1.24
Decision Support	16	.64	14	.56	30	1.20
Generate Query	44	1.76	10	.40	54	2.16
Subtotal	265	10.60	83	3.32	348	13.92
Action/Choice Operators						
Generate Alternative	0	0	0	0	0	0
Audit Decision	23	.92	40	1.60	63	2.52
Decision Rule	3	.12	9	.36	12	.48
Other Decisions	8	.32	2	.08	10	.40
Subtotal	34	1.36	51	2.04	85	3.40

Unknown Operator

?	4	.16	5	.20	9	.36
Grand Total	321	12.84	169	6.76	490	19.60

Note that the *information evaluation* operators were used the most, especially the operators *conditional judgment* and *evaluation*. Also note the minimal use of the *set goal* operator, the *generate alternative* operator and the decision rule operator.

The complete coded transcripts are included in Appendix U. Tables detailing the use of the operators for each individual auditor are in Appendix V for both the decisions, in Appendix W for estimating the audited gross profit margin and in Appendix X for making the extent of audit testing decision.

One way to understand these results is to look at the most commonly used operators and to see how the average auditor made these decisions. The professional auditors used 20 operators, on average, in the verbal protocol when estimating what the audited gross profit margin would be and setting the extent of the audit testing. Table 24 shows which operators the auditors used and the average of how often they were used as a count and as a percentage.

Table 24. Operators used by an average auditor when estimating the audited gross profit margin and the extent of audit testing decision.

Operator	Example	Operator Used Count (avg)	%
Reading	“Please indicate your best estimate of what the audited gross profit will be for the year 2010”	.96	5%

	(Conrad)		
Comparison	“Sales have gone down compared to last year” (Julie)	1.24	6%
Generate Query	“Okay, so why did it go lower?” (Miramar)	2.16	11%
Conditional Judgment	“If what they did is correct, it should raise above 35% unless obviously they made a bad business decision” (Al)	3.68	19%
Evaluation	“I think bias could go one or the other way” (Adbills)	5.4	28%
Decision Support	“and it would tend to make sense because my sales have dropped and my cost of sales have probably gone up, the costs of pricing and it would certainly have an effect on my gross profit” (Gupp)	1.2	6%
Audit Decision	“The annual gross profit for 2010 probably should be, I would think, in the area of about 32%” (Gupp)	2.52	13%
Remaining operators		2.44	12%
	Total	19.60	100%

The *information evaluation* operators were used the most, especially *generate query*, *conditional judgment* and *evaluation* which is similar to findings in other auditing verbal protocol studies (Biggs & Mock, 1983; Biggs, Messier, & Hansen, 1987). There were fewer *information acquisition* types of operators in Study 6 than in the mentioned studies (Biggs & Mock, 1983; Biggs et al., 1987), but this may be due to the narrow scope of the decisions that were made or the fact that most of the information for the case was presented as a video. Virtually no *task structuring* type of operators (*set goal*) were used. The use of the *task structuring* operators and the *action/choice* type of operators were also in line with the mentioned studies (Biggs & Mock, 1983; Biggs et al., 1987).

Most of the professional auditors' effort went into estimating what the audited gross profit margin would be. Of the 490 operators used, 321 (66%) applied to the audited gross profit margin and 169 (34%) applied to setting the extent of the audit testing. This is unexpected. Although estimating the audited amount is important, it is the range (the difference between the upper boundary and the lower boundary) that determines how much risk the auditor takes. A small range means there is more audit effort (the extent of the audit testing is larger) and there is less chance of missing errors.

The professional auditors put much less effort into setting the extent of the audit testing. Again, I will look at the most commonly used operators for this decision to see how the average auditor made it. The professional auditors used 6.76 operators, on average, in the verbal protocol when deciding the extent of the audit testing. Table 25 shows which operators the auditors used and the average of how often they were used as a count and as a percentage.

Table 25. Operators used by an average auditor when deciding the extent of audit testing.

Operator	Example	Operator Used Count (avg)	%
Reading	“But the upper range, I am just going to read the question here. Indicate the upper and lower bounds to the nearest 1/10 of 1% for 2010 beyond which you feel an investigation should be conducted to explain, where would you need to follow up on this percentage because it is too different from what you would have?” (Minnie)	.72	11%
Information Retrieval	“Because certain manufacturers, such as retailers like Walmart, send all their goods back after December, so there is like always a huge, there is always markdowns in February. You usually have to take an allowance. (Stuart)	.32	5%
Generate Query	“Was there any obsolete merchandise?” (4480xyz)	.40	6%
Conditional Judgment	“the exchange rate, they will perhaps be able to recover a portion with the exchange rate” (Olivier)	1.08	16%
Evaluation	“So something has gone on here.” (Barney)	1.08	16%
Decision Support	“because it is high risk and it is a new client” (Lindsay)	.56	8%
Audit Decision	“The upper bound of the range, so it would be 35%” (Ricardo)	1.6	24%
Decision Rule	“I would look at plus or minus 5%, definitely beyond that” (Jack)	.36	5%
Remaining operators		.64	9%
	Total	6.76	100%

Note how few *information evaluation* operators are used to make this estimate. Totaling all of the *information evaluation* operators averaged to a mere 3.32 operators. Not only is less effort being put into the extent of audit testing decision, there is more

variability in how much effort was considered appropriate when making this decision. I split the auditors into two groups, those who used fewer operators than average and those who used more operators than average. The 15 auditors who used fewer operators than average used an average of only 3.87 operators. The 10 auditors who used more operators than average used 11.10 operators. Auditors who used fewer operators than average put 35% of the effort into this decision compared to those who used more operators than average. When I compare these two groups on some of the individual *information evaluation* operators, the variability is even greater. The 10 auditors who used more operators than average used more than three times the *conditional judgment* operators, used over eight times the *evaluation* operators and over 18 times the *decision support* operators than the others. To summarize, very little effort was put into this decision relative to its importance and the amount of effort that the auditors considered appropriate when making this decision was very different among the auditors.

13.2.2 Auditors' focus with respect to risk and trust when making the point estimate and extent of audit testing decision. The preceding results addressed the process of making a decision about the extent of audit testing. The following results analyze the content of the operators looking for references to risk and references to trustworthiness. There were 62 operators which included a mention of risk when the auditors were estimating the audited gross profit margin. Twenty operators included a mention of risk when the auditors were setting the boundaries for the extent of audit testing decision. All mentions of risk in the operators are italicized in the transcripts in Appendix U. Table 26 gives a count of the mentions of risk in an operator split by the

category of risk. These are the same categories of risk that were used in 6B, effect of trustworthiness on risk, except that one category is added called *Risk in general*. This category contains counts where risk is considered, but a specific risk from the case is not mentioned.

Table 26. Count of operators that mention risk when estimating audited gross profit margin.

Category of Risk	Example of an operator that mentioned risk	Count
Competence of management	“So the only thing I could see is that the CFO has no sufficient competence in the matter” (18121972)	2
Nonroutine transactions	“because of the manufacturing overseas, so some cost savings” (Lawrence) “it doesn’t sound like something major happened or something is wrong” (Samuel)	28
Management’s integrity	“Is this based on the fact that I suspect these guys” (Grump)	3
Client’s relationship with preceding auditors	“it could be lower because I don’t know what work the previous auditor has done or how good” (4480XYZ)	3
Judgment required to record transactions correctly		0
Client motivation to manipulate the financial results	“and I also think that they would be biased to show maybe more sales in order to obtain government grants” (Jane)	7
Nature of the client’s business	“Based on discussions with the firm’s previous auditors we know the business is not seasonal” (Ricardo)	8
Financial risk		0
Suitability of relationship of new auditor with client		0
Reliance on the financial statements	“They are a public company, I think, so they would want to have a higher gross profit, that would look better for their shareholders and their earnings per share.” (Miramar)	2

First time client for the auditor	“because they are a new client, I may not have the past years audit files” (Al)	1
Reliance on technology & its complexity		0
Results of previous audits	“We don’t know what are the adjustments without having seen or talked to the previous auditor” (Samuel)	7
Related parties		0
Assets susceptible to misappropriation		0
Type of items to be audited		0
Risk in general	“I would definitely because the risk is that the sales were understated and the costs of goods sold is understated as well” (Julie81)	1
Total	Of all categories	62

Risks were not mentioned very frequently in the verbal protocols. They were mentioned in 62 of the operators (19%). This averaged to being mentioned 2.5 times in the average of 13 operators for making this estimate of the audited gross profit margin. Table 26 gave the counts of the operators which mentioned risk when estimating the audited gross profit margin. Table 27 gives the same counts of the operators which mention risk but in this case, the auditors were estimating the extent of audit testing decision. These counts are split by the same categories of risk that were used in 6B, effect of trustworthiness on risk, except that one category is added called *Risk in general*. This category contains counts where risk is considered, but a specific risk from the case is not mentioned.

Table 27. Count of operators that mention risk when making the extent of audit testing decision.

Category of Risk	Example of an operator that mentioned risk	Count
Competence of management	“The thought process that goes through my head is because I know they have had variances and they have trouble explaining them” (Al)	1
Nonroutine transactions	“So which really means that I really do expect it to be lower because of the new circumstances” (Wolfgang)	4
Management’s integrity	“I made an average because I am estimating, because I am basing this on, this is unaudited, the chances are it is going to vary and because I suspect them I want to check everything with a low variance.” (Grump)	1
Client’s relationship with preceding auditors	“There may have been errors that the auditors accepted that I wouldn’t have accepted.” (Al)	1
Judgment required to record transactions correctly		0
Client motivation to manipulate the financial results		0
Nature of the client’s business	“The bounds of possible gross profit percentage, the upper bound range I think 34% may be too high given this particular industry” (Gupp)	5
Financial risk		0
Suitability of relationship of new auditor with client		0
Reliance on the financial statements		0
First time client for the auditor	“I would investigate either way just to get assurance because it is a new client.” (Al)	3
Reliance on technology & its complexity		0
Results of previous audits	“So let’s presume that last year there were no mistakes because they were audited by good accountants” (Conrad)	1
Related parties		0

Assets susceptible to misappropriation		0
Type of items to be audited		0
Risk in general	“Since my risk is high I would put a low, upper 5%, lower 2% plus or minus, both ways” (Grump)	4
Total	Of all categories	20

Risks were mentioned fewer times in the operators for the extent of audit testing decision. Only 20 of the 169 operators (12%) had any mention of risk. This averaged to being mentioned 0.8 times in the seven operators for making this estimate of the extent of audit testing decision.

Trustworthiness was mentioned so infrequently as to be negligible. Trustworthiness was mentioned five times in the operators for the estimate of the audited gross profit margin. It was mentioned twice in the operators for the extent of audit testing decision. All these references to trustworthiness are in two of the risk categories; *Management’s integrity* and *Competence of management*. These mentions of trustworthiness are italicized in Appendix U and listed in Appendix Y.

13.3 Discussion

The quantitative results of looking at the consequences of trustworthiness in 6A showed that trust, as expected, did affect the audit plan decision. The more the auditors trusted the management of the firm that they were auditing, the larger the range they would allow without asking for an explanation. This means that the auditors were

potentially accepting a higher level of risk of a material misstatement in the financial statements because they are asking for fewer explanations. What is very interesting about this effect was that the analysis of the verbal protocols showed that the auditors did not appear to be taking trust into account when making their decisions. There were very few mentions (only seven) of the trustworthiness of the management of the firm being audited in the verbal protocols. When this is compared to the 31 mentions of *comparing the figures* from one year to the other or the 92 *conditional judgments* in the verbal protocols, it shows how very little weight the auditors appeared to give to considerations of the trustworthiness of the management of the firm being audited. Auditors were affected by their trust of the management of the firm they were auditing as shown by the significant correlation between their trust and the extent of audit testing. Higher trust meant less audit testing. Yet these auditors appear unaware of the effect of trust as shown by the few mentions of the trustworthiness of the management of the firm being audited in 6C, the verbal protocol analysis. One potential explanation for these seemingly contradictory results is that auditors are affected by their trust of the management of the firm being audited, but are unaware of these effects as proposed by Bazerman and his colleagues (Bazerman et al., 1997; Bazerman et al., 2002; Bazerman et al., 2006; D. Moore et al., 2006) who contend that auditors think they are being objective, but they are in fact biased because they are hired and paid by the firms that they audit.

The quantitative results from Study 6 also showed that as the assessed risk of the audit engagement increased, the proposed extent of the audit testing actually decreased. This is the opposite of the hypothesized relationship and a puzzling result. The verbal

protocol analysis gives some insight into how this could come about. Some attention was paid to risk factors such as foreign exchange and moving the manufacturing to China when the auditors were estimating what they thought the audited gross profit margin should be. Risk factors were mentioned in 62 of the 321 operators of the analyzed text (19%). In contrast, it was only mentioned in 20 of the 169 operators of the analyzed text (12%) when the auditors were estimating the extent of audit testing. It appears that risk is not routinely considered and not an important factor when setting the boundaries which determine whether further investigation is required or not. Interestingly, even those who mention risk factors when considering the first question did not seem to consider them pertinent to their estimate of the extent of audit testing in the second question.

The decision about the extent of audit testing does not appear to be made based on risk. Given the myriad risk factors included in the case, it is hard to assert that risk is given appropriate weight in the extent of audit testing decision. Since this decision did not appear to be based on risk as suggested by the professional standards how was this decision actually made?

It did not appear to be made using *goal setting* as the data showed no operators in the verbal protocol for estimating the extent of audit testing that related to goals. It did not appear to be made using *decision rules* as the data showed only 9 operators (5%) in the verbal protocol for estimating the extent of audit testing that related to decision rules.

The decision seemed to have been made by making a *conditional judgment* of the form “It could have been caused by moving the manufacturing to China” and then *evaluating* whether they believed this was true. On average, each auditor made one conditional judgment and one evaluation before deciding on the extent of audit testing. A similar approach was to *generate questions* of the form “Could it have been caused by management bias” and then *evaluating* whether they believed this was true. On average, less than half a question per auditor was generated and one evaluation was made before the extent of audit testing decisions were made.

In summary, there was a lot of variability in how the decision on the extent of audit testing was made. The majority of the professional auditors made no mention of risk factors when making this decision. The majority of professional auditors set no goals and used no decision rules to make this decision. The 20 risks that were actually considered were far fewer than those considered when estimating the risk of a material misstatement in the financial statements (99) and fewer than those considered when estimating the audited gross profit margin (62). This is problematic since they do not appear to be following their professional standards and basing their amount of audit testing decision on the amount of risk.

Chapter 14. 6D – Interviews with Auditors on Trust in Client Management

The research goal was to explore how well the integrated theory of trust applied in a situation where trust was proscribed by professional standards. This is an important

question because if trust affects an auditor and has an impact on his professional skepticism, then the current audit standards may need to be changed to address this problem.

14.1 Method

14.1.1 Procedures. After participants had filled in the questionnaire, they were asked the following two questions and an audio recording was made of their answers.

“Please think of the client you have audited that you have trusted the most. Don’t say their name or anything that will allow me to identify them. Can you describe this client for me? I am particularly interested in what it was that made you think this client was very trustworthy. Naturally there are no right or wrong answers. I’m looking for how you define a trustworthy client.”

“Please think of the client you have audited that you have trusted the least. Can you describe this client for me? I am particularly interested in what it was that made you think this client was not very trustworthy.”

These data were the basis for this analysis.

14.1.2 Analysis. The taped interviews were transcribed and the main ideas were selected from these transcripts. The expected themes were based on the constructs from

the integrated model of trust; ability, benevolence, integrity, perceived risk and propensity to trust as described in the section 3.1. The main ideas were categorized using the expected themes. Any idea that was not associated with an expected theme was grouped with other similar ideas.

14.2 Results

One hundred and seventy two ideas were expressed in the 26 interviews. The integrated model of trust (Mayer et al., 1995) posits that the characteristics of the person to be trusted are important (specifically their *ability*, *benevolence* and *integrity*) and these relationships were supported by the interviews with the 26 experienced auditors.

14.2.1 Ability. Some of the auditors talked about the credentials of the management of the firm being audited. Unsurprisingly, they particularly valued financial accounting knowledge. Many of the auditors mentioned that they found audited firms trustworthy when they had good answers to the auditor's questions. A good answer generally involved the timeliness and the support provided for the answer. Bad answers to the auditor's questions (inconsistent, unsupported or missing information) reduced their perceived trustworthiness. Competent behavior in general also affected whether the firm being audited was perceived as trustworthy. Behaviors such as making mistakes, being disorganized, and changing their answers were perceived negatively. Being prepared, up-to-date and well managed were positive factors. Whether or not the auditor found mistakes in the accounts also had an effect on the perceived trustworthiness of the

management of the firm being audited. The number and breadth of these comments support the idea that ability was an important antecedent to trust even in a context where trust was not supposed to affect an auditor’s professional scepticism. Table 28 lists the subcategories within the ability theme, gives an illustrative quote from the interviews and counts the number of times the theme was mentioned in the interviews.

Table 28. Illustrative comments for the Ability theme.

Subcategory	Count	Example
Credentials	8	“...he was a CA [Chartered Accountant] so I held him in high regard already.” (Barney)
Had good answers to questions	13	“...when we had questions the people who were available or who were able to respond or help us responded promptly and properly...” (John)
Had bad answers to questions	11	“Every time I asked him questions about the cash function I seemed to get contradictory answers” (Gupp)
Generally competent behavior	27	“Work was prepared well, on time.” (John) “...he had all the CICA guidelines...he was reading up-to-date...he knew what was going on...” (Barney)
Results achieved	3	“...they make mistakes that seem to be very very very fundamental mistakes, like Accounting 101...” (BM)

14.2.2 Benevolence. Some of the auditors talked about whether the management of the firm being audited was helpful or not. Management being cooperative and involving the auditor were positive factors. An unwillingness to help was negative. Respect being shown to the auditor was also positive. Being polite, being nice and making the auditors comfortable were all mentioned. Although there were fewer comments about benevolence, the fact that there were 17 comments supports the idea that benevolence was an important antecedent to trust even in a context where trust is not supposed to

affect an auditor’s professional scepticism. Table 29 lists the subcategories within the benevolence theme, gives an illustrative quote from the interviews and counts the number of times the theme was mentioned in the interviews.

Table 29. Illustrative comments for the Benevolence theme.

Subcategory	Count	Example
Helpful	8	“...were always trying to help us during the course of the audit...” (John)
Unhelpful	5	“...he gave us a really hard time. When we came back he was ...even threatening.” (Jack)
Respectful	4	“...even though I was at a lower level...he treated me with respect.” (Barney)

14.2.3 Integrity. Some of the auditors talked about specific ethical actions they considered conducive to trustworthiness such as openness and fairness. Openness involved not hiding things from the auditors. Fairness involved not taking advantage of others even when you were in a position to do so. Ethical actions generally involved honesty or “the right thing” implying that the management’s values were acceptable to the auditor. Unethical behaviors generally involved cheating or evading an unpleasant responsibility. Different values includes comments for things (like flamboyancy) that were not necessarily bad (like cheating) but were considered negative by the auditors. Again, the number and breadth of these comments support the idea that integrity was an important antecedent to trust even in a context where trust was not supposed to affect an auditor’s professional scepticism. Table 30 lists the subcategories within the integrity theme, gives an illustrative quote from the interviews and counts the number of times the theme was mentioned in the interviews.

Table 30. Illustrative comments for the Integrity theme.

Subcategory	Count	Example
Open	14	“...we meet at least once a month just to discuss what is going on in the company...we will discuss what we think the accounting implications are for that type of transaction...you know there is no hidden transaction or something they are hiding because it is a really open relationship ” (Barney)
Fair	2	“Our prices [for our merchandise] are set ...based on our estimates ...this is what is fair in the marketplace based on our competitors.” (Ricardo Mirablo)
Ethical	16	“...people who truly wanted to do the right thing.” (Minnie)
Unethical	7	“...look for if my clients cheat at golf...someone that cheats on a golf course will cheat everywhere else.” (Stuart)
Different values	2	“...he was very flamboyant. Mind you he was in an industry which required a certain amount of flamboyancy... I didn’t trust him very much. The spending of money, the lack of being frugal.” (Conrad)
Reputation	1	“I googled him ...and there was some article about him ripping off students...” (Lindsay)

14.2.4 Risk. The integrated model of trust also posits that perceived risk would affect the amount of trust (Mayer et al., 1995) and the interviews supported this antecedent as well. Motivation to cheat was the largest subcategory and involved situations where it was very important to the firm being audited to achieve a desired result. Bank loans, lines of credit, reduced taxes or the very survival of the firm were mentioned as strong reasons to find the firm risky. Two specific other risks were mentioned; that the industry itself was risky (an industry that deals with a lot of cash for example) and that the firm was understaffed increasing the risk of errors. Although the number and variety of comments in this category were smaller than for ability or integrity, these responses still provide support that perceived risk was an important antecedent to trust even in a context where

trust was not supposed to affect an auditor’s professional scepticism. Table 31 lists the subcategories within the risk theme, gives an illustrative quote from the interviews and counts the number of times the theme was mentioned in the interviews.

Table 31. Illustrative comments for the Risk theme.

Subcategory	Count	Example
Motivation to cheat	12	“...it was the attitude...that business was the reason for any kind of behavior and that the objective was profit and the saving of taxes.” (Wolfgang)
Industry risk	3	“Some industries...are of higher risk or where more judgment can be used in terms of providing information, so the risk of misrepresentation goes up...” (John)
Overworked	3	“...mostly I didn’t trust them because I saw how overworked they were...” (Julie)

14.2.5 Relationship. The previous themes were based on the integrated model of trust which is basically a model of an individual in a dyadic relationship (Mayer et al., 1995). The relationship theme is not based on the individual model, but fits quite well with the Lewicki and Bunker relationship model of trust. They describe a theory of trust that focuses on the relationship between parties (Lewicki & Bunker, 1996). The lowest level, *deterrence-based* trust is sustained by the threat of the loss of the relationship if people do not do what they say they will (Lewicki & Bunker, 1996). The middle level, *knowledge-based* trust occurs when one has enough information about others to understand them and accurately predict their likely behavior.” (Lewicki & Bunker, 1996, p 119). The highest level *identification-based* trust...is based on a complete empathy with the other party’s desires and intentions.” (Lewicki & Bunker, 1996, p 119).

The bad relationship comments that emerged in the interviews seemed appropriate to the lowest level – the deterrence-based relationship. The comments described a combative relationship and included words like *blocked*, *pushing*, *mad*, and *stressful*. Some of the comments explicitly included the threat of the loss of the relationship. The comments in the good relationship subcategory appeared appropriate for the middle level – the knowledge-based relationship. They talked of a history of the relationship and knowing each other well. *Safe*, *friendly* and *respect* are the types of words used in these comments.

These comments do not support the integrated model of trust; however, they fit nicely with the relationship model of trust with its focus on the relationship instead of on the individual. So although they did not support the specific trust model, they still supported the idea that trust was involved even in a context where trust was not supposed to affect an auditor’s professional scepticism. Table 32 lists the subcategories within the relationship theme, gives an illustrative quote from the interviews and counts the number of times the theme was mentioned in the interviews.

Table 32. Illustrative comments for the Relationship theme.

Subcategory	Count	Example
Bad relationship	10	“Autocratic senior management combative in dealing with the auditor, challenging every request...” (Minnie)
Good relationship	13	“We were friends. We were also in the community. We interacted socially.” (4480xyz)

The last two categories that emerged from the interviews, inappropriate behaviors and auditors' intuition, did not fit with the above theories of trust.

14.2.6 Inappropriate behaviors. This category included behaviors (like not keeping records) that were very obviously wrong in this context and therefore surprising to the auditor. Not even trying to answer questions was placed in this category (instead of the "bad answers to questions" subcategory) because it seemed to signal that there was an additional problem (such as trying to cover up something).

The inappropriate behavior comments could have been put into some of the other categories. For example, not answering the auditors questions could have been attributed to lack of ability – they didn't know the answer; or to lack of benevolence – they didn't care that the auditors needed this information; or lack of integrity – they wanted to hide this particular information. That was the problem. Behavior in this category could fit into several other categories which indicated to me that its correct category was not clear. Therefore, I put them in this separate category and did not count these comments as supportive of the theory of trust. Table 33 lists the subcategories within the inappropriate behavior theme, gives an illustrative quote from the interviews and counts the number of times the theme was mentioned in the interviews.

Table 33. Illustrative comments for the Inappropriate behavior theme.

Subcategory	Count	Example
Behavior	5	“...it is a big organization and they were maintaining their books handwritten, like ledger books for that division, it was an international division of that big organization,...so a big red flag for them.” (Jack)
Not answer	4	“...if we would ask a questions...although they should have the answer they would...tell me “Go speak to the owner”...because they were afraid to give me the wrong answer.” (John)

14.2.7 Auditors’ intuition. The last category contains one comment that talks about the auditor’s intuition as part of his decision-making strategy. This may be the auditors general attitude to trust, a part of the integrated model of trust (Mayer et al., 1995); however, the comment was too open to other interpretations to be confidently put in this category and so it, too, was put in a separate category and was not counted as supportive of the theory of trust. Table 34 lists single quote for this theme.

Table 34. Comment for the Auditors' intuition theme.

Auditors’ intuition	1	“...at the end of the day I use my gut to make my final determination ...to decide whether or not I do more work...” (Wolfgang)
---------------------	---	---

In summary, 81% of the comments in this auditor and firm-being-audited context were directly supportive of the integrated model of trust. These are shown in the ability, benevolence, integrity and perceived client risk categories in Table 35. A further 13% of the comments were supportive of trust in this context, but looked at it from the perspective of the relationship not the individual. These are shown in the relationship category in Table 35. Only 6% of these comments were not easily classifiable with

themes from one of the two models of trust. These are shown in the inappropriate behavior and auditors' intuition categories in Table 35.

Table 35. Summary table of themes.

Idea category	Count	Example
Ability	62	"...they were always well prepared for the audit. They were competent. Anytime you would ask a question they would have the answer ready..." (18121972)
Benevolence	17	"A client that cooperates with us and is willing to answer our questions and help us." (Miramar)
Integrity	42	"...a client that is honest even if he's got issues...we felt that the chief financial officer on site was very very honest and a very hard worker...he wanted to clean up what was done in the past...very professional, very trustworthy, very credible..." (Samuel)
Perceived client risk	18	"...companies who are struggling now and the biggest concern is that they would want to falsify their information in order to maintain their line of credit...if they can't get the line of credit that means that they can't continue operating." (Conrad)
Relationship	23	"...I feel safe with him and he knows that I have been trustworthy over the years...so we have proven it to each other." (Grump)
Inappropriate behavior	9	"...impropriety...putting...personal expenses through the company account." (Victor Steel)
Auditors' intuition	1	"...at the end of the day I use my gut to make my final determination ...to decide whether or not I do more work..." (Wolfgang)

14.3 Discussion

The strong qualitative support for the integrated model of trust adds weight to the idea that the lack of significant quantitative results in Study 6 was at least partly due to the small sample size. (There was no support for the propensity to trust variable in the integrated model of trust. This was unsurprising given that the qualitative questions

focused on the management of the firm being audited not on the characteristics of the auditor him- or herself.)

These comments were very supportive of the integrated model of trust in the auditing context. 6A, consequences of trustworthiness, showed that trust had an effect on audit decisions, over and above the effect it had through the risk assessment. 6C, verbal protocol analysis, showed that the experienced auditors were unaware of the effect that trust had on their decision. In light of these effects, it is important to understand the process by which trust develops in the auditing context. This understanding could prove valuable should regulators or audit professionals wish to reduce the effects of trust on audit decisions. This study contributed to the understanding of the process in this specialized context.

Chapter 15. General Discussion

The research objective was to assess whether auditing professionals were influenced by their trust of the management of the firms they audit, which would be an inappropriate influence on audit decisions.

15.1 Trust

First we dealt with whether the perceived ability and benevolence of the management of the firm being audited affected an auditor's trust of them. Although the quantitative

results are mixed, there is some evidence that management's behavior does affect the auditor's trust. The auditing student sample has a significant correlation between perceived benevolence and trust. The experienced auditor sample has a significant correlation between the interaction term (ability times propensity to trust) and trust. The strongest support for this relationship came from the qualitative data for the experienced auditors. When asked to describe clients who were trustworthy, 36% of the comments included discussions of their ability and 10% of the comments included discussions of their benevolence. The results from both the auditing students and experienced auditor samples support two findings. The first is that auditors do trust the management of the firms that they audit.

The second finding is that not all of the antecedents of trust have an effect in this context. For the student sample, neither ability, nor propensity to trust, nor any of the interaction terms were significant. The experienced auditor sample was very small and only the interaction term, ability times propensity to trust was significant. Further analysis of this interaction showed that for experienced auditors with a low propensity to trust, benevolence was significant as was the interaction term between benevolence and propensity to trust. Experienced auditors with a high propensity to trust were not significantly affected by the trustworthiness of the management of the firm being audited. These findings hint at a complex interrelationship among the antecedents of trust which varies between the samples. The fact that any significant relationship was found with the experienced auditors, in a sample size of 26, supports the findings from the qualitative

analysis that trustworthy behavior of the management of the firm being audited is important to the auditor.

15.1.1 Limitations. First, this research was based on a single case which means that its external validity and generalizability are limited. This research had real auditors as participants and a case adapted from a real lighting firm. Auditors seldom have all the information that they would like; however, in this study several constraints were placed on them. They were working with a case; they had no prior experience with the client; they had limited financial and other information (c.f. Biggs et al., 1989). The interview questions on trust, which asked about the auditor's experience with their own clients, compensated for this to some degree, but they were limited in that they depended on recall, leaving them open to inaccuracies and biases. Second, the case was set in an auditing context which may also limit its generalizability. On the other hand the auditing context can provide strong data on the robustness of trust as trust's influence is proscribed by auditing standards (Canadian Institute of Chartered Accountants, 2008, section 5090.07). Further research can address this shortcoming by using other contexts and other populations. Thirdly, there were too few people in the experienced auditor sample. It speaks to the strength of the relationship between trust, risk and extent of audit testing that the results were still significant given the sample size.

15.1.2 Contributions. The qualitative analysis of the interview questions on the characteristics of trusted and distrusted clients established that trust is a factor in the relationship between auditors and the management of the firms that they audit. It

provided detailed responses to how trust could affect professional skepticism - a cornerstone of auditors' professional standards. It identified behaviors that lead to greater auditor trust of client management as called for by Rennie, Kopp and Lemon (2010). As they suggest, "...it is desirable for auditors and auditing standard setters to be aware of factors that may lead to greater auditor trust of client management and to perhaps consider whether there may be a potential for excessive trust to overwhelm the auditor's professional skepticism. Further research into auditor trust and professional skepticism may identify a need to augment existing guidance on professional skepticism to specifically address the trust issue." (Rennie et al., 2010, p 290). This is particularly important in the context of the findings of 6A, consequences of trustworthiness and 6C, verbal protocol analysis, which indicate that the professional auditors made decisions that were affected by trust and that they were unaware of this influence. It raises the question of whether the current professional standards which call for professional skepticism are achievable. Since auditor trust of the management of the firm being audited does affect audit decisions over and above the effect of integrity and competence on risk, then this is a problem with trust and contributes to the trust literature by responding to the calls for more research on the "down side" of trust (McEvily et al., 2003; Rennie et al., 2010).

This study contributed to the trust literature by identifying behaviors that auditors find benevolent and non-benevolent. Auditors respond positively to high benevolent behaviors such as *being given a nice room to work in*. They also appreciate it when the managers *volunteer useful information* and *provide required information quickly*. Auditors respond negatively to low benevolent behaviors such as *being given a small, uncomfortable room*

to work in. Auditors react unfavorably if management *drag their feet when auditors ask for documents* or if they *threaten to replace the auditors*. It complements Anderson and Marchant's previous work (1989) which identifies behaviors that auditors find competent or incompetent, and honest or dishonest. Potentially, the management of a firm being audited could use these specific behaviors to influence an auditor's trust of them. If auditors are aware of the effect of these behaviors on their trust, they may potentially mitigate these effects by assessing whether the behavior is genuine or contrived for its effect.

This study contributed to the trust literature by showing there is an interaction among the three factors of trustworthiness; ability, benevolence and integrity. This is seen in Study 2 where many of the behaviors that people attributed to a competent manager were also attributed to a benevolent and an honest manager. It is also seen in Study 6. Here the interaction term ability times propensity to trust was significant when the entire experienced auditor sample was tested. By way of contrast, when the experienced auditor sample was split into low and high propensity to trust, benevolence and benevolence times propensity to trust became important instead of ability times propensity to trust. One of the limitations of this study is that I did not build the scenarios around the behaviors that were most distinct to each of the trustworthiness factors. Doing so would have reduced some of the confound among the trustworthiness factors. There is not much understanding of how these three trustworthiness factors (benevolence, ability and integrity) interact among themselves and with propensity to trust and how they affect trust, either individually or in concert. These findings hint at a fair amount of complexity

in the interactions among these factors. Further research on whether they complement or substitute for each other and how they interact within specific contexts would be useful.

Let me give a practical example. As a professional, I need clients to trust me.

Demonstrating my integrity is a long process as people put less weight on ethical behavior than on non-ethical behavior. I would need to demonstrate a lot of ethical behavior before people would believe that I was ethical whereas a single unethical act would convince them that I was unethical. It is much easier to show that I am capable. I could, for instance, show my professional certificates and awards quite easily and establish my competence quickly. This research finds that competence, integrity and benevolence behaviors are fairly interdependent. If this is generalizable, it would allow professionals to build up trusting relationships with clients more quickly.

15.2 Risk

Next we looked at whether the perceived ability and benevolence of the management of the firm being audited affected the auditors' assessment of the risk of the audit engagement. Neither the auditing student sample nor the experienced auditor sample showed a correlation between perceived ability and benevolence and the auditor's assessment of the risk of the audit engagement.

The qualitative results provided a different insight into this relationship. The experienced auditors wrote the same number of risk factors for the low ability, low benevolence scenario and the high ability and high benevolence one. This is surprising

because both cases contained the same number of risks to start with (the risks inherent to the case) and the low ability low benevolence scenario had the additional risks associated with management's lack of ability and lack of benevolence. Even though there were more risk factors in the low ability low benevolence scenario, the auditors considered the same number of risks. It appears that they stopped looking for risk factors once they had "enough".

There was, however, a significant difference between the types of risk factors that were considered between these two scenarios. In the low ability, low benevolence scenario, most of the free response risk factors were triggered by the low ability and low benevolence behaviors in the scenario. In the high ability and high benevolence scenario, most of the free response risk factors were common to all the scenarios and not triggered by high ability and high benevolence behaviors. It seems that the risk factors due to management's lack of ability and lack of benevolence were more obvious and were found first. Once "enough" risk factors were found, the auditors seemed to stop looking for more. The high ability and high benevolence scenario didn't include risk factors due to management's lack of ability and lack of benevolence, so other risk factors were identified until "enough" risk factors were found.

Again there were differences between the auditing student sample and the experienced auditor sample. The auditing students took integrity into account when assessing risk, but not ability. The experienced auditors appeared to take neither into account. The qualitative analysis showed that they were aware of the risk factors. It

seemed that the experienced auditors did not use the risk factors as the basis for their assessment of risk, but only to give their assessment some legitimacy. I say this because they did not go through the case and extract many of the available risk factors. They stopped well before identifying even a fraction of them. Neither the auditing students nor the experienced auditors took management's ability into account when assessing risk. Part of the reason for the difference in these results may be due to the newness of the standards requiring audits to be based on risk. It may be that experienced auditors add risk to their previously established approaches to setting audit procedures; whereas the students may put much more emphasis on risk as they do not have these previously established approaches.

15.2.1 Limitations. The limitations discussed earlier due to the use of one case, student auditors and a small sample of experienced auditors apply to this discussion as well. For example, the experienced auditors gave most weight to risks in the categories the *Competence of management*, *Nonroutine transactions*, *Management's integrity* and *Client's relationship with preceding auditors*. Since this finding is based on a single case, it is not known how generalizable these findings are.

15.2.2 Contributions. Research is mixed on whether the presence of risk factors affects the audit program or not (Wright & Bedard, 2000). Study 6 contributes to understanding the process of assessing risk. Specifically, it finds that all risk factors are not considered; that some types of risk factors are more likely to be considered; that experienced auditors appear to use risk factors as support for the level of risk they have

assessed and stop when they have identified “enough” risk factors. These results also contribute by showing that certain types of risk factors are more obvious and thus are identified by more auditors. Four categories, *Management’s integrity*, *Competence of management*, *Client’s relationship with the preceding auditors* and *Nonroutine transactions* contained more than two thirds of the free response risk factors. This responds to the call by Rennie, Kopp and Lemon (Rennie et al., 2010) for comparison of the effects of different risks.

More generally, Study 6 finds that factors that increase risk are given weight, but that factors which reduce risk are given almost no weight in the assessment of risk. In one way, this makes sense in that one of the basic principles of auditing is conservatism (Libby, Libby, Short, Kanaan, & Gowing, 2006). On the other hand, it is problematic in that if factors that reduce the risk are given less weight, then the extent of audit testing is higher than it need be and thus the costs of the audit are higher than necessary too.

It appears that there is an opportunity for audit firms and standard setters to improve the way that auditors assess risk, for example, by providing some sort of decision aid. The auditors did not consider the majority of the risk factors when assessing the risk of the audit engagement (6B, effect of trustworthiness on risk). Looking at the consequences of trustworthiness in 6A shows that the experienced auditors do not consider the integrity nor the ability of the management of the firm being audited when assessing the risk of a material misstatement in the financial statements. The auditing students did consider the integrity of the management of the firm being audited, but did not consider their ability.

Providing a more detailed and extensive checklist of the types of factors that could affect the risk of a material misstatement may help to reduce the likelihood that this problem occurs.

15.3 Audit Decision

Lastly, we looked at the relationship between the auditor's risk assessment, how much the auditor trusted the management and the extent of audit testing that the auditor proposed. For the student sample, neither risk nor trust was significantly correlated with the extent of audit testing. For the experienced auditor sample, both risk and trust were significantly correlated with the extent of audit testing. As trust increased, the extent of audit testing decreased. As the assessed risk increased, the extent of audit testing decreased, instead of increasing as expected.

The experienced auditors talked aloud while they were making this extent of audit testing decision. The verbal protocols showed that risk was considered in the minority (12%) of the operators. Trust was considered in even fewer operators (1%).

These results appear to uncover three problems. The first is that experienced auditors are influenced by their trust of the management of the firm being audited and this has an effect on the extent of audit testing. This is proscribed by auditing standards (Canadian Institute of Chartered Accountants, 2008, section 5090.07) and raises the question of how effective these standards are. When combined with the results of the verbal protocol

analysis where the auditor appears unaware of effect of trust when making these decisions, it raises the question of whether it is possible for standards calling for professional skepticism and objective evaluations to work. This point has been raised repeatedly by Bazerman et al. (Bazerman et al., 1997; Bazerman et al., 2002; Bazerman et al., 2006; D. Moore et al., 2006).

The second problem is that risk does not seem to be affecting the amount of audit testing as called for in the professional standards (Canadian Institute of Chartered Accountants, 2008, section 5025.55 & 5141.102). With the sample of auditing students, the model is non-significant, and with the sample of experienced auditors, the relationship is in the wrong direction. Instead of the extent of audit testing increasing when risk increased, the extent of audit testing reduced as the risk increased. The verbal protocol analysis showed that risk was not considered in 88% of the operations used when the experienced auditors were making the extent of audit testing decision. Given the number of risk factors included in the case, it is hard to assert that risk is given appropriate weight in the extent of audit testing decision.

The third problem has to do with the process that auditors used when assessing the extent of audit testing. It appeared that they do not have a process to make this decision. In line with the results of other research (for example, Biggs et al., 1987), the experienced auditors in this sample did not use a risk based probabilistic reasoning process. Nor did they appear to use rule based reasoning. The data showed only 9 operators (5%) in the verbal protocol for estimating the extent of audit testing that related to decision rules. Nor

did they appear to use goal directed decision strategies as there were no operators in the verbal protocol for estimating the extent of audit testing that related to goals. In summary, there was a lot of variability in how the decision on the extent of audit testing was made.

15.3.1 Limitations. The limitations discussed earlier due to the use of one case, student auditors and a small sample of experienced auditors apply to this discussion as well. Most of the limitations of verbal protocols were reduced by using concurrent talking aloud to avoid problems with retrospectives and by using existing coding categories to reduce the amount of subjectivity in the coding. Having said that, there is still the possibility that the verbal protocol data is incomplete (Ericsson & Simon, 1980).

I used established codes that were specifically structured to an audit decision situation and applied them in the same manner as in previous research. Having the coding done by a second coder and resolving any inconsistencies would further reduce the subjectivity. However, I show all verbal protocols and coding so readers can assess the consistency themselves.

15.3.2 Contributions. As Gibbins and Swieringa (1995, p 238) put it “Research about how auditors make judgments about audit exposure and how these judgments influence audit process activities and audit risk could make a significant contribution to our understanding of judgments in auditing.” My results show that there is a fair amount of variability in what is considered when the auditors make decisions about the extent of audit testing. Auditors do not appear to follow the professional standards and use risk as

the basis of this decision. Nor do they follow other processes for making these decisions such as using decision rules. From a practical standpoint, these results show that there is room for improvement in both the decision making process and the data that are considered in these processes. For example, a detailed checklist of potential risks could improve their salience when auditors are making decisions about the extent of audit testing. These data provide little evidence that the professional standards are working. There is the potential for auditing firms and standards setters to provide more guidance on how to base the extent of audit decisions on risk. These decision tools could have the benefit of increasing the consistency of the audit decisions made.

It is interesting that trust did not affect the extent of audit testing for the student sample. Solomon and Shields (1995) suggest that studying students provides a baseline for the effects of experience. In this case, it would be interesting to see how experience moves the students away from deciding in accordance with the standards (trust having no additional effect after risk is taken into account) towards letting trust affect the audit decision directly. A longitudinal study on auditors' decision making processes starting at the time they are auditing students would help understand how this comes about.

This difference between the auditing students' and experienced auditors' decisions on the extent of audit testing has uncovered a significant context variable. Professional auditors seem more vulnerable to the influence of trust. Trust also appears to exert its influence below the auditor's conscious level. Thus it appears that the professional safeguards and legislative controls are not effective against trust and supports calls to

“...augment existing guidance on professional skepticism to specifically address the trust issue.” (Rennie et al., 2010, p 290).

Chapter 16. Conclusion

Professions, including the auditing profession, claim that they are acting in the interest of those who depend on their expertise (Wilensky, 1964). They make this claim explicit in their professional standards (*CICA standards and guidance collection (CICAHB)*.2011, section 1000.18(c)) and the bodies that enforce these standards (for example, *The investor's advocate: How the SEC protects investors, maintains market integrity, and facilitates capital formation.*).

“We are professionals that follow our code of ethics and practice by the highest moral values.” said Gary Shamis, then chairman of an accounting practice committee for the American Institute of Certified Public Accountants when testifying on auditor independence before the SEC (Securities and Exchange Commission) (Shamis).

The professions, as a body, support these standards, but there is little evidence that the individual professionals actually adhere to them (Larson, 1977).

Auditing standards require that the extent of audit testing be based on the amount of risk that there will be a material misstatement in the financial statements of the firm being audited (Canadian Institute of Chartered Accountants, 2008, section 5025.55 &

5141.102). This study provided exploratory data on the types of risks that the auditors attended to the most and which they attended to the least. It finds that most auditors attended to only a fraction of the actual risks. This leads to the conclusion that there is a potential to improve how auditors actually process the input (risks of a material misstatement in the financial statements) into output (extent of audit testing that is based on risk).

Auditing standards also require auditors to be professionally skeptical of the management of the firms that they audit (Canadian Institute of Chartered Accountants, 2008, section 5090.05). They are not supposed to believe or disbelieve, [trust or distrust] the firms that hire them (Canadian Institute of Chartered Accountants, 2008, section 5090.07). For example, The Canadian Auditing Standard 240 requires that "...the auditor shall maintain professional skepticism throughout the audit,...,notwithstanding the auditor's past experience of the honesty and integrity of the entity's management and those charged with governance." (*CICA standards and guidance collection (CICAHB)*.2011, CAS 240 12). The results of this study hint that all auditors may not be adhering to these standards. Specifically, it finds that trust is important to auditors in their relationship with the management of the firms they audit. It also finds that a decision by experienced auditors on the extent of audit testing appears to be influenced by this trust. This leads to the conclusion that there may be a gap between what the auditors' professional standards require and what is actually being done.

This gap could be addressed in several ways. The professional standards could be augmented to address this problem as suggested by Rennie, Kopp and Lemon (2010). Another approach is to assess whether the standards *are* achievable at all. Auditors work in a difficult environment. They can only accept clients if they believe them to have enough integrity that there is not an overwhelming risk of a material misstatement in the financial statements (Canadian Institute of Chartered Accountants, 2008, section 5141.108). They must take the client's competence and integrity into account when they assess the risk of a material misstatement (Canadian Institute of Chartered Accountants, 2008, section 5141.104 and .108). Yet they are not supposed to accept what clients say unless they have supporting evidence (Canadian Institute of Chartered Accountants, 2008, section 5090.07). So trust – a “leap of faith” – is not supposed to affect their decisions. Bonner (2008) cites research showing that auditors can make poor decisions because they are influenced by irrelevant factors such as anchoring, framing, the order of information and its repetition. As Bazerman and his colleagues (Bazerman et al., 1997; Bazerman et al., 2002; Bazerman et al., 2006; D. Moore et al., 2006) argue there is much evidence in the psychology literature that says it is not possible for an auditor to be skeptical and objective when he or she is hired and fired by the firm being audited. Research that addresses whether the standards are achievable at all would be appropriate.

In assessing the generalizability of these results, it is worth noting that auditors have a unique relationship with the people who depend on their professional services. Other professionals, such as lawyers, are hired by their clients, who are the *same* people who are affected by whether the lawyer trusts them or not. Others are not negatively affected

by the lawyer's trust of the client. If doctors trust their patients and are influenced by this trust, this trust is not potentially detrimental to others. Thus this research is primarily applicable to the auditing profession. First there is a gap between the normative auditing standards and actual practice. This gap is non-trivial as it pertains to an auditor's objectivity and skepticism - two of the fundamental underlying principles of auditing. Second, there is a potential to improve how auditors decide on the amount and type of audit testing. These results show that risk, the theoretical basis of this decision, is underutilized. These results also show that trust does have an effect (over and above the effect that it has through risk), even though it should not. The gap between the normative standards and the actual practice means that potentially there is less protection than implied by the standards for the investors, creditors and others who depend on audited financial statements.

References

- Abbott, A. (1988). *The system of professions*. Chicago: The University of Chicago Press.
- An act respecting the authorite des marches financiers R.S.Q., chapter A-33.2*. (2011). Retrieved May 12, 2011, from http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=%2F%2FA_33_2%2FA33_2_a.htm
- Anderson, U., & Marchant, G. (1989). The auditor's assessment of the competence and integrity of auditee personnel. *Auditing*, 8(supplement), 1-16.
- Arens, A., Elder, R., Beasley, M., & Spletstoesser, I. (2005). *Auditing and other assurance services* (Canadian Tenth Edition ed.). Toronto: Pearson Prentice Hall.
- Arens, A., Loebbecke, J., Lemon, W., & Spletstoesser, I. (2003). *Auditing and other assurance services* (Canadian Ninth Edition ed.). USA: Prentice Hall.
- Ashcraft, M. (2006). *Cognition* (4th ed.). Upper Saddle River: Pearson Prentice Hall.
- Auditing and Assurance Standards Board. (2008). *General standards of quality control for firms performing professional assurance engagements* www.knotia.ca.
- Babcock, L., Loewenstein, G., Issacharoff, S., & Camerer, C. (1995). Biased judgments of fairness in bargaining. *The American Economic Review*, 85(5), 1337-1343.
- Baird, I., & Thomas, H. (1985). Towards a contingency model of strategic risk taking. *Academy of Management Review*, 10(2), 230-243.
- Ballinger, G., Schoorman, F., & Lehman, D. (2009). Will you trust your new boss? the role of affective reactions to leadership succession. *The Leadership Quarterly*, 20, 219-232.
- Barlaup, K., Dronen, H., & Stuart, I. (2009). Restoring trust in auditing: Ethical discernment and the Adelphia scandal. *Managerial Auditing Journal*, 24(2), 183-203.
- Bazerman, M. (2006). *Judgment in managerial decision making* (6th ed.). United States of America: John Wiley & Sons, Inc.

- Bazerman, M., Baron, J., & Shore, L. (2001). *"You can't enlarge the pie" six barriers to effective government*. NY: Basic Books.
- Bazerman, M., Loewenstein, G., & Moore, D. (2002). Why good accountants do bad audits. *Harvard Business Review*, 80(11), 97-102.
- Bazerman, M., Moore, D., Tetlock, P., & Tanlu, L. (2006). Reports of solving the conflicts of interest in auditing are highly exaggerated. *Academy of Management Review*, 31(1), 43-49.
- Bazerman, M., Morgan, K., & Loewenstein, G. (1997). The impossibility of auditor independence. *Sloan Management Review*, 38(4), 89-94.
- Beaulieu, R. (2001). The effects of judgments of new clients' integrity upon risk judgments, audit evidence, and fees. *Auditing*, 20(2), 85-99.
- Bernardi, R. (1994). Fraud detection: The effect of client integrity and competence and auditor cognitive style. *Auditing*, 13, 68-84.
- Besharov, G. (2004). Second-best considerations in correcting cognitive biases. *Southern Economic Journal*, 71(1), 12-20.
- Big four (audit firms). Retrieved April 21, 2011, from [http://en.wikipedia.org/wiki/Big_Four_\(audit_firms\)](http://en.wikipedia.org/wiki/Big_Four_(audit_firms))
- Biggs, S., Messier, W., & Hansen, J. (1987). A descriptive analysis of computer audit specialists' decision-making behavior in advanced computer environments. *Auditing*, 6(2), 1-21.
- Biggs, S., & Mock, T. (1983). An investigation of auditor decision processes in the evaluation of internal controls and audit scope decisions. *Journal of Accounting Research*, 21(1), 234-255.
- Biggs, S., Mock, T., & Watkins, P. (1989). *Analytical review procedures and processing in auditing* (Research Monograph Number 14 ed.) The Canadian Certified General Accountants' Research Foundation.
- Biggs, S., & Wild, J. (1985). An investigation of auditor judgment in analytical review. *The Accounting Review*, LX(4), 607-633.

- Bonner, S. (1990). Experience effects in auditing: The role of task-specific knowledge. *The Accounting Review*, 65(1), 72-92.
- Bonner, S. (2008). *Judgment and decision making in accounting*. Upper Saddle River: Pearson Prentice Hall.
- Brockner, J., Siegel, P., Daly, J., Tyler, T., & Martin, C. (1997). When trust matters: The moderating effect of outcome favorability. *Administrative Science Quarterly*, 42(3), 558-583.
- Business performance highlights*. Retrieved April 21, 2011, from <http://www.pwcwebcast.co.uk/pwc-uk-2010-annual-report.pdf>
- Canadian Institute of Chartered Accountants. (2008). *CICA standards and guidance collection - CICA handbook - assurance* www.knotia.ca.
- Canadian Institute of Chartered Accountants. (2009). *CICA standards & guidelines collection CICA handbook - accounting*
- Chandra, G. (2003). The Enron implosion and its lessons. *Journal of Management Research*, 3(2), 98-111.
- Chiles, T., & McMackin, J. (1996). Integrating variable risk preferences, trust, and transaction cost economics. *Academy of Management Review*, 21(1), 73-99.
- CICA standards and guidance collection (CICAHB)*. (2011). Retrieved Dec. 6, 2011, from 0-edu.knotia.ca.mercury.concordia.ca/knowledge/Home.aspx?productid=1
- Colombo, R. (2010). Trust and the reform of securities regulation. *Delaware Journal of Corporate Law*, 35(3), 829-877.
- Cummings, L., & Bromiley, P. (1996). The organizational trust inventory (OTI) development and validation. In R. Kramer, & T. Tyler (Eds.), *Trust in organizations frontiers of theory and research* (pp. 302-330). Thousand Oaks: Sage.
- Das, T., & Teng, B. (1999). Cognitive biases and strategic decision process: An integrative perspective. *Journal of Management Studies*, 36(6), 757-778.

- Davis, J., Schoorman, F., Mayer, R., & Tan, H. (2000). The trusted general manager and business unit performance: Empirical evidence of a competitive advantage. *Strategic Management Journal*, 21(5), 563.
- Deutsch, M. (1958). Trust and suspicion. *Journal of Conflict Resolution*, 2(4), 265-279.
- Diekmann, K., Ross, L., Samuels, S., & Bazerman, M. (1997). Self-interest and fairness in problems of resource allocation: Allocators versus recipients. *Journal of Personality and Social Psychology*, 72(5), 1061-1074.
- Dirks, K., & Ferrin, D. (2001). The role of trust in organizational settings. *Organization Science*, 12(4), 450-467.
- Dirks, K., & Ferrin, D. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology*, 87(4), 611-628.
- Dusenbury, R., Reimers, J., & Wheeler, S. (2000). The audit risk mode: An empirical test for conditional dependencies among assessed component risks. *Auditing*, 19(2), 105-117.
- Edwards, J. (2001). Accounting regulation and the professionalization process: An historical essay concerning the significance of P.H. Abbott. *Critical Perspectives on Accounting*, 12, 675-696.
- Einhorn, H., & Hogarth, R. (1981). Behavioral decision theory: Process of judgment and choice. *Journal of Accounting Research*, 19(1), 1-31.
- Eining, M., Jones, D., & Loebbecke, J. (1997). Reliance on decision aids: An examination of auditor's assessment of management. *Auditing*, 16(2), 1-19.
- Ericsson, K., & Simon, H. (1980). Verbal reports as data. *Psychological Review*, 87(3), 215-251.
- Ericsson, K., & Simon, H. (1984). *Protocol analysis verbal reports as data*. Cambridge, Mass: The MIT Press.
- Facts and figures*. Retrieved April 21, 2011, from http://www.deloitte.com/view/en_GX/global/press/facts-figures/index.htm
- Freidson, E. (1986). *Professional powers*. Chicago: The University of Chicago Press.

- Gibbins, M., & Swieringa, R. (1995). Twenty years of judgment research in accounting and auditing. In R. Ashton, & A. Ashton (Eds.), *Judgment and decision-making research in accounting and auditing* (pp. 231-249). Cambridge: Cambridge University Press.
- Gill, H., Boies, K., Finegan, J., & McNally, J. (2005). Antecedents of trust: Establishing A boundary condition for the relation between propensity to trust and intention to trust. *Journal of Business and Psychology*, 19(3), 287-302.
- Gillespie, N. (2003). Measuring trust in work relationships: The behavioral trust inventory. paper presented at the *academy of management conference*.
- Global review 2010 facts and figures*.
- [http://www.ey.com/publication/vwLUAssets/Global_review_2010?\\$FILE/Ernst%20&%20Yong%20Global%20Review%202010.pdf](http://www.ey.com/publication/vwLUAssets/Global_review_2010?$FILE/Ernst%20&%20Yong%20Global%20Review%202010.pdf)
- Goldman, A., & Barlev, B. (1974). The auditor - firm conflict of interests: Its implications for independence. *The Accounting Review*, 49(4), 707-718.
- Goode, W. (1957). Community within a community: The professions. *American Sociological Review*, 22(2), 194-200.
- Govier, T. (1994). Is it a jungle out there? trust, distrust and the construction of social reality. *Dialogue*, XXXIII, 237-252.
- Hardin, R. (1993). The street-level epistemology of trust. *Politics and Society*, 21(4), 505-529.
- Hastorf, A., & Cantril, H. (1954). They saw a game: A case study. *Journal of Abnormal and Social Psychology*, 49, 129-134.
- Heintz, J., & White, G. (1989). Auditor judgment in analytical review - some further evidence. *Auditing*, 8(2), 22-39.
- Hirst, D., & Koonce, L. (1996). Audit analytical procedures: A field investigation. *Contemporary Accounting Research*, 13(2), 457-486.
- Houston, R. (1999). The effect of fee pressure and client risk on audit seniors' time budget decisions. *Auditing*, 18(2), 70-86.

- The investor's advocate: How the SEC protects investors, maintains market integrity, and facilitates capital formation.* www.sec.gov/about/whatwedo.shtml
- Jeffries, F., & Reed, R. (2000). Trust and adaptation in relational contracting. *Academy of Management Review*, 25(4), 873-882.
- Johnson, E., & Tversky, A. (1983). Affect, generalization, and the perception of risk. *Journal of Personality and Social Psychology*, 45(1), 20-31.
- Johnson, T. (1972). *Professions and power*. London: Macmillan.
- Jones, K. (1996). Trust as an affective attitude. *Ethics*, 107(October), 4-25.
- Kee, H., & Knox, R. (1970). Conceptual and methodological considerations in the study of trust and suspicion. *The Journal of Conflict Resolution*, 14(3), 357.
- Kennedy, J. (1995). Debiasing the curse of knowledge in audit judgment. *The Accounting Review*, 70(2), 249-273.
- Kizirian, T., Mayhew, B., & Sneathen, L. (2005). The impact of management integrity on audit planning and evidence. *Auditing*, 24(2), 49-67.
- KPMG Europe LLP annual report 2010 notes*. Retrieved April 21, 2011, from http://annualreport.kpmg.eu/documents/financials/kpmg_notes_consolodated.pdf
- Larson, M. (1977). *The rise of professionalism A sociological analysis*. Berkeley: University of California Press.
- Lawler, E., & Rhode, J. (1976). *Information and control in organizations*. Pacific Palisades: Goodyear Publishing Company Inc.
- The laws that govern the securities industry*. Retrieved May 5, 2011, from <http://www.sec.gov/about/laws.shtml>
- Leck, J., & Robitaille, A. (2011). Psychometric properties of the behavioral trust inventory for measuring trust in mentoring relationships. *Journal of American Academy of Business, Cambridge*, 17(1), 119-124.

- Levitt, A. Testimony concerning: Commission's auditor independence proposal: Testimony concerning: Commission's auditor independence proposal: (2000).
- Lewicki, R., & Bunker, B. (1996). Developing and maintaining trust in work relationships. In R. Kramer, & T. Tyler (Eds.), *Trust in organizations frontiers of theory and research* (pp. 114-139). Thousand Oaks: Sage.
- Lewicki, R., Tomlinson, E., & Gillespie, N. (2006). Models of interpersonal trust development: Theoretical approaches, empirical evidence, and future directions. *Journal of Management*, 32(6), 991-1022.
- Lewis, D., & Weigert, A. (1985). Trust as a social reality. *Social Forces*, 63(4), 967-985.
- Libby, R., Artman, J., & Willingham, J. (1985). Process susceptibility, control risk, and audit planning. *The Accounting Review*, LX(2), 212-230.
- Libby, Libby, Short, Kanaan, & Gowing. (2006). *Financial accounting*. Toronto: McGraw Hill.
- List of countries by GDP (nominal)*. Retrieved May 5, 2011, from [http://en.wikipedia.org/wiki/List_of_countries_by_GDP_\(nominal\)](http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal))
- List of stock exchanges*. (2010). Retrieved April 21, 2011, from http://en.wikipedia.org/wiki/List_of_stock_exchanges
- Loewenstein, G., & Thaler, R. (1989). Anomalies intertemporal choice. *Journal of Economic Perspectives*, 3(4), 181-193.
- Lyles, M., & Thomas, H. (1988). Strategic problem formulation: Biases and assumptions embedded in alternative decision-making models. *Journal of Management Studies*, 25(2), 131-145.
- Mayer, R., & Davis, J. (1999). The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology*, 84(1), 123-136.
- Mayer, R., Davis, J., & Schoorman, D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), 709-734.

- Mayer, R., & Gavin, M. (2005). Trust in management and performance: Who minds the shop while the employees watch the boss. *Academy of Management Journal*, 48(5), 874-888.
- Mayer, R., & Norman, P. (2004). Exploring attributes of trustworthiness: A classroom exercise. *Journal of Management Education*, 28(2), 224-249.
- McEvily, B., Perrone, V., & Zaheer, A. (2003). Trust as an organizing principle. *Organization Science*, 14(1), 91-103.
- McPhail, K. (2001). The dialectic of accounting education: From role identity to ego identity. *Critical Perspectives on Accounting*, 12, 471-499.
- Messick, D., & Sentis, K. (1979). Fairness and preference. *Journal of Experimental Social Psychology*, 15, 418-434.
- Messick, D., & Sentis, K. (1983). Fairness, preference, and fairness biases. In D. Messick, & K. Cook (Eds.), *Equity theory psychological and sociological perspectives* (pp. 61-94). New York: Praeger.
- Mock, T., & Wright, A. (1999). Are audit program plans risk-adjusted. *Auditing*, 18(1), 55-74.
- Moore, D., Tetlock, P., Tanlu, L., & Bazerman, M. (2006). Conflicts of interest and the case of auditor independence: Moral seduction and strategic issue cycling. *Academy of Management Review*, 31(1), 10-29.
- Moore, S., Shaffer, L., Pollack, E., & Taylor-Lemcke, P. (1987). The effects of interpersonal trust and prior commons problem experience on commons management. *The Journal of Social Psychology*, 127(1), 19-29.
- Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, XXIX, 314-328.
- Pratt, J., & Stice, J. (1994). The effects of client characteristics on auditor litigation risk judgments, required audit evidence, and recommended audit fees. *The Accounting Review*, 69(4), 639-656.

- Rennie, M., Kopp, L., & Lemon, W. (2010). Exploring trust and the auditor-client relationship: Factors influencing the auditor's trust of a client representative. *Auditing*, 29(1), 279-293.
- Roberts, K., & O'Reilly, C. (1974). Failures in upward communication in organizations: Three possible culprits. *Academy of Management Journal*, 17(2), 205-215.
- Robinson, S. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41(4), 574-599.
- Rotter, J. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35, 651-665.
- Rotter, J. (1971). Generalized expectations for interpersonal trust. *American Psychologist*, 26(5), 443-452.
- Sarbanes-Oxley act of 2002 - CHAPTER 98 - PUBLIC COMPANY ACCOUNTING REFORM AND CORPORATE RESPONSIBILITY*. Retrieved May 5, 2011, from <http://uscode.house.gov/download/pls/15C98.txt>
- Schoorman, D., Mayer, R., & Davis, J. (2007). An integrative model of organizational trust: Past, present and future. *Academy of Management Review*, 32(2), 344-354.
- Schwarz, N., & Clore, G. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology*, 45(3), 513-523.
- Schwarz, N., & Clore, G. (1996). Feelings and phenomenal experiences. In T. Higgins, & A. Kruglanski (Eds.), *Social psychology handbook of basic principles* (pp. 433-465). New York: The Guilford Press.
- The securities act (Alberta) RSA 2000 cS-4*. Retrieved May 12, 2011, from http://www.qp.alberta.ca/574.cfm?page=S04.cfm&leg_type=Acts&isbncln=9780779755400
- Securities act [RSBC 1996] chapter 418*. (2011). Retrieved May 12, 2011, from http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96418_01

- Securities act R.S.O. 1990, chapter S.5.* (2010). Retrieved April 21, 2011, from http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90s05_e.htm
- Securities exchange act of 1934.* Retrieved May 5, 2011, from <http://www.sec.gov/about/laws/sea34.pdf>
- Shamis, G. *Testimony of Gary Shamis, chairman, management of an accounting practice committee, American institute of certified public accountants on auditor independence before the securities and exchange commission Wednesday, September 13, 2000.* Retrieved Dec. 5, 2011, from www.sec.gov/rules/proposed/s71300/testimony/shamins1.htm
- Sitkin, S., & Weingart, L. (1995). Determinants of risky decision-making behavior: A test of the mediating role of risk perceptions and propensity. *Academy of Management Journal*, 38(6), 1573-1592.
- Solomon, I., & Shields, M. (1995). Judgment and decision-making research in auditing. In R. Ashton, & A. Ashton (Eds.), *Judgment and decision-making research in accounting and auditing* (pp. 137-175). Cambridge: Cambridge University Press.
- Staw, B. (1981). The escalation of commitment to a course of action. *Academy of Management Review*, 6(4), 577-587.
- Staw, B. M. (1997). The escalation of commitment: An update and appraisal. In Z. Shapira (Ed.), *Organizational decision making* (pp. 193-215). Cambridge: Cambridge University Press.
- Tenbrunsel, A., & Messick, D. (2004). Ethical fading: The role of self-deception in unethical behavior. *Social Justice Research*, 17(2), 223-236.
- Teoh, S., & Wong, T. (1993). Perceived auditor quality and the earnings response coefficient. *The Accounting Review*, 68(2), 346-366.
- Tomlinson, E., & Mayer, R. (2009). The role of causal attribution dimensions in trust repair. *Academy of Management Review*, 34(1), 85-104.
- Tyler, T. (2003). Trust within organizations. *Personnel Review*, 32(5), 556-568.

- Tyler, T., & Degoey, P. (1996). Trust in organizational authorities the influence of motive attributions on willingness to accept decisions. In R. Kramer, & T. Tyler (Eds.), *Trust in organizations frontiers of theory and research* (pp. 331-356). Thousand Oaks: Sage.
- The U.S. securities and exchange commission*. Retrieved April 21, 2011, from <http://www.sec.gov/about/whatwedo.shtml>
- U.S. Securities and Exchange Commission Office of Investigations. (2009). *Investigation of failure of the SEC to uncover Bernard Madoff's ponzi scheme - public version*. Retrieved Dec. 8, 2011, from www.sec.gov/news/studies/2009/oig-509.pdf
- Wicks, A., Berman, S., & Jones, T. (1999). The structure of optimal trust: Moral and strategic implications. *Academy of Management Review*, 24(1), 99-115.
- Wilensky, H. (1964). The professionalization of everyone? *The American Journal of Sociology*, 70(2), 137-158.
- Williamson, O. (1993). Calculativeness, trust, and economic organization. *Journal of Law and Economics*, 36(1), 453-486.
- Wright, A., & Bedard, J. (2000). Decision processes in audit evidential planning: A multistage investigation. *Auditing*, 19(1), 123-143.
- Yamagishi, T., Cook, K., & Watabe, M. (1998). Uncertainty, trust, and commitment formation in the United States and Japan. *American Journal of Sociology*, 104(1), 165-194.
- Zand, D. (1972). Trust and managerial problem solving. *Administrative Science Quarterly*, 17(2), 229-239.

Appendix A. Trust Questions for Auditors in the Pilot Test

I'm going to ask you some questions about your relationship with clients. What you say may be published in my theses, but your answers will be anonymous. I'll ask you to choose an alias so that you can identify your comments, but you and I will be the only ones who can connect you with your answers. No one else will be able to.

Of course, you can stop anytime if you wish to. You are under no obligation to continue. If you want more info about your rights as a participant – you may contact Adela Reid 514 848 2424 # 7481.

Please remember that there are no right or wrong answers, that I want to hear what you think about these questions.

1) Before we get into the actual questions, I would like to know something about your auditing experience. What are the some of the best things about being an auditor? What are some of the challenges?

2) Now I'd like to focus on how you interact with your clients. Please think of the client that you trusted the most. Don't tell me any identifying information like their name or the name of the firm. I'm interested in how you would describe this client as a person?

3) Now I'd like to switch gears a bit. Please think of the client that you trusted the least. How would you describe this client?

4) I'd like to switch now from those specific clients you were describing and talk about clients in general. What is it about clients that makes them trustworthy? Are there characteristics which make a client trustworthy?

Can you give me some examples of behavior that shows a client is trustworthy?

Do circumstances affect the trustworthiness of a client?

Do you think it takes time to build up trust in an audit relationship?

5) We've been talking about the client a fair amount. Now I'd like to turn to your reactions to this interaction with your clients.

Can you tell me what would happen if you did not trust the client?

Do you think trust could be useful in doing a better audit?

Do circumstances affect your reactions to the interaction with your clients?

In general, would you describe yourself as a trusting person?

6) A large part of auditing is about assessing risks like inherent risk, control risk and planned detection risk. How would you describe the difference between trust and risk?

**Appendix B. Benevolent and Non-benevolent Behaviors Suggested by Experienced
External Auditors**

Requested data is poorly organized (e.g. not in any order).

Responds quickly to requests for documents.

Says nothing about lawsuits.

Employees make no effort to provide a good explanation for complex situations.

Provides adequate support for on-site auditors.

Provides auditors with a small, uncomfortable room to work in.

Conceals information useful to the auditor.

Hides financial distress.

Is forthcoming about financial distress.

Doesn't access records (e.g. sales invoices) when needed by auditors.

Says nothing about financial distress.

Employees explain the situation in several ways in order to make it clear.

When the auditor is under time pressure, makes a point of responding quickly.

Volunteers information useful to the auditor.

Suggests the name of the best person to provide the auditor with information.

Employees make no attempt to explain things.

Takes pleasure in making the auditor wait when auditor is under time pressure.

Room provided to auditors has no phone.

Responds slowly to requests for documents.

Doesn't listen to accounting treatment.

When the auditor is under time pressure, responds in the normal timeframe.

Cooperates with preparation of audit schedules.

Provides incomplete information.

Gathers control documentation when asked.

Works well with auditors.

Expects auditors to prepare schedules on their own.

When the auditor is under time pressure, takes his own time to respond to requests.

Argues for capitalizing R&D.

Goes out of their way to respond to on-site auditors.

Room provided to auditors has inadequate electrical outlets.

Doesn't volunteer background details of financial decisions.

Tries to clear up an auditor's misunderstanding.

Employees are quick to answer auditor's questions.

Gives requests from auditors same priority as their own work.

Volunteers background details to increase understanding of financial decisions

Provides auditors with a large, comfortable room to work in.

Prepares tax return for tax provision.

Doesn't volunteer information useful to the auditor.

Room provided to auditors has a phone.

Tells the auditor where control documentation can be found.

Implies will replace auditors if they don't "go along" with management's approach.

Answers questions adequately.

Requested data is not totaled.

Give requests from auditors higher priority than their own work.

Answers questions to the best of his or her ability.

Provides auditors with access to the cafeteria and parking

Room provided to auditors has plenty of electrical outlets

Room provided to auditors has adequate electrical outlets.

Consults with auditors when scheduling an inventory count.

Gathers control documentation without being asked.

Employees do not check that their explanation is understandable.

Suggests the name of a junior person to provide the auditor with information.

Room provided to auditors has several phones.

Employees will only explain things briefly.

Suggests ways to speed up the audit.

Requested data is totaled.

Employees are happy to answer auditor's questions.

Employees are reluctant to answer auditor's questions.

Let's on-site auditors take care of themselves.

Employees check that their explanation is understandable.

Requested data is well organized (e.g. by date or by invoice number).

Is forthcoming about any lawsuits.

Accesses records (e.g. sales invoices) when needed by auditors.

Prepares audit schedules for auditors.

Tells auditors where records (e.g. sales invoices) are stored.

Gives requests from auditors lower priority than their own work.

Hides potential legal liability.

Respects auditor's professionalism.

Employees are slow to answer auditor's questions.

Doesn't prepare tax return for tax provision.

Explains how to access records (e.g. sales invoices).

Threatens to replace auditors.

Employees make an effort to provide a good explanation for complex situations.

Takes advantage of an auditor's misunderstanding.

Doesn't explain how to access records (e.g. sales invoices).

Appendix C. Instructions and Questionnaire for Rating the Benevolence and Non-benevolence of Behaviors

Please think of a situation where you are an auditor on site at a client firm. A manager in the client firm acts in the following ways. Please rate each behavior on a benevolence scale where 1 is extremely benevolent and 9 is extremely non-benevolent. Benevolence implies that a person is concerned about your needs and desires, not just his or her own benefit. For example, a mentor is benevolent towards his or her protégé.

1. Requested data is poorly organized (e.g. not in any order).

1	2	3	4	5	6	7	8	9
Extremely benevolent	Moderately benevolent	Neither	Moderately non-benevolent	Extremely non-benevolent				

2. Responds quickly to requests for documents.

1	2	3	4	5	6	7	8	9
Extremely benevolent	Moderately benevolent	Neither	Moderately non-benevolent	Extremely non-benevolent				

3.... See Appendix B for behaviors 3 to 73. All these behaviors were rated as shown above.

74. Takes advantage of an auditor's misunderstanding.

1	2	3	4	5	6	7	8	9
Extremely benevolent		Moderately benevolent		Neither		Moderately non-benevolent		Extremely non-benevolent

75. Doesn't explain how to access records (e.g. sales invoices).

1	2	3	4	5	6	7	8	9
Extremely benevolent		Moderately benevolent		Neither		Moderately non-benevolent		Extremely non-benevolent

Appendix D. Behaviors Rated on the Three Trustworthiness Dimensions

Benevolence behaviors.

Extremely Benevolent

- Responds quickly to requests for documents. *
- Employees are quick to answer auditor's questions. *
- Volunteers information useful to the auditor. *
- Employees make an effort to provide a good explanation for complex situations. *

Moderately Benevolent

- Tries to clear up an auditor's misunderstanding. *
- Accesses records (e.g. sales invoices) when needed by auditors. *
- Respects auditor's professionalism. *
- Gathers control documentation when asked. *

Neutral

- Prepares tax return for tax provision.
- Argues for capitalizing research and development.

Moderately Non-Benevolent

- Employees are slow to answer auditor's questions. *
- Employees are reluctant to answer auditor's questions.
- Doesn't listen to accounting treatment.
- Responds slowly to requests for documents. *

Extremely Non-Benevolent

- Provides auditors with a small, uncomfortable room to work in. *
- Says nothing about lawsuits. *
- Employees make no effort to provide a good explanation for complex situations.
- Threatens to replace auditors. *

* indicates that Study 2 found this behavior to be above the median for this category of behavior

Ability Behaviors. (Anderson & Marchant, 1989, p 7)

Extremely Competent

- Keeps up to date with professional developments. *
- Takes the time to teach subordinates. *
- Finished report on time. *
- Is innovative. *

Moderately Competent

- Delegates responsibility to subordinates.
- Double checks calculations. *
- Has worked for a “Big 8” public accounting firm. *
- Is an officer in a professional organization.

Neutral

- Works on the weekend.
- Reads the newspaper in the office in the morning.
- Closes his or her eyes to think.

- Makes an addition error on an expense account report.

Moderately Incompetent

- Dates a subordinate.
- Is evasive when responding to auditor's questions about department's activities. *
- Plays favorites with subordinates. *
- Puts off unpleasant personnel decisions. *

Extremely Incompetent

- Falls asleep in meetings.
- Cannot explain budget variances. *
- Blames subordinates for manager's mistakes. *
- Lies about progress to superiors. *

* indicates that Study 2 found this behavior to be above the median for this category of behavior

Integrity Behaviors. (Anderson & Marchant, 1989, p 8)

Extremely Honest

- Tells the payroll department about an overpayment in a paycheck. *
- Returns a lost wallet intact. *
- Reports a small barter exchange on personal income tax. *
- Calls a supplier to tell them that the company was underbilled. *

Moderately Honest

- Charges personal long-distance calls made in the office to home phone.

- Requests reimbursement for less than the daily per diem.
- Returns phone calls promptly. *
- Switches suppliers when heard a rumour about supplier's honesty.

Neutral

- Takes customers to lunch.
- Clears his or her desk at the end of day.
- Smokes in the office.
- Only takes two to three day vacations.

Moderately Dishonest

- Takes office supplies home for personal use. *
- Promises a report for a specific date knowing it will not be finished. *
- Drinks coffee from the office pot, but not contribute to the coffee fund. *
- Copies office software for personal use. *

Extremely Dishonest

- Takes credit for report written by subordinate. *
- Reads other people's mail. *
- Brags about underreporting income to Revenue Canada.
- Tells a friend to buy shares in the manager's company before the announcement of a new defense contract. *

* indicates that Study 2 found this behavior to be above the median for this category of behavior

**Appendix E. Questions About the Likelihood of a Type of Manager Exhibiting a
Specific Behavior**

Would an honest manager keep up to date with professional developments?

Would an honest manager take the time to teach subordinates?

Would an honest manager finish a report on time?

Would an honest manager be innovative?

Would an honest manager delegate responsibility to subordinates?

Would an honest manager double check calculations?

Would an honest manager have worked for a "Big 4" public accounting firm?

Would an honest manager be an officer in a professional association?

Would an honest manager work on the weekends?

Would an honest manager read the newspaper in the office in the morning?

Would an honest manager close his or her eyes to think?

Would an honest manager make an addition error on an expense account report?

Would an honest manager date a subordinate?

Would an honest manager be evasive when responding to auditor's questions about the department's activities?

Would an honest manager play favorites with subordinates?

Would an honest manager put off unpleasant personnel decisions?

Would an honest manager fall asleep in meetings?

Would an honest manager be unable to explain budget variances?

Would an honest manager blame subordinates for the manager's mistakes?

Would an honest manager lie about progress to superiors?

Would an honest manager tell the payroll department about an overpayment in a paycheque?

Would an honest manager return a lost wallet intact?

Would an honest manager report a small barter exchange on personal income tax?

Would an honest manager call a supplier to tell them that the company was underbilled?

Would an honest manager charge personal long-distance calls made in the office to home phone?

Would an honest manager request reimbursement for less than the daily per diem?

Would an honest manager return phone calls promptly?

Would an honest manager switch suppliers when heard a rumour about supplier's honesty?

Would an honest manager take customers to lunch?

Would an honest manager clear his or her desk at the end of day?

Would an honest manager smoke in the office?

Would an honest manager only take two to three day vacations?

Would an honest manager take office supplies home for personal use?

Would an honest manager promise a report for a specific date knowing it will not be finished?

Would an honest manager drink coffee from the office pot, but not contribute to the coffee fund?

Would an honest manager copy office software for personal use?

Would an honest manager take credit for report written by subordinate?

Would an honest manager read other people's mail?

Would an honest manager brag about underreporting income to Revenue Canada?

Would an honest manager tell a friend to buy shares in the manager's company before the

announcement of a new defense contract?

Would an honest manager respond quickly to an auditor's request for documents?

Would an honest manager quickly answer auditor's questions?

Would an honest manager volunteer information useful to the auditor?

Would an honest manager make an effort to provide a good explanation for complex situations?

Would an honest manager try to clear up an auditor's misunderstanding?

Would an honest manager access records (e.g. sales invoices) when needed by auditors?

Would an honest manager respect an auditor's professionalism?

Would an honest manager gather control documents when asked?

Would an honest manager prepare tax return for tax provision?

Would an honest manager argue for capitalizing R&D?

Would an honest manager be slow to answer auditor's questions?

Would an honest manager be reluctant to answer auditor's questions?

Would an honest manager not listen to accounting treatment?

Would an honest manager respond slowly to requests for documents?

Would an honest manager provide auditors with a small, uncomfortable room to work in?

Would an honest manager say nothing about lawsuits?

Would an honest manager make no effort to provide a good explanation for complex situations?

Would an honest manager threaten to replace auditors?

Would a dishonest manager keep up to date with professional developments?

Would a dishonest manager take the time to teach subordinates?

- Would a dishonest manager finish a report on time?
- Would a dishonest manager be innovative?
- Would a dishonest manager delegate responsibility to subordinates?
- Would a dishonest manager double check calculations?
- Would a dishonest manager have worked for a "Big 4" public accounting firm?
- Would a dishonest manager be an officer in a professional association?
- Would a dishonest manager work on the weekends?
- Would a dishonest manager read the newspaper in the office in the morning?
- Would a dishonest manager close his or her eyes to think?
- Would a dishonest manager make an addition error on an expense account report?
- Would a dishonest manager date a subordinate?
- Would a dishonest manager be evasive when responding to auditor's questions about the department's activities?
- Would a dishonest manager play favorites with subordinates?
- Would a dishonest manager put off unpleasant personnel decisions?
- Would a dishonest manager fall asleep in meetings?
- Would a dishonest manager be unable to explain budget variances?
- Would a dishonest manager blame subordinates for the manager's mistakes?
- Would a dishonest manager lie about progress to superiors?
- Would a dishonest manager tell the payroll department about an overpayment in a paycheck?
- Would a dishonest manager return a lost wallet intact?
- Would a dishonest manager report a small barter exchange on personal income tax?
- Would a dishonest manager call a supplier to tell them that the company was underbilled?

Would a dishonest manager charge personal long-distance calls made in the office to home phone?

Would a dishonest manager request reimbursement for less than the daily per diem?

Would a dishonest manager return phone calls promptly?

Would a dishonest manager switch suppliers when heard a rumour about supplier's honesty?

Would a dishonest manager take customers to lunch?

Would a dishonest manager clear his or her desk at the end of day?

Would a dishonest manager smoke in the office?

Would a dishonest manager only take two to three day vacations?

Would a dishonest manager take office supplies home for personal use?

Would a dishonest manager promise a report for a specific date knowing it will not be finished?

Would a dishonest manager drink coffee from the office pot, but not contribute to the coffee fund?

Would a dishonest manager copy office software for personal use?

Would a dishonest manager take credit for report written by subordinate?

Would a dishonest manager read other people's mail?

Would a dishonest manager brag about underreporting income to Revenue Canada?

Would a dishonest manager tell a friend to buy shares in the manager's company before the announcement of a new defense contract?

Would a dishonest manager respond quickly to an auditor's request for documents?

Would a dishonest manager quickly answer auditor's questions?

Would a dishonest manager volunteer information useful to the auditor?

Would a dishonest manager make an effort to provide a good explanation for complex situations?

Would a dishonest manager try to clear up an auditor's misunderstanding?

Would a dishonest manager access records (e.g. sales invoices) when needed by auditors?

Would a dishonest manager respect an auditor's professionalism?

Would a dishonest manager gather control documents when asked?

Would a dishonest manager prepare tax return for tax provision?

Would a dishonest manager argue for capitalizing R&D?

Would a dishonest manager be slow to answer auditor's questions?

Would a dishonest manager be reluctant to answer auditor's questions?

Would a dishonest manager not listen to accounting treatment?

Would a dishonest manager respond slowly to requests for documents?

Would a dishonest manager provide auditors with a small, uncomfortable room to work in?

Would a dishonest manager say nothing about lawsuits?

Would a dishonest manager make no effort to provide a good explanation for complex situations?

Would a dishonest manager threaten to replace auditors?

Would a competent manager keep up to date with professional developments?

Would a competent manager take the time to teach subordinates?

Would a competent manager finish a report on time?

Would a competent manager be innovative?

Would a competent manager delegate responsibility to subordinates?

Would a competent manager double check calculations?

- Would a competent manager have worked for a "Big 4" public accounting firm?
- Would a competent manager be an officer in a professional association?
- Would a competent manager work on the weekends?
- Would a competent manager read the newspaper in the office in the morning?
- Would a competent manager close his or her eyes to think?
- Would a competent manager make an addition error on an expense account report?
- Would a competent manager date a subordinate?
- Would a competent manager be evasive when responding to auditor's questions about the department's activities?
- Would a competent manager play favorites with subordinates?
- Would a competent manager put off unpleasant personnel decisions?
- Would a competent manager fall asleep in meetings?
- Would a competent manager be unable to explain budget variances?
- Would a competent manager blame subordinates for the manager's mistakes?
- Would a competent manager lie about progress to superiors?
- Would a competent manager tell the payroll department about an overpayment in a paycheck?
- Would a competent manager return a lost wallet intact?
- Would a competent manager report a small barter exchange on personal income tax?
- Would a competent manager call a supplier to tell them that the company was underbilled?
- Would a competent manager charge personal long-distance calls made in the office to home phone?
- Would a competent manager request reimbursement for less than the daily per diem?

Would a competent manager return phone calls promptly?

Would a competent manager switch suppliers when heard a rumour about supplier's honesty?

Would a competent manager take customers to lunch?

Would a competent manager clear his or her desk at the end of day?

Would a competent manager smoke in the office?

Would a competent manager only take two to three day vacations?

Would a competent manager take office supplies home for personal use?

Would a competent manager promise a report for a specific date knowing it will not be finished?

Would a competent manager drink coffee from the office pot, but not contribute to the coffee fund?

Would a competent manager copy office software for personal use?

Would a competent manager take credit for report written by subordinate?

Would a competent manager read other people's mail?

Would a competent manager brag about underreporting income to Revenue Canada?

Would a competent manager tell a friend to buy shares in the manager's company before the announcement of a new defense contract?

Would a competent manager respond quickly to an auditor's request for documents?

Would a competent manager quickly answer auditor's questions?

Would a competent manager volunteer information useful to the auditor?

Would a competent manager make an effort to provide a good explanation for complex situations?

Would a competent manager try to clear up an auditor's misunderstanding?

Would a competent manager access records (e.g. sales invoices) when needed by auditors?

Would a competent manager respect an auditor's professionalism?

Would a competent manager gather control documents when asked?

Would a competent manager prepare tax return for tax provision?

Would a competent manager argue for capitalizing R&D?

Would a competent manager be slow to answer auditor's questions?

Would a competent manager be reluctant to answer auditor's questions?

Would a competent manager not listen to accounting treatment?

Would a competent manager respond slowly to requests for documents?

Would a competent manager provide auditors with a small, uncomfortable room to work in?

Would a competent manager say nothing about lawsuits?

Would a competent manager make no effort to provide a good explanation for complex situations?

Would a competent manager threaten to replace auditors?

Would an incompetent manager keep up to date with professional developments?

Would an incompetent manager take the time to teach subordinates?

Would an incompetent manager finish a report on time?

Would an incompetent manager be innovative?

Would an incompetent manager delegate responsibility to subordinates?

Would an incompetent manager double check calculations?

Would an incompetent manager have worked for a "Big 4" public accounting firm?

Would an incompetent manager be an officer in a professional association?

Would an incompetent manager work on the weekends?

Would an incompetent manager read the newspaper in the office in the morning?

Would an incompetent manager close his or her eyes to think?

Would an incompetent manager make an addition error on an expense account report?

Would an incompetent manager date a subordinate?

Would an incompetent manager be evasive when responding to auditor's questions about the department's activities?

Would an incompetent manager play favorites with subordinates?

Would an incompetent manager put off unpleasant personnel decisions?

Would an incompetent manager fall asleep in meetings?

Would an incompetent manager be unable to explain budget variances?

Would an incompetent manager blame subordinates for the manager's mistakes?

Would an incompetent manager lie about progress to superiors?

Would an incompetent manager tell the payroll department about an overpayment in a paycheque?

Would an incompetent manager return a lost wallet intact?

Would an incompetent manager report a small barter exchange on personal income tax?

Would an incompetent manager call a supplier to tell them that the company was underbilled?

Would an incompetent manager charge personal long-distance calls made in the office to home phone?

Would an incompetent manager request reimbursement for less than the daily per diem?

Would an incompetent manager return phone calls promptly?

Would an incompetent manager switch suppliers when heard a rumour about supplier's honesty?

Would an incompetent manager take customers to lunch?

Would an incompetent manager clear his or her desk at the end of day?

Would an incompetent manager smoke in the office?

Would an incompetent manager only take two to three day vacations?

Would an incompetent manager take office supplies home for personal use?

Would an incompetent manager promise a report for a specific date knowing it will not be finished?

Would an incompetent manager drink coffee from the office pot, but not contribute to the coffee fund?

Would an incompetent manager copy office software for personal use?

Would an incompetent manager take credit for report written by subordinate?

Would an incompetent manager read other people's mail?

Would an incompetent manager brag about underreporting income to Revenue Canada?

Would an incompetent manager tell a friend to buy shares in the manager's company before the announcement of a new defense contract?

Would an incompetent manager respond quickly to an auditor's request for documents?

Would an incompetent manager quickly answer auditor's questions?

Would an incompetent manager volunteer information useful to the auditor?

Would an incompetent manager make an effort to provide a good explanation for complex situations?

Would an incompetent manager try to clear up an auditor's misunderstanding?

Would an incompetent manager access records (e.g. sales invoices) when needed by auditors?

Would an incompetent manager respect an auditor's professionalism?

Would an incompetent manager gather control documents when asked?

Would an incompetent manager prepare tax return for tax provision?

Would an incompetent manager argue for capitalizing R&D?

Would an incompetent manager be slow to answer auditor's questions?

Would an incompetent manager be reluctant to answer auditor's questions?

Would an incompetent manager not listen to accounting treatment?

Would an incompetent manager respond slowly to requests for documents?

Would an incompetent manager provide auditors with a small, uncomfortable room to work in?

Would an incompetent manager say nothing about lawsuits?

Would an incompetent manager make no effort to provide a good explanation for complex situations?

Would an incompetent manager threaten to replace auditors?

Would a benevolent manager keep up to date with professional developments?

Would a benevolent manager take the time to teach subordinates?

Would a benevolent manager finish a report on time?

Would a benevolent manager be innovative?

Would a benevolent manager delegate responsibility to subordinates?

Would a benevolent manager double check calculations?

Would a benevolent manager have worked for a "Big 4" public accounting firm?

Would a benevolent manager be an officer in a professional association?

Would a benevolent manager work on the weekends?

Would a benevolent manager read the newspaper in the office in the morning?

- Would a benevolent manager close his or her eyes to think?
- Would a benevolent manager make an addition error on an expense account report?
- Would a benevolent manager date a subordinate?
- Would a benevolent manager be evasive when responding to auditor's questions about the department's activities?
- Would a benevolent manager play favorites with subordinates?
- Would a benevolent manager put off unpleasant personnel decisions?
- Would a benevolent manager fall asleep in meetings?
- Would a benevolent manager be unable to explain budget variances?
- Would a benevolent manager blame subordinates for the manager's mistakes?
- Would a benevolent manager lie about progress to superiors?
- Would a benevolent manager tell the payroll department about an overpayment in a paycheque?
- Would a benevolent manager return a lost wallet intact?
- Would a benevolent manager report a small barter exchange on personal income tax?
- Would a benevolent manager call a supplier to tell them that the company was underbilled?
- Would a benevolent manager charge personal long-distance calls made in the office to home phone?
- Would a benevolent manager request reimbursement for less than the daily per diem?
- Would a benevolent manager return phone calls promptly?
- Would a benevolent manager switch suppliers when heard a rumour about supplier's honesty?
- Would a benevolent manager take customers to lunch?
- Would a benevolent manager clear his or her desk at the end of day?

Would a benevolent manager smoke in the office?

Would a benevolent manager only take two to three day vacations?

Would a benevolent manager take office supplies home for personal use?

Would a benevolent manager promise a report for a specific date knowing it will not be finished?

Would a benevolent manager drink coffee from the office pot, but not contribute to the coffee fund?

Would a benevolent manager copy office software for personal use?

Would a benevolent manager take credit for report written by subordinate?

Would a benevolent manager read other people's mail?

Would a benevolent manager brag about underreporting income to Revenue Canada?

Would a benevolent manager tell a friend to buy shares in the manager's company before the announcement of a new defense contract?

Would a benevolent manager respond quickly to an auditor's request for documents?

Would a benevolent manager quickly answer auditor's questions?

Would a benevolent manager volunteer information useful to the auditor?

Would a benevolent manager make an effort to provide a good explanation for complex situations?

Would a benevolent manager try to clear up an auditor's misunderstanding?

Would a benevolent manager access records (e.g. sales invoices) when needed by auditors?

Would a benevolent manager respect an auditor's professionalism?

Would a benevolent manager gather control documents when asked?

Would a benevolent manager prepare tax return for tax provision?

Would a benevolent manager argue for capitalizing R&D?

Would a benevolent manager be slow to answer auditor's questions?

Would a benevolent manager be reluctant to answer auditor's questions?

Would a benevolent manager not listen to accounting treatment?

Would a benevolent manager respond slowly to requests for documents?

Would a benevolent manager provide auditors with a small, uncomfortable room to work in?

Would a benevolent manager say nothing about lawsuits?

Would a benevolent manager make no effort to provide a good explanation for complex situations?

Would a benevolent manager threaten to replace auditors?

Would a non-benevolent manager keep up to date with professional developments?

Would a non-benevolent manager take the time to teach subordinates?

Would a non-benevolent manager finish a report on time?

Would a non-benevolent manager be innovative?

Would a non-benevolent manager delegate responsibility to subordinates?

Would a non-benevolent manager double check calculations?

Would a non-benevolent manager have worked for a "Big 4" public accounting firm?

Would a non-benevolent manager be an officer in a professional association?

Would a non-benevolent manager work on the weekends?

Would a non-benevolent manager read the newspaper in the office in the morning?

Would a non-benevolent manager close his or her eyes to think?

Would a non-benevolent manager make an addition error on an expense account report?

Would a non-benevolent manager date a subordinate?

Would a non-benevolent manager be evasive when responding to auditor's questions about the department's activities?

Would a non-benevolent manager play favorites with subordinates?

Would a non-benevolent manager put off unpleasant personnel decisions?

Would a non-benevolent manager fall asleep in meetings?

Would a non-benevolent manager be unable to explain budget variances?

Would a non-benevolent manager blame subordinates for the manager's mistakes?

Would a non-benevolent manager lie about progress to superiors?

Would a non-benevolent manager tell the payroll department about an overpayment in a paycheque?

Would a non-benevolent manager return a lost wallet intact?

Would a non-benevolent manager report a small barter exchange on personal income tax?

Would a non-benevolent manager call a supplier to tell them that the company was underbilled?

Would a non-benevolent manager charge personal long-distance calls made in the office to home phone?

Would a non-benevolent manager request reimbursement for less than the daily per diem?

Would a non-benevolent manager return phone calls promptly?

Would a non-benevolent manager switch suppliers when heard a rumour about supplier's honesty?

Would a non-benevolent manager take customers to lunch?

Would a non-benevolent manager clear his or her desk at the end of day?

Would a non-benevolent manager smoke in the office?

Would a non-benevolent manager only take two to three day vacations?

Would a non-benevolent manager take office supplies home for personal use?

Would a non-benevolent manager promise a report for a specific date knowing it will not be finished?

Would a non-benevolent manager drink coffee from the office pot, but not contribute to the coffee fund?

Would a non-benevolent manager copy office software for personal use?

Would a non-benevolent manager take credit for report written by subordinate?

Would a non-benevolent manager read other people's mail?

Would a non-benevolent manager brag about underreporting income to Revenue Canada?

Would a non-benevolent manager tell a friend to buy shares in the manager's company before the announcement of a new defense contract?

Would a non-benevolent manager respond quickly to an auditor's request for documents?

Would a non-benevolent manager quickly answer auditor's questions?

Would a non-benevolent manager volunteer information useful to the auditor?

Would a non-benevolent manager make an effort to provide a good explanation for complex situations?

Would a non-benevolent manager try to clear up an auditor's misunderstanding?

Would a non-benevolent manager access records (e.g. sales invoices) when needed by auditors?

Would a non-benevolent manager respect an auditor's professionalism?

Would a non-benevolent manager gather control documents when asked?

Would a non-benevolent manager prepare tax return for tax provision?

Would a non-benevolent manager argue for capitalizing R&D?

Would a non-benevolent manager be slow to answer auditor's questions?

Would a non-benevolent manager be reluctant to answer auditor's questions?

Would a non-benevolent manager not listen to accounting treatment?

Would a non-benevolent manager respond slowly to requests for documents?

Would a non-benevolent manager provide auditors with a small, uncomfortable room to work in?

Would a non-benevolent manager say nothing about lawsuits?

Would a non-benevolent manager make no effort to provide a good explanation for complex situations?

Would a non-benevolent manager threaten to replace auditors?

Appendix F. Text of the Scenarios With Four Manipulated Behaviors Each

Scenario 1 – High benevolence and high ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. William's current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO are talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I've already got that data.

CFO - Of course, they'll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here's Larry with the projections. Hi Larry. Thanks for pulling this together. *Oh, and how did your wife's interview go yesterday?*

Larry – *She's all excited about the opportunity. She really appreciates the introduction you gave her.*

COO – *Glad it went well for her.*⁹ OK, let’s get back on track. What else do the new auditors need to see?

CFO – Well they will also be looking at us to determine our style of management. *We can let them know how innovative we are by telling them about our 355 patents for new ballast and light emitting diode technologies.*¹⁰

One of Geo. William’s current external auditors arrives.

CFO – We’ve asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to encourage them to take the engagement, show them the large, comfortable room you set aside for us when we were doing the audit.*¹¹

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

Auditor – They’ll need to know a little about the executives of your firm. *I’ll let them know that your CFO keeps up to date with professional developments so they can expect*

⁹ This is the high benevolence behavior manipulation *Takes the time to teach subordinates*. Note that “time to teach” has been generalized to “time to support”.

¹⁰ This is the high ability behavior manipulation *Is innovative*.

¹¹ This is the high benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in*. Reverse coded

*him to know about recent changes in accounting standards.*¹² They'll also be interested in why you're changing auditors. I'll just tell them that we can't handle the new overseas production so we've recommended that they get auditors with more international experience. They will want to know whether it was difficult for us to work with you. Whether you paid our fees or not. Your firm is good about that stuff, so there will be no problem from that angle.

CFO – Ah here is the managing partner from the new audit firm.

Scenario 2 – Low benevolence and high ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

¹² This is the high ability behavior manipulation *Keeps up to date with professional developments.*

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. William's current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I've already got that data.

CFO - Of course, they'll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here's Larry with the projections. Hi Larry. Thanks for pulling this together.

COO – OK, let's get back on track. What else do the new auditors need to see?

CFO – Well they will also be looking at us to determine our style of management. *We can let them know how innovative we are by telling them about our 355 patents for new ballast and light emitting diode technologies.*¹³ *And don't tell them about the time we threatened to replace our first auditors because we disagreed with them about the research costs for our new electronic ballast.*¹⁴

One of Geo. William's current external auditors arrives.

CFO – We've asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to discourage them from taking the engagement, show them the small, uncomfortable room that you had us working in when we were doing the audit.*¹⁵

¹³ This is the high ability behavior manipulation *Is innovative*.

¹⁴ This is the low benevolence behavior manipulation *Threatens to replace auditors*.

¹⁵ This is the low benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in*.

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

Auditor – They’ll need to know a little about the executives of your firm. *I’ll let them know that your CFO keeps up to date with professional developments so they can expect him to know about recent changes in accounting standards.*¹⁶ They’ll also be interested in why you’re changing auditors. I’ll just tell them that we can’t handle the new overseas production so we’ve recommended that they get auditors with more international experience. They will want to know whether it was difficult for us to work with you. Whether you paid our fees or not. Your firm is good about that stuff, so there will be no problem from that angle.

CFO – Ah here is the managing partner from the new audit firm.

Scenario 3 – High benevolence and low ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional

¹⁶ This is the high ability behavior manipulation *Keeps up to date with professional developments.*

firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. William's current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I’ve already got that data.

CFO - Of course, they’ll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here’s Larry with the projections. Hi Larry. Thanks for pulling this together. *Oh, and how did your wife’s interview go yesterday?*

Larry – *She’s all excited about the opportunity. She really appreciates the introduction you gave her.*

COO – *Glad it went well for her.¹⁷ Oh and would you drop my expense account off with accounting on the way by. It adds up correctly now.*

Larry – *I’d be happy to drop it off.¹⁸*

COO –Thank you. OK, let’s get back on track. What else do the new auditors need to see?

CFO – Well they will also be looking at us to determine our style of management.

One of Geo. William’s current external auditors arrives.

¹⁷ This is the high benevolence behavior manipulation *Takes the time to teach subordinates*. Note that “time to teach subordinates” has been generalized to “time to support subordinates.”

¹⁸ This is the low ability behavior manipulation *Makes an addition error on an expense account report*.

CFO – We’ve asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to encourage them to take the engagement, show them the large, comfortable room you set aside for us when we were doing the audit.*¹⁹

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

Auditor – They’ll need to know a little about the executives of your firm. *Don’t worry, I won’t tell them that you have trouble explaining budget variances.*²⁰ They’ll also be interested in why you’re changing auditors. I’ll just tell them that we can’t handle the new overseas production so we’ve recommended that they get auditors with more international experience. They will want to know whether it was difficult for us to work with you. Whether you paid our fees or not. Your firm is good about that stuff, so there will be no problem from that angle.

CFO – Ah here is the managing partner from the new audit firm.

¹⁹ This is the high benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in.* Reverse coded

²⁰ This is the low ability behavior manipulation *Is unable to explain budget variances.*

Scenario 4 – Low benevolence and low ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. William’s current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I've already got that data.

CFO - Of course, they'll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here's Larry with the projections. Hi Larry. Thanks for pulling this together. *Oh and would you drop my expense account off with accounting on the way by. It adds up correctly now.*

Larry –*I'd be happy to drop it off.*²¹

COO –Thank you. OK, let's get back on track. What else do the new auditors need to see?

²¹ This is the low ability behavior manipulation *Makes an addition error on an expense account report.*

CFO – Well they will also be looking at us to determine our style of management. *So don't tell them about the time we threatened to replace our first auditors because we disagreed with them about the research costs for our new electronic ballast.*²²

One of Geo. William's current external auditors arrives.

CFO – We've asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to discourage them from taking the engagement, show them the small, uncomfortable room that you had us working in when we were doing the audit.*²³

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

Auditor – They'll need to know a little about the executives of your firm. *Don't worry, I won't tell them that you have trouble explaining budget variances.*²⁴ They'll also be interested in why you're changing auditors. I'll just tell them that we can't handle the new overseas production so we've recommended that they get auditors with more

²² This is the low benevolence behavior manipulation *Threatens to replace auditors.*

²³ This is the low benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in.*

²⁴ This is the low ability behavior manipulation *Is unable to explain budget variances.*

international experience. They will want to know whether it was difficult for us to work with you. Whether you paid our fees or not. Your firm is good about that stuff, so there will be no problem from that angle.

CFO – Ah here is the managing partner from the new audit firm.

Appendix G. Risk and Extent of Audit Testing Questionnaire – Study 3



Based on this very incomplete information, I would like you to answer the following questions.

Risk assessment

1 - Based on your knowledge of the prospective client and any outlined factors, this prospective client should be rated as

1 – high risk

2 – moderate risk

3 – low risk

2 - What is the likelihood that the client's financial statements would contain a material misstatement?

_____ %

3 - Develop a preliminary assessment of risk at the financial statement level based on the information obtained to date.



Substantive range questions

You are the auditor for Geo. Williams Lighting. You are conducting an analytical review of the gross profit percentage. You are in the preliminary stage of the 2010 audit; no audit procedures have been performed. The values of the component accounts and the ratios based on the audited values for the last two audit years and the current period's *nine months* unaudited values are reproduced below. Based on discussions with the firm's previous auditors, you know that the business is not seasonal. In addition, there were no unusual events or circumstances affecting the 2008 and 2009 results, and no major audit adjustments were made in those years.

	<u>Audited</u>	<u>Audited</u>	Unaudited
	2008	2009	<u>(9 months)</u>
			2010
Sales	\$436,443	\$582,298	\$393,577
Cost of Goods Sold	<u>-302,455</u>	<u>-381,405</u>	<u>-269,207</u>
Gross Profit	<u>\$133,988</u>	<u>\$200,893</u>	<u>\$124,370</u>
Gross Profit Percentage	30.7%	34.5%	31.6%

You have no reason to expect major changes from recent historical relationships.

PLEASE do the following:

1. Indicate your best estimate of what the audited gross profit percentage will be for the year 2010.

Estimate of Audited Gross Profit Percentage for 2010: _____ %.

2. Indicate the upper and lower bounds of possible gross profit percentages (to the nearest one tenth of one percent) for 2010 *beyond* which you feel an investigation should be conducted to “explain” the change in the gross profit percentage from prior years.

Upper Bound of Range: _____ %

Lower Bound of Range: _____ %

Appendix H. Trust, Trustworthiness and Propensity to Trust Questionnaire – Study

3



Next, I'd like your reaction to the client managers that you read about.

Please think about the client's top management team. For each statement, circle the number that best describes how much you agree or disagree with each statement as the new auditor of this client.

1) I trust client management.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

2) I really wish I had a good way to keep an eye on client management.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree
strongly		nor disagree		strongly

3) I would be comfortable giving client management a task or problem which was critical to me, even if I could not monitor his/her actions.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree
strongly		nor disagree		strongly

4) If a client asked why a problem occurred, I would speak freely even if I were partly to blame.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree
strongly		nor disagree		strongly

Please give me your reaction to the client managers that you read about. For each statement, circle the number that best describes how much you agree or disagree with each statement as the new auditor of this client.

- 5) If I had my way, I wouldn't let client management have any influence over issues that are important to me.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

- 6) I would be willing to let client management have complete control over my future in this company.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

- 7) I would share my opinion about sensitive issues with client management even if my opinion were unpopular.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

8) I like client management's values.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

9) In general, I believe client management's motives and intentions are good.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

10) Client management is known to be successful at the things it tries to do.

1	2	3	4	5
---	---	---	---	---

Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
----------------------	----------	-------------------------------	-------	-------------------

Please give me your reaction to the client managers that you read about. For each statement, circle the number that best describes how much you agree or disagree with each statement as the new auditor of this client.

11) Client management keeps my interests in mind when making decisions.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

12) Client management is very concerned about my welfare.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

13) Client management will go out of its way to help me.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree

Please give me your reaction to the client managers that you read about. For each statement, circle the number that best describes how much you agree or disagree with each statement as the new auditor of this client.

17) I never have to wonder whether client management will stick to its word.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

18) Client management has much knowledge about the work that needs to be done.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

19) Client management's actions and behaviors are not very consistent.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree

Please give me your reaction to the client managers that you read about. For each statement, circle the number that best describes how much you agree or disagree with each statement as the new auditor of this client.

23) Client management has specialized capability that can increase their performance.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

24) I feel very confident about client management's skills.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

25) Sound principles seem to guide client management's behavior.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree

These last 11 questions are about people in general,
not about the client managers that you read about.

Please think about people in general. For each statement, circle the number that best describes how much you agree or disagree with each statement.

29) Most experts tell the truth about the limits of their knowledge.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

30) Most people answer public opinion polls honestly.

1	2	3	4	5
---	---	---	---	---

Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
----------------------	----------	-------------------------------	-------	-------------------

31) Most people can be counted on to do what they say they will do.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

32) Most repair people do not overcharge people who are ignorant of their specialty.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

33) Most salesmen are honest in describing their products.

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

Please think about people in general. For each statement, circle the number that best describes how much you agree or disagree with each statement.

34) These days, you must be alert or someone is likely to take advantage of you.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree
strongly		nor disagree		strongly

35) One should be very cautious with strangers.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree
strongly		nor disagree		strongly

36) Most adults are competent at their jobs.

1	2	3	4	5
Disagree	Disagree	Neither agree	Agree	Agree
strongly		nor disagree		strongly

37) * Would a benevolent manager ever take the time to socialize with subordinates?

1 – extremely unlikely

2

3 – moderately unlikely

4

5 – neither unlikely nor likely

6

7 – moderately likely

8

9 – extremely likely

Please think about people in general. For each statement, circle the number that best describes how much you agree or disagree with each statement.

38) * Would a benevolent manager ever provide auditors with a large, comfortable room to work in?

1 – extremely unlikely

2

3 – moderately unlikely

4

5 – neither unlikely nor likely

6

7 – moderately likely

8

9 – extremely likely

39) * Would a competent manager ever keep up to date with professional developments?

1 – extremely unlikely

2

3 – moderately unlikely

4

5 – neither unlikely nor likely

6

7 – moderately likely

8

9 – extremely likely

40) * Would a competent manager ever be innovative?

1 – extremely unlikely

2

3 – moderately unlikely

4

5 – neither unlikely nor likely

6

7 – moderately likely

8

9 – extremely likely

* Questions 37 to 40 vary with the behaviors included in the scenario.

Please provide the following demographical information by checking in the appropriate circles. This data will be used for statistical purposes.

41) Gender) Male) Female

42) What is your major?

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> Accountancy | <input type="checkbox"/> Supply Chain Operations Management |
| <input type="checkbox"/> Economics | <input type="checkbox"/> Management Information Systems |
| <input type="checkbox"/> Finance | <input type="checkbox"/> International Business |
| <input type="checkbox"/> Management | <input type="checkbox"/> Human Resource Management |
| <input type="checkbox"/> Marketing | |

43) How old are you? _____

44) How many years of full-time work experience do you have?

45) How many years of part-time work experience do you have?

Appendix I. List of Items for Trust, Trustworthiness, Propensity to Trust

Indicate the degree to which you agree with each statement by using the following scale:

1	2	3	4	5
Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly

Think about the client’s top management team. For each statement, write the number that best describes how much you agree or disagree with each statement.

Trust – measure 1.

If I had my way, I wouldn’t let client management have any influence over issues that are important to me. r/c

I would be willing to let client management have complete control over my future in this company.

I really wish I had a good way to keep an eye on client management. r/c

I would be comfortable giving client management a task or problem which was critical to me, even if I could not monitor his/her actions.

Trust – measure 2.

I trust client management. ***

If a client asked why a problem occurred, I would speak freely even if I were partly to blame.

**

I would share my opinion about sensitive issues with client management even if my opinion were unpopular. **

Ability.

Client management is very capable of performing its job.

Client management is known to be successful at the things it tries to do.

Client management has much knowledge about the work that needs to be done.

I feel very confident about client management's skills.

Client management has specialized capability that can increase their performance.

Client management is well qualified.

Benevolence – measure 1.

Client management is very concerned about my welfare.

My needs and desires are very important to client management.

Client management would not knowingly do anything to hurt me.

Client management really looks out for what is important to me.

Client management will go out of its way to help me.

Benevolence – measure 2.

Client management keeps my interests in mind when making decisions. *

In general, I believe client management's motives and intentions are good. ****

I think that client management takes advantage of our problems. r/c *****

My needs are taken into account when client decisions are made. *****

Integrity.

Client management has a strong sense of justice.

I never have to wonder whether client management will stick to its word.

Client management tries hard to be fair in dealings with others.

Client management's actions and behaviors are not very consistent.

I like client management's values.

Sound principles seem to guide client management's behavior.

Propensity to trust.

One should be very cautious with strangers.

Most experts tell the truth about the limits of their knowledge.

Most people can be counted on to do what they say they will do.

These days, you must be alert or someone is likely to take advantage of you.

Most salesmen are honest in describing their products.

Most repair people do not overcharge people who are ignorant of their specialty.

Most people answer public opinion polls honestly.

Most adults are competent at their jobs.

Based on Mayer & Davis, 1999 except for

* based on Ballinger, Schoorman & Lehman (2009)

** based on Schoorman & Ballainger (2006) (in Schoorman, Mayer & Davis (2007))

*** based on Brockner, Siegel, Daly, Tyler, & Martin, 1997

**** based on (Robinson, 1996)

***** based on (Cummings & Bromiley, 1996)

***** based on (Tyler, 2003)

Appendix J. Text of the Scenarios With Eight Manipulated Behaviors Each

Scenario 1 – High benevolent and high ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. William's current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO are talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I've already got that data.

CFO - Of course, they'll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here's Larry with the projections. Hi Larry. Thanks for pulling this together. *Oh, and how did your wife's interview go yesterday?*

Larry – *She's all excited about the opportunity. She really appreciates the introduction you gave her.*

COO – *Glad it went well for her.*²⁵ OK, let’s get back on track. What else do the new auditors need to see?

CFO – Well they will also be looking at us to determine our style of management. *We can let them know how innovative we are by telling them about our 355 patents for new ballast and light emitting diode technologies.*²⁶ *We can show them that we take them seriously by returning their phone calls promptly*²⁷ *and by responding quickly to their requests for documents.*²⁸

One of Geo. William’s current external auditors arrives.

CFO – We’ve asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to encourage them to take the engagement, show them the large, comfortable room you set aside for us when we were doing the audit.*²⁹

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

²⁵ This is the high benevolence behavior manipulation *Takes the time to teach subordinates*. Note that “time to teach” has been generalized to “time to support”.

²⁶ This is the high ability behavior manipulation *Is innovative*.

²⁷ This is the high ability behavior manipulation *Returns phone calls promptly*.

²⁸ This is the high benevolence behavior manipulation *Responds quickly to an auditor’s request for documents*.

²⁹ This is the high benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in*. Reverse coded

Auditor – They’ll need to know a little about the executives of your firm. I’ll let them know that *your CFO keeps up to date with professional developments so they can expect him to know about recent changes in accounting standards.*³⁰ They’ll also be interested in why you’re changing auditors. I’ll just tell them that we can’t handle the new overseas production so we’ve recommended that they get auditors with more international experience. They will want to know whether it was difficult for us to work with you. We’ll let them know that *you finish your reports on time*³¹ and that *you volunteer information when you know it will be useful.*³² Whether you paid our fees or not is important. Your firm is good about that stuff, so there will be no problem from that angle.

CFO – Ah here is the managing partner from the new audit firm.

Scenario 2 – Low benevolence and high ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce

³⁰ This is the high ability behavior manipulation *Keeps up to date with professional developments.*

³¹ This is the high ability behavior manipulation *Finishes a report on time.*

³² This is the high benevolence behavior manipulation *Volunteers information useful to the auditor.*

their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. Williams's current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I’ve already got that data.

CFO - Of course, they’ll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here’s Larry with the projections. Hi Larry. Thanks for pulling this together.

COO – OK, let’s get back on track. What else do the new auditors need to see?

CFO – Well they will also be looking at us to determine our style of management. *We can let them know how innovative we are by telling them about our 355 patents for new ballast and light emitting diode technologies.*³³ *And don’t tell them about the time we threatened to replace our first auditors because we disagreed with them about the research costs for our new electronic ballast.*³⁴ We can show them that we take these audits seriously *by returning their phone calls promptly,*³⁵ but we need to tell them that *we have limited resources so we can’t always get them the documentation that they need right away.*³⁶

One of Geo. William’s current external auditors arrives.

³³ This is the competent behavior manipulation *Is innovative.*

³⁴ This is the non-benevolent behavior manipulation *Threatens to replace auditors.*

³⁵ This is the high ability behavior manipulation *Returns phone calls promptly.*

³⁶ This is the low benevolence manipulation *Responds slowly to requests for documents.*

CFO – We’ve asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to discourage them from taking the engagement, show them the small, uncomfortable room that you had us working in when we were doing the audit.*³⁷

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

Auditor – They’ll need to know a little about the executives of your firm. I’ll let them know that *your CFO keeps up to date with professional developments so they can expect him to know about recent changes in accounting standards.*³⁸ They’ll also be interested in why you’re changing auditors. I’ll just tell them that we can’t handle the new overseas production so we’ve recommended that they get auditors with more international experience. They will want to know whether it was difficult for us to work with you. We’ll let them know that *you finish your reports on time,*³⁹ but I’ll have to tell them that *you blame your staff whenever they are late with something even if you don’t give them enough time to do the job.*⁴⁰ Whether you paid our fees or not is important. Your firm is good about that stuff, so there will be no problem from that angle.

³⁷ This is the low benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in.*

³⁸ This is the high ability behavior manipulation *Keeps up to date with professional developments.*

³⁹ This is the high ability behavior manipulation *Finishes a report on time.*

⁴⁰ This is the low benevolence behavior manipulation *Blames subordinates for the manager’s mistakes.*

CFO – Ah here is the managing partner from the new audit firm.

Scenario 3 – High benevolence and low ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. William’s current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I've already got that data.

CFO - Of course, they'll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here's Larry with the projections. Hi Larry. Thanks for pulling this together. *Oh, and how did your wife's interview go yesterday?*

Larry – *She's all excited about the opportunity. She really appreciates the introduction you gave her.*

COO – *Glad it went well for her.*⁴¹ *Oh and would you drop my expense account off with accounting on the way by. It adds up correctly now.*

Larry – *I'd be happy to drop it off.*

COO –*Thank you.*⁴² OK, let's get back on track. What else do the new auditors need to see?

CFO – Well they will also be looking at us to determine our style of management. We can show them that we take them seriously *by responding quickly to their requests for documents*⁴³, *although it does take us a while before we can answer their questions.*⁴⁴

One of Geo. William's current external auditors arrives.

CFO – We've asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to encourage them to take the engagement, show them the large, comfortable room you set aside for us when we were doing the audit.*⁴⁵

⁴¹ This is the high benevolence behavior manipulation *Takes the time to teach subordinates*. Note that "time to teach" has been generalized to "time to support".

⁴² This is the low ability behavior manipulation *Makes an addition error on an expense account report*.

⁴³ This is the high benevolence behavior manipulation *Responds quickly to an auditor's request for documents*.

⁴⁴ This is the low ability behavior manipulation *Is slow to answer auditor's questions*.

⁴⁵ This is the high benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in*. Reverse coded

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

Auditor – They’ll need to know a little about the executives of your firm. *Don’t worry, I won’t tell them that you have trouble explaining budget variances.*⁴⁶ They’ll also be interested in why you’re changing auditors. I’ll just tell them that we can’t handle the new overseas production so we’ve recommended that they get auditors with more international experience. They will want to know whether it was difficult for us to work with you. We’ll let them know that *you volunteer information when you know it will be useful,*⁴⁷ but *I’ll have to tell them that you promised reports for a date when you knew they won’t be ready.*⁴⁸ Whether you paid our fees or not is important. Your firm is good about that stuff, so there will be no problem from that angle.

CFO – Ah here is the managing partner from the new audit firm.

Scenario 4 – Low benevolence and low ability behaviors. Your audit firm is about to meet the executive of Geo. Williams Lighting to determine if your firm should accept an engagement to audit their financial statements.

Geo. Williams is a small, technologically advanced company which manufactures compact fluorescent light bulbs in a market that is growing by leaps and bounds because

⁴⁶ This is the low ability behavior manipulation *Is unable to explain budget variances.*

⁴⁷ This is the high benevolence behavior manipulation *Volunteers information useful to the auditor.*

⁴⁸ This is the low ability behavior manipulation *Promised a report for a specific date knowing it would not be finished.*

of environmental and government pressures to phase out incandescent light bulbs. They are profitable and have a good relationship with their current auditors, a small regional firm. Geo. Williams is about to start manufacturing their light bulbs in China to reduce their costs and their current auditors have recommended engaging auditors with international experience, like your firm.

In the following scenario the executives from Geo. Williams Lighting are discussing how they are going to interact with your firm. It starts with the CEO and COO waiting for the CFO. Later in the scenario, one of Geo. Williams's current external auditors joins them.

CEO – Chief Executive Officer of Geo. Williams

COO – Chief Operating Officer of Geo. Williams

CFO – Chief Financial Officer of Geo. Williams

CEO and COO talking in a meeting room waiting for CFO.

CEO – Refresh my memory again. We're happy with our current auditors. Why do we have to replace them?

COO – It's because we're beginning to manufacture overseas. Our current auditors just aren't connected internationally so we need to find new ones.

CEO – So we've identified a new auditor who can deal with our expansion and we're meeting now to figure out what we need to tell them before we engage them.

CFO joins them.

CFO – I talked to our current auditors and they gave me a list of the sorts of things our new auditors will need to know. What I'd like to do today is to go over this list and check that we're on the same page about what we are going to tell them.

First, we're just starting to manufacture our light bulbs in the Far East, so they will want to go into some detail about what our manufacturing plans are for the new plant.

COO – We talked about this issue earlier so I had Larry pull together a cost benefit summary and budget for our new operation. Larry should be here any minute to drop it off.

CFO – We'll also need to set up a meeting with our current auditors so that they can vouch for us. I've arranged that for a little later.

We need to tell them that the lighting industry is in flux right now. Governments are giving incentives to encourage lower energy consumption. There are so many new technologies such as fluorescent bulbs, light emitting diodes and compact fluorescents. But which one will be most cost effective in the long run is still up in the air. CEO, I

think you've asked our industry association to give us some of the data they've prepared on the future trends in the industry. We can pass it along to the new auditors.

CEO – Yes, I've already got that data.

CFO - Of course, they'll need our financial statements for the past few years. But that will really be in our favor because our numbers are pretty good.

COO – Here's Larry with the projections. Hi Larry. Thanks for pulling this together. *Oh and would you drop my expense account off with accounting on the way by. It adds up correctly now.*

Larry –*I'd be happy to drop it off.*

COO –*Thank you.*⁴⁹ OK, let's get back on track. What else do the new auditors need to see?

CFO – Well they will also be looking at us to determine our style of management. So *don't tell them about the time we threatened to replace our first auditors because we disagreed with them about the research costs for our new electronic ballast.*⁵⁰ *We can tell them that we have limited resources for these audits so we can't always get them the*

⁴⁹ This is the low ability behavior manipulation *Makes an addition error on an expense account report.*

⁵⁰ This is the low benevolence behavior manipulation *Threatens to replace auditors.*

*documents they need right away*⁵¹ and that sometimes it does take a while before we can answer their questions.⁵²

One of Geo. William's current external auditors arrives.

CFO – We've asked you here to introduce us to the auditors that we would like to engage for our next audit.

Auditor – *Well, if you want to discourage them from taking the engagement, show them the small, uncomfortable room that you had us working in when we were doing the audit.*⁵³

CFO - Seriously, what sort of information are they going to want from you before they will consider taking the engagement?

Auditor – They'll need to know a little about the executives of your firm. Don't worry, *I won't tell them that you have trouble explaining budget variances.*⁵⁴ They'll also be interested in why you're changing auditors. I'll just tell them that we can't handle the new overseas production so we've recommended that they get auditors with more international experience. They will want to know whether it was difficult for us to work with you. *We'll have to tell them that you promised reports for a date when you knew*

⁵¹ This is the low benevolence manipulation *Responds slowly to requests for documents.*

⁵² This is the low ability behavior manipulation *Is slow to answer auditor's questions.*

⁵³ This is the low benevolence behavior manipulation *Provides auditors with a small uncomfortable room to work in.*

⁵⁴ This is the low ability behavior manipulation *Is unable to explain budget variances.*

*they wouldn't be ready*⁵⁵ and then *blamed your people for them being late.*⁵⁶ Whether you paid our fees or not is important. Your firm is good about that stuff, so there will be no problem from that angle.

CFO – Ah here is the managing partner from the new audit firm.

⁵⁵ This is the low ability behavior manipulation *Promised a report for a specific date knowing it would not be finished.*

⁵⁶ This is the low benevolence behavior manipulation *Blames subordinates for the manager's mistakes.*

Appendix K. Risk and Extent of Audit Testing Questionnaire – Study 4



Based on this very incomplete information, I would like you to answer the following questions.

Risk assessment

1 - Based on your knowledge of the prospective client and any outlined factors, this prospective client should be rated as

1 – high risk

2 – moderate risk

3 – low risk

2 - What is the likelihood that the client's financial statements would contain a material misstatement?

_____ %

3 - Develop a preliminary assessment of risk at the financial statement level based on the information obtained to date. (i.e. What factors point to low risk? What factors point to high risk?)



Substantive range questions

You are the auditor for Geo. Williams Lighting. You are conducting an analytical review of the gross profit percentage. You are in the preliminary stage of the 2010 audit; no audit procedures have been performed. The values of the component accounts and the ratios based on the audited values for the last two audit years and the current period's *nine months* unaudited values are reproduced below. Based on discussions with the firm's previous auditors, you know that the business is not seasonal. In addition, there were no unusual events or circumstances affecting the 2008 and 2009 results, and no major audit adjustments were made in those years.

	<u>Audited</u>	<u>Audited</u>	Unaudited
	2008	2009	<u>(9 months)</u>
			2010
Sales	\$436,443	\$582,298	\$393,577
Cost of Goods Sold	<u>-302,455</u>	<u>-381,405</u>	<u>-269,207</u>
Gross Profit	<u>\$133,988</u>	<u>\$200,893</u>	<u>\$124,370</u>
Gross Profit Percentage	30.7%	34.5%	31.6%

You have no reason to expect major changes from recent historical relationships.

PLEASE do the following:

1. Indicate your best estimate of what the audited gross profit percentage will be for the year 2010.

Estimate of Audited Gross Profit Percentage for 2010: _____ %.

- 3) Rely on the client manager to represent your work accurately. 1 2 3 4 5 6 7
- 4) Depend on the client manager to back you up in difficult situations. 1 2 3 4 5 6 7
- 5) Rely on the client manager's work related judgments. 1 2 3 4 5 6 7
- 6) Share your personal feelings with the client manager. 1 2 3 4 5 6 7
- 7) Discuss work-related problems or difficulties with the client manager that could potentially be used to disadvantage you. 1 2 3 4 5 6 7
- 8) Confide in the client manager about personal issues that are affecting your work. 1 2 3 4 5 6 7
- 9) Discuss how you honestly feel about your work, even negative feelings and frustration. 1 2 3 4 5 6 7
- 10) Share your personal beliefs with the client manager. 1 2 3 4 5 6 7

Please give me your reaction to the client managers that you read about. For each statement, circle the number that best describes how much you agree or disagree with each statement as the new auditor of this client.

	Disagree				Agree
	<u>strongly</u>				<u>strongly</u>
11) I trust client management.	1	2	3	4	5
12) I really wish I had a good way to keep an eye on client management.	1	2	3	4	5
13) I would be comfortable giving client management a task or problem which was critical to me, even if I could not monitor his/her actions.	1	2	3	4	5
14) If a client asked why a problem occurred, I would speak freely even if I were partly to blame.	1	2	3	4	5
15) If I had my way, I wouldn't let client management have any influence over issues that are important to me.	1	2	3	4	5

- 16) I would be willing to let client management have complete control over my future in this company. 1 2 3 4 5
- 17) I would share my opinion about sensitive issues with client management even if my opinion were unpopular. 1 2 3 4 5
- 18) I like client management's values. 1 2 3 4 5
- 19) In general, I believe client management's motives and intentions are good. 1 2 3 4 5
- 20) Client management is known to be successful at the things it tries to do. 1 2 3 4 5
- 21) Client management keeps my interests in mind when making decisions. 1 2 3 4 5
- 22) Client management is very concerned about my welfare. 1 2 3 4 5
- 23) Client management will go out of its way to help me. 1 2 3 4 5
- 24) I think that client management takes advantage of our problems. 1 2 3 4 5

Please give me your reaction to the client managers that you read about. For each statement, circle the number that best describes how much you agree or disagree with each statement as the new auditor of this client.

	Disagree				Agree
How much do you agree or disagree with these statements?	<u>strongly</u>	_____	_____	_____	<u>strongly</u>
25) Client management has a strong sense of justice.	1	2	3	4	5
26) Client management is very capable of performing its job.	1	2	3	4	5
27) I never have to wonder whether client management will stick to its word.	1	2	3	4	5
28) Client management has much knowledge about the work that needs to be done.	1	2	3	4	5
29) Client management's actions and behaviors are not very consistent.	1	2	3	4	5
30) Client management tries hard to be fair in dealings with others.	1	2	3	4	5
31) Client management would not knowingly do anything to hurt me.	1	2	3	4	5

- 32) Client management is well qualified. 1 2 3 4 5
- 33) Client management has specialized capability that can increase their performance. 1 2 3 4 5
- 34) I feel very confident about client management's skills. 1 2 3 4 5
- 35) Sound principles seem to guide client management's behavior. 1 2 3 4 5
- 36) Client management really looks out for what is important to me. 1 2 3 4 5
- 37) My needs are taken into account when client decisions are made. 1 2 3 4 5
- 38) My needs and desires are very important to client management. 1 2 3 4 5

Please provide the following demographical information by checking in the appropriate circles. This data will be used for statistical purposes.

39) Gender) Male) Female

40) What is your major?

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> Accountancy | <input type="checkbox"/> Supply Chain Operations Management |
| <input type="checkbox"/> Economics | <input type="checkbox"/> Management Information Systems |
| <input type="checkbox"/> Finance | <input type="checkbox"/> International Business |
| <input type="checkbox"/> Management | <input type="checkbox"/> Human Resource Management |
| <input type="checkbox"/> Marketing | |

41) How old are you? _____

42) How many years of full-time work experience do you have?

43) How many years of part-time work experience do you have?

44) Did you participate in this experiment in a previous class?

No Yes

Appendix M. List of Items for the Gillespie Trust Scale

(Gillespie, 2003)

How willing are you to do the following with the client managers?

- 1) Rely on the client manager's task related skills and abilities.
- 2) Depend on the client manager to handle an important issue on your behalf.
- 3) Rely on the client manager to represent your work accurately.
- 4) Depend on the client manager to back you up in difficult situations.
- 5) Rely on the client manager's work related judgments.
- 6) Share your personal feelings with the client manager.
- 7) Discuss work-related problems or difficulties with the client manager that could potentially be used to disadvantage you.

- 8) Confide in the client manager about personal issues that are affecting your work.

- 9) Discuss how you honestly feel about your work, even negative feelings and frustration.

- 10) Share your personal beliefs with the client manager.

Appendix N. Risk and Extent of Audit Testing Questionnaire – Study 5



Based on this **very incomplete** information, I would like you to answer the following questions.

Audit Risk assessment

You are a managing partner of an audit firm. Please think about the executive team at Geo. Williams Lighting who are planning to hire your firm for an audit engagement.

High Moderate Low
Risk risk risk

- 1) What is the likelihood that the client's financial statements would contain a material misstatement? 1 2 3 4 5 6 7

- 2) Develop a preliminary assessment of the risk at the financial statement level based on the information to date. 1 2 3 4 5 6 7

- 3) Based on your knowledge of the prospective client and any outlined factors, this prospective client should be rated as 1 2 3 4 5 6 7



Substantive range questions

You are the auditor for Geo. Williams Lighting. You are conducting an analytical review of the gross profit percentage. You are in the preliminary stage of the 2010 audit; no audit procedures have been performed. The values of the component accounts and the ratios based on the audited values for the last two audit years and the current period's *twelve months unaudited* values are reproduced below. Based on discussions with the firm's previous auditors, you know that the business is not seasonal. In addition, there were no unusual events or circumstances affecting the 2008 and 2009 results, and no major audit adjustments were made in those years.

	<u>Audited</u>	<u>Audited</u>	Unaudited
	2008	2009	<u>(12 months)</u>
			2010
Sales	\$436,443	\$582,298	\$524,769
Cost of Goods Sold	<u>-302,455</u>	<u>-381,405</u>	<u>-358,943</u>
Gross Profit	<u>\$133,988</u>	<u>\$200,893</u>	<u>\$165,826</u>
Gross Profit Percentage	30.7%	34.5%	31.6%

You have no reason to expect major changes from recent historical relationships.

PLEASE do the following:

1. Indicate your best estimate of what the audited gross profit percentage will be for the year 2010.

Estimate of Audited Gross Profit Percentage for 2010: _____ %.

2. Indicate the upper and lower bounds of possible gross profit percentages (to the nearest one tenth of one percent) for 2010 *beyond* which you feel an investigation should be conducted to “explain” the change in gross profit percentage from prior years. i.e. When would you need to follow up on this percentage because it is too different from what you expect it to be for this company?

Upper Bound of Range: _____ %.

Lower Bound of Range: _____ %.

- 3) Share your personal feelings with the client manager. 1 2 3 4 5 6 7
- 4) Depend on the client manager to handle an important issue on your behalf. 1 2 3 4 5 6 7
- 5) Share your personal beliefs with the client manager. 1 2 3 4 5 6 7
- 6) Rely on the client manager to represent your work accurately. 1 2 3 4 5 6 7
- 7) Rely on the client manager's work related judgments. 1 2 3 4 5 6 7
- 8) Confide in the client manager about personal issues that are affecting your work. 1 2 3 4 5 6 7
- 9) Discuss work-related problems or difficulties with the client manager that could potentially be used to disadvantage you. 1 2 3 4 5 6 7
- 10) Discuss how you honestly feel about your work, even negative feelings and frustration. 1 2 3 4 5 6 7

Please give me **your reaction to the executive team at Geo. Williams Lighting**. For each statement, circle the number that best describes how much you agree or disagree with each statement **as the new auditor of this client**.

	Disagree				Agree
	<u>strongly</u>				<u>strongly</u>
How much do you agree or disagree with these statements?					
11) I trust client management.	1	2	3	4	5
12) I really wish I had a good way to keep an eye on client management.	1	2	3	4	5
13) I would be comfortable giving client management a task or problem which was critical to me, even if I could not monitor his/her actions.	1	2	3	4	5
14) If a client asked why a problem occurred, I would speak freely even if I were partly to blame.	1	2	3	4	5
15) If I had my way, I wouldn't let client management have any influence over issues that are important to me.	1	2	3	4	5

- 16) I would be willing to let client management have complete control over my future in this company. 1 2 3 4 5
- 17) I would share my opinion about sensitive issues with client management even if my opinion were unpopular. 1 2 3 4 5
- 18) I like client management's values. 1 2 3 4 5
- 19) In general, I believe client management's motives and intentions are good. 1 2 3 4 5
- 20) Client management is known to be successful at the things it tries to do. 1 2 3 4 5
- 21) Client management keeps my interests in mind when making decisions. 1 2 3 4 5
- 22) Client management is very concerned about my welfare. 1 2 3 4 5
- 23) Client management will go out of its way to help me. 1 2 3 4 5
- 24) I think that client management takes advantage of our problems. 1 2 3 4 5

Please give me **your reaction to the executive team at Geo. Williams Lighting**. For each statement, circle the number that best describes how much you agree or disagree with each statement **as the new auditor of this client**.

	Disagree				Agree
How much do you agree or disagree with these statements?	<u>strongly</u>				<u>strongly</u>
25) Client management has a strong sense of justice.	1	2	3	4	5
26) Client management is very capable of performing its job.	1	2	3	4	5
27) I never have to wonder whether client management will stick to its word.	1	2	3	4	5
28) Client management has much knowledge about the work that needs to be done.	1	2	3	4	5
29) Client management's actions and behaviors are not very consistent.	1	2	3	4	5
30) Client management tries hard to be fair in dealings with others.	1	2	3	4	5
31) Client management would not knowingly do anything to hurt me.	1	2	3	4	5

- 32) Client management is well qualified. 1 2 3 4 5
- 33) Client management has specialized capability that can increase their performance. 1 2 3 4 5
- 34) I feel very confident about client management's skills. 1 2 3 4 5
- 35) Sound principles seem to guide client management's behavior. 1 2 3 4 5
- 36) Client management really looks out for what is important to me. 1 2 3 4 5
- 37) My needs are taken into account when client decisions are made. 1 2 3 4 5
- 38) My needs and desires are very important to client management. 1 2 3 4 5

These next 8 questions are **about people in general**,
not about the executive team at Geo. Williams Lighting.

Please think about people in general. For each statement, circle the number that best describes how much you agree or disagree with each statement.

	Disagree				Agree
How much do you agree or disagree with these statements?	<u>strongly</u>				<u>strongly</u>
39) Most experts tell the truth about the limits of their knowledge.	1	2	3	4	5
40) Most people answer public opinion polls honestly.	1	2	3	4	5
41) Most people can be counted on to do what they say they will do.	1	2	3	4	5
42) Most salesmen are honest in describing their products.	1	2	3	4	5
43) Most repair people do not overcharge people who are ignorant of	1	2	3	4	5

their specialty.

44) These days, you must be alert or someone is likely to take advantage of you. 1 2 3 4 5

45) One should be very cautious with strangers. 1 2 3 4 5

46) Most adults are competent at their jobs. 1 2 3 4 5

Please provide the following demographic information by putting a checkmark in the appropriate circles.

47) Gender Male Female

48) What is your major?

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> Accountancy | <input type="checkbox"/> Supply Chain Operations Management |
| <input type="checkbox"/> Economics | <input type="checkbox"/> Management Information Systems |
| <input type="checkbox"/> Finance | <input type="checkbox"/> International Business |
| <input type="checkbox"/> Management | <input type="checkbox"/> Human Resource Management |
| <input type="checkbox"/> Marketing | <input type="checkbox"/> Other (please specify) |

49) How old are you? _____

50) How many years of full-time work experience do you have?

51) How many years of part-time work experience do you have?

52) Did you participate in this experiment in a previous class?

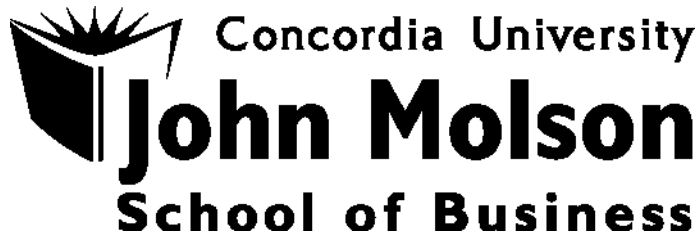
) No) Yes

53) Did you use a transcript of the video in today's experiment?

) No) Yes

Thank You!

Appendix P. Risk and Extent of Audit Testing Questionnaire – Study 6



Based on this **very incomplete** information, I would like you to answer the following questions.

Audit Risk assessment

You are a managing partner of an audit firm. Please think about the executive team at Geo. Williams Lighting who are planning to hire your firm for an audit engagement.

High Moderate Low
Risk risk risk

- 1) What is the likelihood that the client's financial statements 1 2 3 4 5 6 7

would contain a material misstatement?

- 2) Develop a preliminary assessment of the risk at the financial statement level based on the information to date. 1 2 3 4 5 6 7
- 3) Based on your knowledge of the prospective client and any outlined factors, this prospective client should be rated as 1 2 3 4 5 6 7
- 4) Identify key risks and other factors contributing to the risk of a material misstatement at the financial statement level.



Substantive range questions

You are the auditor for Geo. Williams Lighting. You are conducting an analytical review of the gross profit percentage. You are in the preliminary stage of the 2010 audit; no audit procedures have been performed. The values of the component accounts and the ratios based on the audited values for the last two audit years and the current period's *twelve months unaudited* values are reproduced below. Based on discussions with the firm's previous auditors, you know that the business is not seasonal. In addition, there were no unusual events or circumstances affecting the 2008 and 2009 results, and no major audit adjustments were made in those years.

	<u>Audited</u>	<u>Audited</u>	Unaudited <u>(12 months)</u>
	2008	2009	2010
Sales	\$436,443	\$582,298	\$524,769
Cost of Goods Sold	<u>-302,455</u>	<u>-381,405</u>	<u>-358,943</u>
Gross Profit	<u>\$133,988</u>	<u>\$200,893</u>	<u>\$165,826</u>
Gross Profit Percentage	30.7%	34.5%	31.6%

You have no reason to expect major changes from recent historical relationships.

PLEASE do the following:

1. Indicate your best estimate of what the audited gross profit percentage will be for the year 2010.

Estimate of Audited Gross Profit Percentage for 2010: _____ %.

2. Indicate the upper and lower bounds of possible gross profit percentages (to the nearest one tenth of one percent) for 2010 *beyond* which you feel an investigation should be conducted to “explain” the change in gross profit percentage from prior years. i.e. When would you need to follow up on this percentage because it is too different from what you expect it to be for this company?

Upper Bound of Range: _____ %.

Lower Bound of Range: _____ %.

Appendix Q. Trust, Trustworthiness and Propensity to Trust Questionnaire – Study

6



Next, I'd like **your reaction to the executive team at Geo. Williams Lighting** who are planning to hire your firm for an audit engagement

Please think about the client's top management team. Please indicate how willing you are **(as a new auditor of this client)** to engage in each of the following behaviors with the client managers, by circling a number from 1 to 7.

How willing are you to do the following with the client managers? Not at all willing Completely willing

- 1) Rely on the client manager's task related skills and abilities. 1 2 3 4 5 6 7

- 2) Depend on the client manager to back you up in difficult situations. 1 2 3 4 5 6 7

- 3) Share your personal feelings with the client manager. 1 2 3 4 5 6 7
- 4) Depend on the client manager to handle an important issue on your behalf. 1 2 3 4 5 6 7
- 5) Share your personal beliefs with the client manager. 1 2 3 4 5 6 7
- 6) Rely on the client manager to represent your work accurately. 1 2 3 4 5 6 7
- 7) Rely on the client manager's work related judgments. 1 2 3 4 5 6 7
- 8) Confide in the client manager about personal issues that are affecting your work. 1 2 3 4 5 6 7
- 9) Discuss work-related problems or difficulties with the client manager that could potentially be used to disadvantage you. 1 2 3 4 5 6 7
- 10) Discuss how you honestly feel about your work, even negative feelings and frustration. 1 2 3 4 5 6 7

Please give me **your reaction to the executive team at Geo. Williams Lighting**. For each statement, circle the number that best describes how much you agree or disagree with each statement **as the new auditor of this client**.

	Disagree				Agree
	<u>strongly</u>				<u>strongly</u>
11) I trust client management.	1	2	3	4	5
12) I really wish I had a good way to keep an eye on client management.	1	2	3	4	5
13) I would be comfortable giving client management a task or problem which was critical to me, even if I could not monitor his/her actions.	1	2	3	4	5
14) If a client asked why a problem occurred, I would speak freely even if I were partly to blame.	1	2	3	4	5
15) If I had my way, I wouldn't let client management have any influence over issues that are important to me.	1	2	3	4	5

- 16) I would be willing to let client management have complete control over my future in this company. 1 2 3 4 5
- 17) I would share my opinion about sensitive issues with client management even if my opinion were unpopular. 1 2 3 4 5
- 18) I like client management's values. 1 2 3 4 5
- 19) In general, I believe client management's motives and intentions are good. 1 2 3 4 5
- 20) Client management is known to be successful at the things it tries to do. 1 2 3 4 5
- 21) Client management keeps my interests in mind when making decisions. 1 2 3 4 5
- 22) Client management is very concerned about my welfare. 1 2 3 4 5
- 23) Client management will go out of its way to help me. 1 2 3 4 5
- 24) I think that client management takes advantage of our problems. 1 2 3 4 5

Please give me **your reaction to the executive team at Geo. Williams Lighting**. For each statement, circle the number that best describes how much you agree or disagree with each statement **as the new auditor of this client**.

	Disagree				Agree
How much do you agree or disagree with these statements?	<u>strongly</u>				<u>strongly</u>
25) Client management has a strong sense of justice.	1	2	3	4	5
26) Client management is very capable of performing its job.	1	2	3	4	5
27) I never have to wonder whether client management will stick to its word.	1	2	3	4	5
28) Client management has much knowledge about the work that needs to be done.	1	2	3	4	5
29) Client management's actions and behaviors are not very consistent.	1	2	3	4	5
30) Client management tries hard to be fair in dealings with others.	1	2	3	4	5
31) Client management would not knowingly do anything to hurt me.	1	2	3	4	5

- 32) Client management is well qualified. 1 2 3 4 5
- 33) Client management has specialized capability that can increase their performance. 1 2 3 4 5
- 34) I feel very confident about client management's skills. 1 2 3 4 5
- 35) Sound principles seem to guide client management's behavior. 1 2 3 4 5
- 36) Client management really looks out for what is important to me. 1 2 3 4 5
- 37) My needs are taken into account when client decisions are made. 1 2 3 4 5
- 38) My needs and desires are very important to client management. 1 2 3 4 5

These next 8 questions are **about people in general**,
not about the executive team at Geo. Williams Lighting.

Please think about people in general. For each statement, circle the number that best describes how much you agree or disagree with each statement.

- | | Disagree | | | | Agree |
|--|-----------------|---|---|---|-----------------|
| | <u>strongly</u> | | | | <u>strongly</u> |
| 39) Most experts tell the truth about the limits of their knowledge. | 1 | 2 | 3 | 4 | 5 |
| 40) Most people answer public opinion polls honestly. | 1 | 2 | 3 | 4 | 5 |
| 41) Most people can be counted on to do what they say they will do. | 1 | 2 | 3 | 4 | 5 |
| 42) Most salesmen are honest in describing their products. | 1 | 2 | 3 | 4 | 5 |
| 43) Most repair people do not overcharge people who are ignorant of | 1 | 2 | 3 | 4 | 5 |

their specialty.

44) These days, you must be alert or someone is likely to take
advantage of you. 1 2 3 4 5

45) One should be very cautious with strangers. 1 2 3 4 5

46) Most adults are competent at their jobs. 1 2 3 4 5

These next 8 questions are **about managers in general**,
not about the executive team at Geo. Williams Lighting.

Please think about managers in general. For each statement, circle the number that best describes how much you agree or disagree with each statement.⁵⁷

How much do you agree or disagree with these statements? Extremely Extremely
unlikely likely

47) Would a benevolent manager take the time to socialize with subordinates? 1 2 3 4 5 6 7

48) Would a benevolent manager provide the auditors with a large, comfortable room to work in? 1 2 3 4 5 6 7

49) Would a benevolent manager volunteer information useful 1 2 3 4 5 6 7

⁵⁷ Only one set of Questions 47-50 were included depending on whether the scenario included benevolent or non-benevolent behaviors. Only one set of Questions 50-53 were included depending on whether the scenario included competent or incompetent behaviors.

to the auditor?

- 50) Would a benevolent manager respond quickly to an auditor's request for documents? 1 2 3 4 5 6 7
- 47) Would a non-benevolent manager threaten to replace the auditors? 1 2 3 4 5 6 7
- 48) Would a non-benevolent manager provide the auditors with a small, uncomfortable room to work in? 1 2 3 4 5 6 7
- 49) Would a non-benevolent manager respond slowly to an auditor's request for documents? 1 2 3 4 5 6 7
- 50) Would a non-benevolent manager blame subordinates for the manager's mistakes? 1 2 3 4 5 6 7
- 51) Would a competent manager keep up to date with professional developments? 1 2 3 4 5 6 7
- 52) Would a competent manager be innovative? 1 2 3 4 5 6 7
- 53) Would a competent manager finish a report on time? 1 2 3 4 5 6 7

- 54) Would a competent manager return phone calls promptly? 1 2 3 4 5 6 7
- 51) Would an incompetent manager promise a report for a specific date knowing it would not be finished? 1 2 3 4 5 6 7
- 52) Would an incompetent manager make an addition error on an expense account report? 1 2 3 4 5 6 7
- 53) Would an incompetent manager be unable to explain budget variances? 1 2 3 4 5 6 7
- 54) Would an incompetent manager be slow to answer an auditor's questions? 1 2 3 4 5 6 7

Please provide the following demographic information by putting a checkmark in the appropriate circles.

55) What are your professional designations?

- | | |
|---------------------------------|---|
| <input type="checkbox"/> C.A. | <input type="checkbox"/> C.P.A. |
| <input type="checkbox"/> C.G.A. | <input type="checkbox"/> C.M.A. |
| <input type="checkbox"/> C.F.E. | <input type="checkbox"/> Other (please specify) |

56) Size of your firm?

- | | |
|--|--|
| <input type="checkbox"/> Individual professional | <input type="checkbox"/> Over 5 partners |
| <input type="checkbox"/> Up to 5 partners | <input type="checkbox"/> A “big 4” accounting firm |

57) Your title in the firm is?

58) How many years of experience do you have as an auditor?

59) Gender) Male) Female

60) Age Bracket

-) Under 20 years
-) 20 to 29 years
-) 30 to 39 years
-) 40 to 49 years
-) 50 to 59 years
-) 60 years and over

61) Education

-) Undergraduate degree
-) Graduate degree
-) Other (please specify)

Questions 62) and 63) will be in an oral interview format.

Thank You!

Appendix R. Free Response Risk Factors Which Contained More Than One Risk

This is a description of the risk factors that combined two risks. When a free response risk factor contains two risks, the entire sentence is written, but the pertinent part is underlined.

<p>“Comment to CFO by former auditor – re <u>timing of delivery of deliverables</u> – re “blame”” (Minnie)</p> <p>“Comment to CFO by former auditor – re timing of delivery of deliverables – re <u>blame</u>” (Minnie)</p>	<p>Coded with Management competence along with the other comments about late reports.</p> <p>Coded with Management integrity along with other comments about blaming staff for late reports.</p>
<p>“COO’s expense reports not balancing. Puts into <u>question his qualifications</u> and maybe honesty” (AI)</p> <p>“COO’s expense reports not balancing. Puts into <u>question his</u> qualifications and maybe <u>honesty</u>” (AI)</p>	<p>Included with Competence of management because AI is questioning his qualifications.</p> <p>Included with Management’s integrity because AI is questioning his honesty.</p>
<p>“<u>Different legal / business environment</u> – may not be able to “satisfy ourselves” without undue work / time / effort / fees”</p>	<p>Was coded as Nonroutine transactions based on “Different legal / business environment” along with other comments</p>

<p>(Wolfgang)</p> <p>“Different legal / business environment – <u>may not be able to “satisfy ourselves” without undue work / time / effort / fees”</u></p> <p>(Wolfgang)</p>	<p>about operating in foreign lands.</p> <p>Was coded with Suitability of relationship of new auditor with client due to “may not be able to “satisfy ourselves” without undue work / time / effort / fees”. This is similar to other comments about the fees not being worth the risk or effort.</p>
---	---

<p>“<u>Growing company</u> – might be out of management control – might not have qualified staff internally to manage growth needs” (Al)</p> <p>“Growing company – might be <u>out of management control</u> – <u>might not have qualified staff</u> internally to manage growth needs” (Al)</p>	<p>Was coded with Nonroutine transactions along with other comments about growth.</p> <p>Was coded with Competence of management because of the “might be out of management control”.</p>
--	---

<p>“<u>Going concern</u> because a small industry” (Julie81)</p> <p>“Going concern because a <u>small industry</u>” (Julie81)</p>	<p>Included with Financial risk along with other comments about whether the client can avoid bankruptcy.</p> <p>Included with Nature of the client’s business along with other comments about the size and uncertainty in the industry.</p>
---	---

<p>“<u>High growth</u> and high pressure => risk of mgt. bias” (Lindsay)</p> <p>“High growth and high pressure => <u>risk of mgt. bias</u>” (Lindsay)</p>	<p>Was coded in Nonroutine transactions along with other comments about the high rate of growth.</p> <p>Was also coded in Client motivation to manipulate the financial results because Lindsay is leery that management may be biased.</p>
<p>“Lower the risk – <u>good CFO</u> and financial situation” (18121972)</p> <p>“Lower the risk – <u>good CFO</u> and <u>financial situation</u>” (18121972)</p>	<p>Coded under Competence of management because of “good CFO”.</p> <p>Coded Financial risk because of “good ... financial situation”. A good financial situation reduces the chances of bankruptcy.</p>
<p>“<u>Management is aggressive</u> and high pressure on management = concerns over control” (Lindsay)</p> <p>“Management is aggressive and high pressure on management = <u>concerns over control</u>” (Lindsay)</p>	<p>Included with integrity of management along with other comments about management being aggressive when capitalizing research costs.</p> <p>Included with Competence of management along with other comments about things being out of management control.</p>

<p>“Variance and budget [<u>can’t explain variance</u> – don’t have enough budget]” (Rosie)</p>	<p>Coded with Competence of management along with other comments about not being able to explain variance.</p>
<p>“Variance and budget [can’t explain variance – <u>don’t have enough budget</u>]” (Rosie)</p>	<p>Coded under Financial risk because of “don’t have enough budget” which implies a shortage of financial recourses.</p>

Appendix S. Details of the Coding for Risk Factors Inherent to the Case vs. Risk Factors Triggered by the Manipulated Behaviors

Risk factors triggered by manipulated behaviors. I did the initial coding while I was blind to the experimental condition. For example, if I saw the word “blame” in the free response risk factor, I coded the free response risk factor as manipulated due to a manipulated low benevolence behavior (The preceding auditor says “I’ll have to tell them that you blame your staff whenever they are late with something even if you don’t give them enough time to do the job.”). In most cases, it was relatively easy to identify the specific manipulated behavior that led to the free response risk factor; however, in many cases, the free response risk factor could have been triggered by more than one manipulated behavior. For example, free response risk factors that talked about client management being late giving information to the auditors could have been triggered by either of two manipulated low ability behaviors “CFO says, “... it does take us a while before we can answer their questions.”” Or “The preceding auditor says, “We’ll have to tell them that you promised reports for a date when you knew they wouldn’t be ready.””. In these cases, I coded the free response risk factors as manipulated but I coded them as triggered by both of the applicable manipulated behaviors. A few of the free response risk factors were obviously manipulated, but in these cases it was very difficult to know which manipulated behavior triggered it. For example, one free response risk factor talked about the falsification of data which could have been extrapolated from the manipulated low ability behavior “COO says, “Oh and would you drop my expense account off with accounting on the way by. It adds up correctly now.” Financial analyst

says, “I’d be happy to drop it off.” COO says, “Thank you.””. Although a participant could have thought that the error in the expense account was due to a deliberate intention to cheat, this was not actually part of this specific behavior. Nor was it inherent to the case. In these circumstances, I coded the behavior as manipulated and coded the triggering behavior as unknown.

Table S1 contains a complete list of the manipulated behaviors along with examples of the type of risk factors that were classed as manipulated because of them.

Table S 1. Examples of free response risk factors triggered by manipulated behaviors.

Manipulated <i>high ability</i> behaviors.	Examples of free response risk factors
CFO says, “We can let them know how innovative we are by telling them about our 355 patents for new ballast and light emitting diode technologies.”	“Patents (lots of estimates)” (Julie) “Significant number of patents” (Minnie)
The preceding auditor says, “I’ll let them know that your CFO keeps up to date with professional developments so they can expect him to know about recent changes in accounting standards.”	
CFO says, “We can show them that we take these audits seriously by returning their phone calls promptly.”	
The preceding auditor says, “We’ll let them know that you finish your reports on time.”	

Manipulated <i>low ability</i> behaviors.	Examples of free response risk factors
COO says, “Oh and would you drop my expense account off with accounting on the way by. It adds up correctly now.” Financial analyst says, “I’d be happy to drop it off.”	“COO’s expense reports not balancing. Puts into question his qualification and maybe honesty” (Al)

COO says, "Thank you."	
The preceding auditor says, "Don't worry, I won't tell them that you have trouble explaining budget variances."	"Trouble explaining variances. Will impact testing and information needed to gain audit evidence. Might indicate errors & we may not catch them all without prior year audit files." (AI) "Variance and budget [<u>can't explain variance</u> – don't have enough budget]" (Rosie)
CFO says, "... it does take us a while before we can answer their questions."	"Late information" (4480XYZ) "Timing (late) to forward information" (Rosie)
The preceding auditor says, "We'll have to tell them that you promised reports for a date when you knew they wouldn't be ready."	"Untimely reports" (Adbills) See also the 3 rd behavior in Manipulated <i>low ability</i> behaviors

Manipulated *high benevolence* behaviors.

Examples of free response risk factors

COO says, "Oh, and how did your wife's interview go yesterday?" Financial analysis says, "She's all excited about the opportunity. She really appreciates the introduction you gave her." COO says, "Glad it went well for her."	"Favor for analyst's wife (may influence analyst)" (Rosie) "Incentive to financial analyst to produce favorable reports" (BM)
The preceding auditor says, "Well, if you want to encourage them to take the engagement, show them the large, comfortable room you set aside for us when we were doing the audit."	Made auditors comfortable so it's easy for them to accept [client] info (Rosie)
CFO says, "We can show them that we take them seriously by responding quickly to their requests for documents."	
The preceding auditor says, "We'll let them know that you volunteer information when you know it will be useful."	

Manipulated *low benevolence* behaviors.

Examples of free response risk factors

CFO says "...don't tell them about the time we threatened to replace our first auditors because	"Disagreement with original auditors re accounting treatment" (Minnie)
---	--

we disagreed with them about the research costs for our new electronic ballast.”	“CFO hold info from new auditor” (Ricardo)
The preceding auditor says “I’ll have to tell them that you blame your staff whenever they are late with something even if you don’t give them enough time to do the job.”	“Blame (for late reports) placed on staff not managers who gave short time delays” (John) “Unrealistic pressures and deadlines placed on staff to produce report” (John)
CFO says “... tell them that we have limited resources so we can’t always get them the documentation that they need right away.”	“Low capital” (4480XYZ) “Staff shortage” (Ricardo) See also the 3 rd behavior in Manipulated <i>low ability</i> behaviors
The preceding auditor says, “Well, if you want to discourage them from taking the engagement, show them the small, uncomfortable room you had us working in when we were doing the audit.”	

Risk factors triggered by behaviors inherent to the case and common to all scenarios. Many of the free response risk factors were not due to a manipulated behavior but were included in each of the experimental conditions. For example, free response risk factors that dealt with the expansion into China or the potential obsolescence of the lighting technology were coded as not manipulated.

Risk factors whose trigger is unknown. For seven of the free response risk factors, it was difficult to tell whether they were due to the manipulated behaviors or were inherent to the case. These types of free response risk factors were coded as neither manipulated nor not manipulated. A description of these seven risk factors that were difficult to classify as manipulated or inherent to the scenario follows.

“Fluctuations in their sales/marketing” (Rosie) and “Target variances” (BM) could refer to a manipulated behavior about variances (The preceding auditor says, “Don’t worry, I won’t tell them that you have trouble explaining budget variances.”) or it could refer to the year to year variations in the sales figures and thus be a non manipulated factor. Because of the uncertainty about how it was triggered, it was classified as unknown instead of either manipulated or not manipulated.

Four factors referred to the client’s relationship with the preceding auditors and it was difficult to understand exactly what triggered the comment. “Sway company has on current auditor” (Barney) “Lack of objectivity of CA [chartered accountant]” (Grump) “Questionable audited F/S [financial statements] / lack of reliance on past date” (Grump) “Ethical values of (existing) external auditor” (Victor Steel). These general comments could have been triggered by manipulated behaviors such as (The preceding auditor says, “Don’t worry, I won’t tell them that you have trouble explaining budget variances.”) or (The preceding auditor says “I’ll have to tell them that you blame your staff whenever they are late with something even if you don’t give them enough time to do the job.”). They could also have been triggered by comments that were included in every experimental condition such as (I’ll just tell them that we can’t handle the new overseas production so we’ve recommended that they get auditors with more international experience.). Because of the uncertainty about how these free response risk factors were triggered, they were classified as unknown instead of either manipulated or not manipulated.

The seventh free response risk factor that was difficult to categorize as manipulated or not manipulated is 18121972's comment "Lower the risk – good CFO and financial situation". This appears to be triggered by the manipulated behavior (The preceding auditor says, "I'll let them know that your CFO keeps up to date with professional developments so they can expect him to know about recent changes in accounting standards."). Unfortunately, 18121972 was not in the experimental condition that included that manipulated behavior leaving me with no idea what triggered this free response risk factor. Therefore, I classified it as unknown instead of either manipulated or not manipulated.

Consistency of the coding with the experimental condition. Once I had completed the initial coding while I was blind to the experimental condition, I went back and verified that the behavior manipulation I had chosen as the trigger had actually occurred. For example, one free response risk factor talked about the CFO being good so I coded it as manipulated and coded the manipulated high ability behavior (The preceding auditor says, "I'll let them know that your CFO keeps up to date with professional developments so they can expect him to know about recent changes in accounting standards.") as the trigger. This was done without knowing the experimental condition. Unfortunately, the experimental condition was actually low ability and low benevolence. This means that this auditor didn't see the behavioral manipulation that I had chosen as the trigger. I changed the coding to neither manipulated nor not manipulated because I now have no idea what led to this risk factor being considered. This was the only case where the

coding for manipulated, not manipulated or neither was changed because of knowledge of the experimental condition.

Once the described coding was complete, the 99 free response risk factors had been split into 45 free response risk factors that were triggered by the manipulated behavior, 47 free response risk factors that were not and 7 that were unknown.

Appendix T. Details of the Coding of Free Response Risk Factors by Category of Risk

Competence of management. In general, the competence of management affects risk because when client management is capable, they are more likely to see and minimize potential operating and financing problems. One of the operating problems that was often mentioned (7 times) was that the information was not delivered to auditors in a timely fashion. Another operating problem that was mentioned 4 times was their inability to budget and staff well. Three free response risk factors dealt with management’s inability to explain why they were not on budget. Another of the operating problems mentioned 3 times was management’s lack of qualifications. Another operating problem that was mentioned in 3 free response risk factors had to do with the lack of management control in the firm. All the preceding free response risk factors implied that management were not very competent. One of the auditors commented positively on the competence of management. So the competence of management was the category where the most free response risk factors were coded, mainly referring to information being given late to auditors, management not budgeting and staffing well, their not being able to explain why they weren’t on budget, their lack of qualifications and their lack of control. One auditor commented on the high quality of the CFO.

Table T 1. Examples of free response risk factors coded to the Competence of management category.

Subcategory	Count	Examples
Information was not delivered to auditors in a timely fashion	7	“Untimely reports” (Adbills) “Late information” (4480XYZ) “Timing (late) to forward information” (Rosie)

Inability to budget and staff well	4	“Poor budgeting” (Adbills) “Poor internal production of figures (accuracy)” (4480XYZ) “Staff shortage” (Ricardo).
Management’s inability to explain why they were not on budget	3	“Variance and budget [<u>can’t explain variance</u> – don’t have enough budget” (Rosie) “Explanations weak – potential problem” (Rosie) “Trouble explaining variances. Will impact testing and information needed to gain audit evidence. Might indicate errors & we may not catch them all without prior year audit files” (AI).
Management’s lack of qualifications	3	“CEO limited knowledge” (Ricardo) “High risk – CFO – knowledge, competence” (18121972) “COO’s expense reports not balancing. Puts into <u>question his qualification</u> and maybe honesty” (AI).
Lack of management control in the firm	3	“Questionable management internal controls” (Grump) “Growing company – might be <u>out of management control – might not have qualified staff</u> internally to manage growth needs” (AI) “Management is aggressive and high pressure on management = <u>concerns over control environment</u> ” (Lindsay)
Positively competence of management	1	“Lower the risk – <u>good CFO</u> and financial situation” (18121972)

Nonroutine transactions affect risk because when a client firm does not have a lot of experience with a situation, they are less likely to know how to document them correctly in the financial records. Many of the free response risk factors (10) raised the idea that the firm’s lack of experience in the international arena was important. Six other free response risk factors talked about a new business, product or market. Three of the free response risk factors touched on the growth spurt the company was experiencing. The high pace of the growth, the newness of the venture and the expansion into a different geographical, legal and cultural environment all added to the risk due to lack of experience with the situation.

Table T 2. Examples of free response risk factors coded to the Nonroutine transactions category.

Subcategory	Count	Examples
Firm's lack of experience in the international arena	10	"High risk – entering international market – no experience" (19121972) "New market expansion Asia" (Minnie) "No Chinese management – language, culture, lack of control over offshore operations" (Wolfgang)
A new business, product or market	6	"New venture" (Ricardo) "New market" (Grump) "New Product" (Miramar)
Growth spurt the company was experiencing	3	"Expansion, aggressive growth" (Julie) " <u>High growth</u> and high pressure => risk of mgt. bias" (Lindsay) " <u>Growing company</u> – might be out of management control – might not have qualified staff internally to manage growth needs" (Al)

Management's integrity may affect the likelihood of conflict with others and biases in the financial statements. Four of the free response risk factors raised the issue of the clients biasing their employee by helping his wife. Four other free response risk factors talked about other actions that the management took which were unsavory. Three free response risk factors talked about the integrity of the managers in general. Three other free response risk factors talked about the conflict with the previous auditors. The last 2 free response risk factors in this category deal with management unfairly blaming their staff when they had not been given enough time to do the job. These free response risk factors were all included in the category of management's integrity because they raised issues of integrity in general or referred to specific actions such as withholding information, biasing employees, conflicts with others or blaming employees unfairly.

Table T 3. Examples of free response risk factors coded to the Management’s integrity category.

Subcategory	Count	Examples
Clients biasing their employee by helping his wife	4	“Wife of employee to be hired, employee may have been biased to show positive results so that wife could get job” (Jane) “Incentive to financial analyst to produce favorable reports” (BM) “Favor for analyst’s wife (may influence analyst)” (Rosie)
Other actions that the management took which were unsavory	4	“Complicity of exec to withhold info” (Ricardo) “CFO hold info from new auditor” (Ricardo) “Falsification of data” (4480XYZ)
Integrity of the managers in general	3	“Personnel seem to be shady” (Adbills) “High risk – management integrity” (18121972) “COO’s expense account not balancing. Puts into <u>question</u> <u>his</u> qualification and maybe <u>honesty</u> ” (Al)
The conflict with the previous auditors	3	“Disagreement with original auditors re accounting treatment” (Minnie) “Aggressive to capitalize research costs / inflate profits as a result” (John) “ <u>Management is aggressive</u> and high pressure on management = concerns over control environment” (Lindsay)
Management unfairly blaming their staff when they had not been given enough time to do the job	2	“Blame (for late reports) placed on staff not managers who gave short time delays” (John) “Comment to CFO by former auditor – re timing of delivery of deliverables – re “ <u>blame</u> ”” (Minnie)

Client’s relationship with preceding auditors. This next category, client’s relationship with preceding auditors, was not based on the categories of risk included in Arens et al. (2005), but emerged from the data. All these free response risk factors pertained to the client’s relationship with the previous auditors. Seven of them had to do with either the motivation or the competence of the preceding auditors. Two free response risk factors talked about the size of the previous audit firm – the implication being that they did not have the resources to do the same quality of audit as a “big 4” audit firm. In accounting research, the size of the audit firm is frequently used as a proxy

for the quality of the audit done (Teoh & Wong, 1993). One free response risk factor alluded to the fact that the previous auditors would be pleased because the clients paid their fees. The last free response risk factor had to do with how the preceding auditors felt about this client. These free response risk factors are grouped into a separate category from *First time client for the auditor* since these comments seem to go further than a lack of knowledge about the client. The comments seem to actively question the professionalism of the relationship between the client and the preceding auditors.

Table T 4. Examples of free response risk factors coded to the Client’s relationship with preceding auditors category.

Subcategory	Count	Examples
The motivation or the competence of the preceding auditors	7	“Ethical values of (existing) external auditor” (Victor Steel) “Lack of objectivity of CA [chartered accountant]” (Grump) “Sway company has on current auditor” (Barney) “Questionable audited F/S [financial statements] / lack of reliance on past data” (Grump) “Delay in receiving the documents by the auditors – may not have audited and found all the material misstatements” (Julie81)
Size of the previous audit firm	2	“Previous auditor not a big international firm” (Julie81) “Small CA [Chartered Accountant] firm (predecessor)” (Grump)
Previous auditors would be pleased because the clients paid their fees	1	“Paid fees timely – make happy” (Rosie)
How the preceding auditors felt about this client	1	“Old auditors happy to leave” (Wolfgang)

Judgment required to record transactions correctly. The judgment required to record transactions correctly category is important because the greater the degree of estimation and management judgment in the amounts that are recorded in the financial

records, the greater leeway there is for them to be incorrect. Three of the free response risk factors raised the difficulty in valuing patents. Two free response risk factors dealt with the difficulty of knowing what would happen with foreign exchange. Another two free response risk factors discusses variability. The last two free response risk factors talked about the difficulty of valuing the new technology or the fact that reports and systems used in the past may no longer apply to the current context and therefore more judgment will be required to assess the appropriateness of the figures. These free response risk factors were all included in the judgment required to record transactions correctly category because they all indicated a difficulty in valuing patents, foreign exchange, technology, or that figures would be difficult to value because of variability or changes.

Table T 5. Examples of free response risk factors coded to the Judgment required to record transactions correctly category.

Subcategory	Count	Examples
Difficulty in valuing patents	3	“A lot depends on valuation of 355 patents, (lots of estimation involved)” (Lindsay) “Significant number of patents (350)” (Minnie) “Patents (lots of estimates)” (Julie)
Difficulty of knowing what would happen with foreign exchange	2	“Foreign exchange risk” (Wolfgang) “Operating in a foreign market – foreign exchange risk” (Stuart)
Variability	2	“Fluctuations in their sales / marketing” (Rosie) “Target variances” (BM)
Difficulty of valuing the new technology	1	“New technology, hard to value” (Lindsay)
Reports and systems used in the past may no longer apply to the current context	1	“Historical F/S [financial statements] + systems not that relevant give new operating environment” (Wolfgang)

Client motivation to manipulate the financial results. The client motivation to manipulate the financial results category is important because if client management sees an advantage in misstating the financial statements then there may be a higher risk that there will be an error in them. Six of the free response risk factors talked of management bias either because of government incentives, to maintain historical profitability or because of unspecified pressures. The other two free response risk factors talk about the relationship with the new auditor. Potentially, these could be included in a category about the *relationship between the client and the new audit firm*; however, these two risk factors seem to be suspicious about the motivation of the client management more than they seem to be focused on the new auditors and the relationship.

Table T 6. Examples of free response risk factors coded to the Client motivation to manipulate the financial results category.

Subcategory	Count	Examples
Management bias either because of government incentives, to maintain historical profitability or because of unspecified pressures.	6	<p>“May be biased to show positive results (statement of earnings) in order to obtain government grants (manipulate bottom line)” (Jane)</p> <p>“Shift in industry due to energy / environmental pressures – therefore higher risk and pressure to maintain historical profitability”(John)</p> <p>“High growth and <u>high pressure => risk of mgt. bias</u>” (Lindsay)</p>
The relationship with the new auditor	2	<p>“Why Williams lighting needs to sell themselves to new auditor” (X211)</p> <p>“Seem to be anxious re getting new auditor on board” (Wolfgang)</p>

Nature of the client’s business. The risk of accepting an audit engagement from this client is affected by the nature of the client’s business. Five free response risk factors

raised issues about the uncertainty in the industry due to the amount of change, due to the technological change and due to the size of the industry.

Table T 7. Examples of free response risk factors coded to the Nature of the client’s business category.

Subcategory	Count	Examples
Uncertainty in the industry due to the amount of change, due to the technological change and due to the size of the industry	5	“Huge changes and uncertainty in the industry” (Barney) “Uncertainty re best new lighting to replace incandescent bulbs – may never collect re sales” (Wolfgang) “Going concern because a <u>small industry</u> ” (Julie81)

Financial risk. The financial risk category has to do with a client running out of cash and going out of business because they are having difficulty paying their bills. Two of the free response risk factors talked about having low capital resources. A third free response risk factor talked directly about the firm not having the resources to continue. Going concern is a key audit term that addresses whether the company is viable throughout the foreseeable future (Arens et al., 2005). A last free response risk factor also deals with the company’s financial position, but in this case, sees it as positive.

Table T 8. Examples of free response risk factors coded to the Financial risk category.

Subcategory	Count	Examples
Low capital resources	2	“Low capital” (4480XYZ) “Variance and budget [can’t explain variance – <u>don’t have enough budget</u>]” (Rosie)
Firm not having the resources to continue	1	“ <u>Going concern</u> because a small industry” (Julie81)
Positive financial position	1	“Lower the risk – <u>good</u> CFO and <u>financial situation</u> ” (18121972)

Suitability of relationship of new auditor with client. This next category, suitability of relationship of new auditor with client, was not based on the categories of risk included in Arens et al. (2005), but emerged from the data. All these free response risk factors pertained to the appropriateness of the new auditor accepting the audit engagement. There were two free response risk factors that discussed whether it was worthwhile to accept this client. There was also one free response risk factor that dealt with whether the new audit firm had the skills to accept the audit engagement.

Table T 9. Examples of free response risk factors coded to the Suitability of relationship of new auditor with client category.

Subcategory	Count	Examples
Whether it is worthwhile to accept this client	2	“Cost benefit – may not be worth the risk because is a small company with low audit fees” (Julie81) “Different legal / business environment – <u>may not be able to satisfy ourselves</u> ” without undue work / time / effort / fees” (Wolfgang)
Whether the new audit firm has the skills to accept the audit engagement	1	“We may not have the knowledge of this industry” (Julie81)

Reliance on the financial statements. The category, reliance on the financial statements is for risks that arise from the number of people that use the client’s financial statements and how much importance they attach to them when making their financial decisions. The first free response risk factor deals with the government’s reliance on the financial statements to pay out incentives to the manufacturers of the light bulbs. Another free response risk factor talks about the size of operations. This being a small firm, there

are probably fewer people referring to their financial statements. The last free response risk factor deals with environmental issues and may refer to environmentalist’s use of the annual report to see the firm’s effect on the environment.

Table T 10. Examples of free response risk factors coded to the Reliance on the financial statements category.

Subcategory	Count	Examples
Government’s reliance on the financial statements to pay out incentives	1	“Gov’t incentives / grants? – likely reliance on F/S [financial statements] / special work” (Wolfgang)
Size of operations	1	“Size of operations” (John)
Environmental issues	1	“Risk of environmental issues due to poor product quality” (Stuart)

First time client for the auditor. One category, first time client for the auditor, contained no free response risk factors, but was applicable to the scenario. The auditors had no experience auditing this client and this lack of familiarity increased their risk of accepting the audit engagement.

Reliance on technology & its complexity, results of previous audits, related parties, assets susceptible to misappropriation, and type of items to be audited. The remaining categories that contained no free response risk factors were not really applicable to the scenario as no information was supplied that would raise these issues.

This includes the categories *reliance on technology & its complexity, results of previous audits, related parties, assets susceptible to misappropriation, and type of items to be audited.*

Appendix U. Coding of the Verbal Protocols

Quest.

Q1 refers to the estimate of the audited gross profit margin.

Q2 refers to the extent of audit testing decision.

Code refers to the operators used to code the decision making protocols – Table 22 contains the definitions.

Risk category refers to the type of risk that is italicized in the operator – The definitions are given in 6B, effects of trustworthiness on risk, section 12.1.3.

The *title* is the alias chosen by the person who made the decisions. Aliases are in alphabetical order with numbers first.

Quest.	Code	Transcript	Risk category
--------	------	------------	---------------

18121972

Q1	E	Related to the financial statements, to the industry <i>management integrity</i> and everything, but per se I don't see any <i>bias</i> that they would, which would make them overstate sales or understate costs of goods sold.	Management's integrity and Client motivation to manipulate the financial results
Q1	E	So the only thing that I could see is that the <i>CFO has no sufficient competence</i> in the matter.	Competence of management
Q1	E	So if there are mistakes they are unintentional but they could basically go either way, up or down, like increase revenues or decrease revenues and the same for costs of goods.	

Q1	CJ	Also I would say, based on all this, I would expect the gross profit percentage to be higher than 2009 maybe, which would be basically increased sales and increased costs of goods all in the same proportion probably as the increase of sales.	
Q1	AD	So that would remain in the 34% gross margin.	
Q1	CJ	But that would be my expectation. Until I have other information to influence my...	
Q1	CJ	It would be similar to what it was in 2009 or probably a little higher if we follow the trend because lack of any other factors.	
Q2	AD	So maybe the highest would be, like if we follow the trend it would be something like 38%	
Q2	AD	probably and the low would be, I am guessing, something closer to 30%. Like that is very...	

4480xyz

Q1	R	Indicate your best estimate of what the audited gross profit percentage will be for the year 2010.	
Q1	CJ	Well, without starting anything I would say somewhere around this range, between 30% and 34%	
Q1	E	but, you know, it could be anything.	
Q1	CJ	It could be much higher,	
Q1	CJ	it could be much lower because I don't know what <i>work the previous auditor has done or how good</i>	Client's relationship with preceding auditors
Q1	?	-- can I underline this?	
Q1	E	Previous auditor, I don't know. That is the thing that makes me a little nervous.	
Q1	AD	So again, indicate your best estimate, I would say here anything.	
Q1	DS	I have no preconceived ideas.	
Q1	OD	I mean it might be but again let's go in and see.	
Q2	R	Indicate the upper and lower bounds of possible gross profit to the nearest 1/10 of 1% for 2010 beyond which you feel an investigation should be conducted to explain the change in gross profit for prior years.	
Q2	CJ	I mean if it stays around here then I would sort of be comfortable with it.	
Q2	E	It may have dropped.	
Q2	GQ	I would want to know why.	
Q2	IR	But you said here the business is <i>seasonal</i> .	Nature of the client's business
Q2	GQ	I would want to know why there is a...	
Q2	R	So upper bound range again it is,	
Q2	DR	if they give me a good explanation and it checks out even 50% would be fine, if you could check it.	
Q2	DR	In other words if it is there is it reasonable, is it plausible?	
Q2	AD	I am going to ask for an explanation if there is even like a 2% or 3% difference.	

Q2	R	I am looking over here.	
Q2	AS	But if there is a differentiation between the 2009, assuming that the previous auditor has done his work and so on,	
Q2	GQ	I would like to know why. I would still like to know why.	
Q2	AD	But I would even ask even if it is like 1%	
Q2	DS	because sometimes when you start asking you find out that oh yes,	
Q2	CJ	we had this line that was discontinued.	
Q2	GQ	Have you had any lines that were <i>discontinued</i> ?	Nonroutine transactions
Q2	GQ	Was there any <i>obsolete merchandise</i> ?	Nature of the client's business
Q2	GQ	Did you take some merchandise and donate it to charity and not get a receipt?	

Adbills

Q1	GQ	OK so how soon will these statements have to be done?	
Q1	GQ	What was in the <i>inventories</i> taken?	Nature of the client's business
Q1	GQ	And what rate of procedures in relation to inventory for this year?	
Q1	OD	2009, 2008, 2010 we have to look at <i>foreign exchange</i> ,	Nonroutine transaction
Q1	DS	'cause foreign exchange is important in relation to the way things are going.	
Q1	E	No because I'm trying to...	
Q1	E	the numbers aren't all that different.	
Q1	CN	I mean sales are down slightly	
Q1	CN	and purchases are up	
Q1	CJ	so there may be a problem in relation to final inventory	
Q1	E	but it's not drastically out of line.	
Q1	DR	So the lowest profit percentages if I would at this point just take an average	
Q1	AD	I would end up with probably about 32/33%.	
Q2	DR	The upper range will all relate to basically my determination of what the <i>inventory</i> should be and potential sales and net realizable value	Nature of the client's business
Q2	AD	so the upper range should be about 35%,	
Q2	AD	the lower range would have to be about 30.	

AI

Q1	CJ	The first guess it should fall somewhere between 30% and 35% based on the last years.	
Q1	E	They are <i>growing</i> .	Nonroutine transactions
Q1	CJ	So my point is actually that I would expect a higher gross margin especially if they are saying they are expanding into <i>China</i> to save	Nonroutine transactions

		costs and grow their operations.	
Q1	E	The actual costs should be going down.	
Q1	GQ	Granted if this is new, what is it going to be in 2010?	
Q1	CJ	There is a possibility that there were set-up costs that were a little bit higher in the first year.	
Q1	CJ	They are amortized over time so there may be an issue of them just recording the costs in one shot, which is affecting your gross margin currently.	
Q1	E	The fact is all their sales did drop while they said they were growing and that doesn't make sense.	
Q1	E	Their sales should be increasing.	
Q1	E	The fact that their costs, actually the gross profit went down when they should be actually saving some going to <i>China</i> despite the fact that they would have incurred set-up costs.	Nonroutine transactions
Q1	CJ	I am expecting this to actually rise based on what they are stipulating.	
Q1	CJ	If what they did is correct, it should raise above 35% unless obviously they made a <i>bad business decision</i> .	Competence of management
Q1	E	Then it would explain it being too low.	
Q1	CJ	But if not, I would say greater than 35%.	
Q1	CJ	Because they are a <i>new client</i> , I may not have the past years audit files.	First time client for the auditor
Q2	CJ	I would feel inclined to investigate anything above 35%	
Q2	DS	though I would expect it to be above 35%. I wouldn't feel comfortable.	
Q2	DR	Actually I would investigate any amount.	
Q2	AD	I would expect it to be around 35%.	
Q2	DR	I would investigate either way just to get assurance because it is a <i>new client</i> .	First time client for the auditor
Q2	DS	I wouldn't feel comfortable with anything.	
Q2	IR	The thought process that goes through my head is because I know they have had variances and they have <i>trouble explaining them</i> .	Competence of management
Q2	CJ	There may be <i>errors that the auditors accepted</i> that I wouldn't have accepted.	Client's relationship with preceding auditors
Q2	DR	On an <i>initial year</i> I would spend the extra time to gain sufficient assurance, sufficient comfort for myself so that in the next years I could reduce the effort.	First time client for the auditor
Q2	CJ	But for the first year I think more would need to be explained	
Q2	IR	because I know there were those unexplained variances in the past.	
Q2	DR	That is why regardless I would investigate anything.	
Q2	CJ	Even if it is at 35% I would feel the need to investigate	
Q2	OD	and I would have to go more account by account, not on the gross profit margin. It would really be on smaller line items that I would have to look and see if there was an inconsistency over a broader period of time. If it is not consistent over a broad period of time which ones need investigation.	

Barney

Q1	R	So it says here please indicate your best estimate of what the audited gross profit percentage for the year will be.
Q1	CN	I can see obviously it has gone down
Q1	E	which is strange
Q1	DS	because they have been increasing and what they have indicated that the future, that the industry is doing well,
Q1	E	so I don't understand why there is a decline.
Q1	OD	So obviously investigation has to be done on this amount.
Q1	CN	And I see that there seems to be, if I look at the percentage difference there is like a less than 3% increase.
Q1	CJ	So there should have been a 3%, you know, increase here.
Q1	AC	So just a quick and dirty 3% increase on \$100,000. So it should be, the gross profit percentage should be about 37% approximately I would say.
Q1	AD	So 37% is what I would guess
Q1	DS	based on just the trend.
Q1	GQ	But definitely I would question this amount as to why there is, just in the unaudited amounts why there is a decrease.
Q1	E	I certainly don't understand that, especially if things are doing well.
Q1	E	So that is definitely an area for concern.
Q2	R	I am just going to read the second part again.
Q2	?	I am not sure I understand the question. You mean once I find out what is the actual amount? But isn't this the actual amount?
Q2	E	So I would investigate it, period. Like I would have no bounds.
Q2	?	Maybe I don't understand.
Q2	E	I mean I would question this number, period.
Q2	DS	I would say that, I mean there was an increase, obviously I mean in terms of what is happening in the world, yes, there was a recession. But in a recession they seem to increase in percentage and then as things are picking up it decreased.
Q2	E	So something has gone on here.
Q2	E	So I would expect this, unless given reasonable explanation, so I have no other bounds. Like this is what I want it to be unless you explain otherwise. So that is all I want to say.

BM

Q1	CJ	I would think that the estimated, the estimated audited gross profit margin should be around 30% to 35%.
Q1	E	Well, this is not a range, okay.
Q1	AD	I would say take the average of those three items, those three years, 2008, '09 and '10,
Q2	AD	and the range, upper range or lower range should, the lower range I would say about 30%,
Q2	AD	the upper range I would say is 35%
Q2	DS	given the history of this company's gross margin trend
Q2	CN	because the sales from 2008 to 2009 jumped a lot, from \$436,000 to \$582,000.
Q2	AC	That is like \$150,000.

Q2	AC	Probably it is a 33% sales increase,
Q2	E	that is a lot of increase.
Q2	CN	And from '09 to '10 that is a small dip
Q2	GQ	but is it tolerable?
Q2	E	So I would say 2008, 2009...
Q2	E	But the profit margin didn't jump so much,
Q2	AC	only by maybe 3%. That's it.

Conrad

Q1	CN	So I am looking at, just comparing the actual results for the last two years	
Q1	E	and there is a significant change in the gross profit.	
Q1	E	Sales have increased	
Q1	E	and costs of sales have increased	
Q1	E	but not as quickly as the sales because the gross profit is higher.	
Q1	E	Now I look at this year and sales are down slightly	
Q1	E	and the gross profit percentage is back to, close to the 2008 level.	
Q1	GQ	So I am thinking maybe I would want to see if there was any <i>cut-off errors in 2009</i> that would have inflated the figures of 2009 and made better results.	Results of previous audits
Q1	GQ	I would also want to have a discussion with management as to why the sales have fluctuated so greatly, why last year it was so high and why this year it is back down again,	
Q1	IR	if what the discussions earlier were that the industry is in <i>rapid expansion</i> ,	Nonroutine transactions
Q1	CJ	I don't expect to see sales going back down.	
Q1	CJ	And costs of sales, if they went <i>overseas</i> , it would make sense that they would go down	Nonroutine transactions
Q1	OD	but I still want to validate that information.	
Q1	R	Please indicate your best estimate of what the audited gross profit will be for the year 2010.	
Q1	E	Well, I mean I haven't had any discussions yet with management.	
Q1	CJ	If the 2009 figures were audited and there were <i>no mistakes</i> , I would expect that the gross profit would be around 34% again, same as the year before,	Results of previous audits
Q1	DS	because of the increased sales and <i>overseas manufacturing</i> .	Nonroutine transactions
Q1	AD	So I will put 34%.	
Q2	R	Indicate the upper and lower bounds of possible gross profit percentages to the nearest 1/10 of 1%.	
Q2	AS	So let's presume that last year there were <i>no mistakes</i> because they were audited by good accountants,	Results of previous audits
Q2	AD	so I would expect that my gross profit would be between 34% and 35%	
Q2	AD	and on the lower range 33% to 34%.	
Q2	DS	I would expect it to be in line with 2009.	

Grump

Q1	E	There is a trend,	
Q1	E	it was audited, audited, unaudited.	
Q1	CN	There is an upward trend based on unaudited information.	
Q1	GQ	Is this based on the fact that <i>I suspect those guys</i>	Management's integrity
Q1	GQ	and <i>I can't rely on the prior auditors?</i>	Client's relationship with preceding auditors
Q1	?	So I would be somewhere within -- do you want a formula or just a percentage?	
Q1	CJ	I would give a reasonable average between here and there.	
Q1	E	And we have no suspicion that the current year is any different than the past.	
Q1	E	There is no <i>adjustments</i> .	Results of previous audits
Q1	AD	So I would go like 32%, close enough to there.	
Q2	R	Indicate the upper and lower bounds of possible gross profit to the nearest 1/10.	
Q2	CJ	Since <i>my risk is high</i> I would put a low, upper 5%, lower 2% plus or minus, both ways.	Risk in general
Q2	CJ	My variance would be plus or minus. If it varies 5% too much or 5% too low from the given point, plus or minus because ***.	
Q2	CJ	So my range would be, my lowest range would just vary 2% and my higher would be 5%.	
Q2	DS	I made an average because I am estimating, because I am basing this on, this is unaudited, the chances are it is going to vary and because <i>I suspect them</i> I want to check everything with a low variance.	Management's integrity
Q2	CJ	If I want to tolerate a big variance I would say 10%. If it would be up from 0% to 10%, I don't really care.	
Q2	DS	So I am going to check it or ask for explanations as soon as I see a smaller variance because of new market, blablabla, high risk, right?	

Gupp

Q1	E	My first comment is that we are dealing with a domestic product right here	
Q1	E	and we are looking at historical data from 2008 to 2010.	
Q1	E	2010 is unaudited.	
Q1	CJ	The best estimate for a percentage would probably be, 2008 would seem to be at the low end audited and 2009 would be the high end.	
Q1	E	We have suddenly gone down.	
Q1	GQ	I would like to know why we have gone down	
Q1	GQ	and how much this sales factor contributed to pricing,	
Q1	GQ	how much contributed to costing and the <i>market competitiveness</i> .	Nature of the client's business

Q1	AD	The annual gross profit for 2010 probably should be, I would think, in the area of about 32%	
Q1	E	which would mean between the 30.7% and the 34.5%	
Q1	DS	and it would tend to make sense because my sales have dropped and my costs of sales have probably gone up, the costs of pricing and it would certainly have an effect on my gross profit.	
Q2	CJ	The bounds of the possible gross profit percentage, the upper bound range I think 34% may be too high <i>given this particular industry</i> .	Nature of the client's business
Q2	CJ	It may be it was a good year, it may be it was a different type of quality, it could be a quantity, quality change or they could have gone from high level to low level or vice versa.	
Q2	AD	So I would still think the upper level should be not more than 33%	
Q2	AD	and the lower bound range should be no less than 30%.	

Jack

Q1	CJ	I would probably go, being more conservative, go toward a lower, more towards the 2008 figure.	
Q1	CN	Especially there seem to be, like there is questions of asking, like it seems like from 2008 to 2009 they have increased their gross profit margin	
Q1	CN	and then they are back down or on a downward trend	
Q1	GQ	or is this a good representation of the average?	
Q1	OD	So I think of course you would need more information.	
Q1	GQ	Like if I was looking at this I might want to go back a little bit further back and ask for their forecasting next year.	
Q1	E	So that is what I would consider.	
Q1	GQ	But would I consider,	
Q1	AD	so I would say 31% or 32% that they have there.	
Q2	R	The upper bound range and lower bound range,	
Q2	OD	and this is where I need to follow up more, I would say,	
Q2	DR	I would look at plus or minus 5%, definitely beyond that.	
Q2	AD	So say if I go, so I would say anything between 26%, outside -- sorry. 26%,	
Q2	AD	the upper range I would say about 35% to 26%.	

Jane

Q1	CN	So I see that there's a trend from 2008 to 2009 of sales increasing so I would	
Q1	CN	as well as cost of goods sold	
Q1	CN	have a slight increase in the gross profit percentage	
Q1	CJ	so I would think that again since this is a new market it's a <i>new product</i> and it's getting bigger that again it would probably either	Nonroutine transaction
Q1	E	no I think it would increase especially if they're going to be manufacturing in <i>China</i> that might decrease their cost of goods sold.	Nonroutine transaction
Q1	GQ	So, do you want an actual number?	
Q1	E	But here it says the actual unaudited results show the reverse.	
Q1	CJ	And I'd also think that they would be <i>biased</i> to show maybe	Client

		more sales in order to obtain government grants	motivation to manipulate the financial results
Q1	E	so this maybe goes against what I'm thinking.	
Q1	E	Then I actually reverse what I say I think it would probably be a little bit lower.	
Q1	E	I think it would be more like 2008 probably around 30%.	
Q1	AD	I think it would like be much much lower then I'd say at least 29% .	
Q2	AD	I'd say there should be maybe a 2-3% range above and below the gross product percentage that I had estimated.	

John

Q1	R	The first question in terms of my best estimate of what the audited gross profit percentage would be for 2010	
Q1	E	looking historically at 2008 and 2009, 2008 was at 30.7%	
Q1	E	and 2009 was 34.5%.	
Q1	E	The unaudited numbers for 2010 come at 31.6%.	
Q1	E	It is closer,	
Q1	SG	I would have to figure out why 2009 was so much higher because it seems to be closer to the 2008 numbers.	
Q1	CN	But considering that these are the numbers that they have internally although 2009 appears to be higher, the revenues were also higher in that year.	
Q1	CJ	So it may have been an unusually good year since 2010 the revenues dropped compared to 2009.	
Q1	CJ	So if I had to venture a guess for the 2010 or best estimate based on this information, the gross profit percentage for 2010 would probably be close to what the unaudited numbers are.	
Q1	AD	So it would probably be in the neighbourhood of 31.5%	
Q1	DR	give or take a couple of percentage points.	
Q2	R	In terms of what type of range which would necessitate more questions if they could get, or outside a certain range,	
Q2	CJ	I guess maybe at this point, going back to 2008 and 2009, if it gets closer or goes higher than the 2009 percentage I would want to know why.	
Q2	AD	So in terms of an upper range I would say in the neighbourhood of around 34%, 34.5%.	
Q2	CJ	And in terms of the lower end of the range it would have to be, like if it goes anywhere below the 2008 or somewhere in between the 2008 and 2010 percentages,	
Q2	AD	which I would say maybe around 31%,	
Q2	GQ	I would want to know why even from an operational point of view what has caused the decrease in the gross profit percentage.	

Julie

Q1	CN	So what I am thinking is that it seems that the gross profit percentage has gone up in 2009	
Q1	CN	and down in 2010.	
Q1	CN	Sales have gone down compared to last year	

Q1	CN	and costs of goods sold have also gone down.	
Q1	E	What I am thinking is that it is already calculated.	
Q1	GQ	So do I understand the question in the sense of do I think that there is something missing in costs of goods sold?	
Q1	GQ	Like is that what I am trying to...	
Q1	E	I would say that, well, I mean they are <i>expanding</i> because they think that costs are less	Nonroutine transactions
Q1	CJ	so that I would expect that costs of goods sold have gone down compared to last year.	
Q1	DS	Otherwise they, I mean they wouldn't expand otherwise. That is their whole idea of expanding, so costs of sales would go down.	
Q1	CJ	I would have expected that their sales would go up.	
Q1	DS	Otherwise, I mean they wouldn't have expanded.	
Q1	E	But I mean they have no <i>bias</i> to show lower sales either.	Client motivation to manipulate the financial results
Q1	E	So that is what I am pretty much thinking.	
Q1	E	So I would say that they would have a higher gross profit percentage.	
Q1	DS	I would say about, I would say the same as last year,	
Q1	AD	34.5%.	
Q2	R	Upper bound,	
Q2	IR	I think if it was, well, I am saying it should be 34%.	
Q2	AD	I think if it was like 38% I wouldn't follow up on that.	
Q2	CJ	And lower bound, lower bound what I am thinking is, I mean they are expanding and that is a huge risk, so even if it went down a lot I probably wouldn't be that surprised.	
Q2	AD	So I would probably say, well, here it went up, probably if it was 28% I guess.	

Julie81

Q1	IR	Based on what's written here	
Q1	CJ	the business is not <i>seasonal</i> therefore it should be constant	Nature of the client's business
Q1	CJ	or if its growing throughout the years it should be consistently growing.	
Q1	E	And as well there is no <i>unusual events</i> that occurred in 2008 and 2009 to show a growth.	Nonroutine transactions
Q1	CN	Therefore when looking at the numbers since I don't really know the trends but I would think that if in 2008 and 2009 the business has grown in sales,	
Q1	E	it's a little odd for me to see that the number of sales has decreased	
Q1	CN	and when regarding to costs of goods sold, they have decreased as well	
Q1	E	but by, I believe, a smaller amount.	

Q1	SG	Thus I can only think in trying to assess what's their <i>bias</i> .	Client motivation to manipulate the financial results
Q1	GQ	Is there bias to show a higher growth profit percentage?	
Q1	CJ	I would have thought so since they want to go <i>internationally</i> and they want to show that their business is going well.	Nonroutine transactions
Q1	E	It's just a little odd.	
Q1	GQ	Is it because they're over putting expenses in the cost of goods sold?	
Q1	E	I think <i>bias</i> could go one or the other way.	Client motivation to manipulate the financial results
Q1	E	But I just find it weird	
Q1	CN	that the business has grown 4% in 2008/2009	
Q1	CN	and it has decreased 3% in 2010.	
Q1	CJ	I would definitely because the <i>risk</i> is that the sales were understated and the cost of goods sold is understated as well.	Risk in general
Q1	OD	So I would do the procedures to see what's happening there.	
Q1	CJ	Now if I have to assess the upper bound or lower bound I think between I would have to look at <i>what the industry has gone through</i> .	Nature of the business
Q1	E	Unfortunately, I don't have the information	
Q1	AS	so you would assume that you look at the <i>auditor's numbers, you assume they are correct</i> .	Results of previous audits
Q1	CN	They have increased by 4% in a year.	
Q1	E	I would expect at least an increase maybe a 2% to be conservative,	
Q1	CJ	so I would probably consider that the number that was here in 2010 would be the upper volume range.	
Q1	CJ	I would say plus or minus let's say 5% or 2%	
Q1	CJ	above 2% or below, actually below because seeing the upper bound or lower bound is based on the increase or just the gross profit.	
Q1	AS	I would assume it would probably be a constant growth.	
Q1	GQ	Are the <i>international</i> numbers in 2010 yet?	Nonroutine transaction
Q1	CJ	Because we don't know maybe the business has hit a ceiling, so it's pretty hard.	
Q1	AD	I would keep it at 34.5 let's say,	
Q1	E	at least keep it constant	
Q1	E	I wouldn't think there would be necessarily to be conservative a decrease.	
Q2	R	What's the range where I would feel comfortable?	
Q2	AD	I would say between 30 and 34.5 I would feel comfortable.	
Q2	CJ	If it's higher I would want to audit	
Q2	CJ	and if it's much lower well	
Q2	E	actually because this is lower...	

Q2	AS	I would assume that it's growing,	
Q2	AD	so I would let's say between 33 and 36 I would feel comfortable.	
Q2	CJ	If it's lower or higher, that's where I would be asking questions even more than the actual questions I would ask to assess.	

Lawrence

Q1	AD	So I would estimate the gross profit for the next year as 31.6%	
Q1	DS	because of the manufacturing <i>overseas</i> , so some cost savings.	Nonroutine transactions
Q1	E	And the 34% seems to be like totally out of whack from the 30.7%,	
Q1	CJ	so I would say a slightly increasing gross profit in the first year overseas.	
Q1	AD	So I would estimate it at 31.6%	
Q2	AD	and the upper range anything over 35% I would consider is very suspect	
Q2	AD	and anything under 28% I would consider as a problem.	

Lindsay

Q1	CJ	So if I base it on the unaudited amounts	
Q1	IR	with what I know, with them being a bit <i>aggressive</i> ,	Management's integrity
Q1	CJ	I would expect it to be lower than what they are putting here.	
Q1	IR	First they mention <i>they can't produce their light bulbs any more, or something, so they are going into new markets.</i>	Nonroutine transactions
Q1	CJ	So like I would deduct let's say, I don't know, I am just being arbitrary, 2% for their aggressiveness	
Q1	CJ	and let's say, I don't know, another 3% for getting rid of their old light bulbs and expanding to new markets.	
Q1	AD	So like 27%.	
Q2	R	Indicate the upper and lower bounds of possible gross profit percentages to the nearest 1/10 of 1% beyond which you feel an investigation should be conducted to explain the change in gross profit percentage from prior years.	
Q2	CJ	So I guess I would investigate,	
Q2	DS	because it is <i>high risk</i> and it is a <i>new client</i>	Risk in general and First time client for the auditor
Q2	AD	I would probably just investigate anything between 25% and 35%. But I would investigate anything outside of those.	
Q2	E	Actually I want to make it smaller, yes.	
Q2	AD	Because I said it right but I would want to make it smaller	
Q2	DS	because they are <i>riskier</i> .	Risk in general

Minnie

Q1	E	I think that it is not clear from the fact case whether or not there	Results of
----	---	--	------------

		were significant numbers of <i>audit adjustments</i> that have gone through.	previous audits
Q1	E	It is also not completely clear when I am coming to my decision whether or not the <i>expansion</i> has actually started to occur in 2009.	Nonroutine transactions
Q1	AS	I have to assume not because this is indicated as being audited and you are looking at bringing in new auditors presumably for the 2010 period.	
Q1	E	Another step, there is <i>no seasonality</i> in the business, no significant seasonality in the business	Nature of the client's business
Q1	E	and there is a normal fluctuation in the gross margin percentage.	
Q1	E	It could be for a lot of reasons.	
Q1	E	It is not clear to me that this is all <i>domestic operations</i> ,	Nonroutine transactions
Q1	CJ	so it could be North American operations and there could be some effects impact involved in here.	
Q1	CJ	So based on this I think, just for a conservative estimate, I would probably think my original gross margin percentage would be somewhere in the range of 30% to 34%	
Q1	CJ	so I could probably start off with the preliminary expectation that it would be somewhere in the area of 32%.	
Q1	DS	Again, this is just, this is at the planning phase here. I haven't executed any procedure. So this is just to, normally when we will develop our expectations of materiality of percentages, it is to ensure that we have understood all the risks and to decide where we are going to focus our audit effort.	
Q1	AD	So that is sort of my process. It will probably land somewhere in the area of 32%	
Q1	DR	within, I guess, you know, 2% up or down to my thing.	
Q2	R	But the upper range, I am just going to read the question here. Indicate the upper and lower bounds to the nearest 1/10 of 1% for 2010 beyond which you feel an investigation should be conducted to explain, where would you need to follow up on this percentage because it is too different from what you would have?	
Q2	AD	I think my range would sort of be in the area of 30% to 30.5%, probably somewhere in the area, I would look at something, I think I would probably go to 32%.	

Miramar

Q1	CN	So I see that for '08 it is 30.7% and '09 is 34.5% and which is an increase.	
Q1	CN	But in 2010 it is down from '09 and it is *** above '08.	
Q1	CN	So let's see, so sales are less in 2010 than they were in '09	
Q1	E	which makes sense then for a lower gross profit percentage.	
Q1	E	Cost to consult is also lower.	
Q1	E	So the gross profit, for some reason, is lower than last year and higher than the previous year.	
Q1	E	That makes some sense.	
Q1	GQ	Okay, so why did it go lower?	

Q1	E	I am not too worried that, it is not all that much lower, only 3% or so.	
Q1	GQ	So why do I think the audited that it is unaudited?	
Q1	CJ	So after we audited maybe they showed too much in sales.	
Q1	E	It is not unreasonable	
Q1	E	but we are going to be worried about or try to determine whether some of the sales that are there, included in sales should really be there and do they,	
Q1	GQ	well, first of all what are their goals.	
Q1	GQ	Are their <i>goals to pay, to have a lower gross profit and pay less tax?</i>	Client motivation to manipulate the financial results
Q1	E	No, I don't think so.	
Q1	DS	They are a <i>public company</i> , I think, so <i>they would want to have a higher gross profit, that would look better for their shareholders and their earnings per share.</i>	Reliance on the financial statements and Client motivation to manipulate the financial results
Q1	CJ	So maybe the audited would be a little more like the 2008.	
Q1	CJ	Maybe it would be 31% possibly.	
Q1	AD	Okay, that is what it was, 31%.	
Q2	R	I would have to do more investigation if it is this upper bound, okay.	
Q2	IR	So if I am expecting 31%	
Q2	AD	then I would say 33%,	
Q2	AD	lower 29%.	

Olivier

Q1	E	As far as... The margin at 31.6% should, theoretically, be reasonable relative to the estimated sales and the cost of sales.	
Q1	AC	If we average out the two years, we should end up with roughly a 34 to 35% margin, overall.	
Q1	CJ	Therefore, with a percentage lower than the margin (at 31.6%)... [it] could be even a little underestimated relative to what they could get.	
Q1	E	I would say that, normally, as long as the margin is over 30%, it is a viable project.	
Q1	GQ	So, the risk... Are they off by much?	
Q1	CJ	No, because the two trends, I think, appear to be good, at first glance.	
Q1	E	For me, they would have to put the margin at 30% to begin with,	
Q1	E	increase somewhat the cost of sales...	
Q1	E	That way they'd be safe.	

Q1	E	Because there are nonetheless areas...	
Q1	E	Where they need to be careful is on the <i>exchange rate</i> .	Nonroutine transaction
Q1	DS	Because, depending on the exchange rate at the time, there can be a completely different margin.	
Q1	E	That's where there is variation.	
Q1	IR	But if it's with <i>China</i> , we know that, with the value of the yen being underestimated,	Nonroutine transactions
Q1	CJ	the <i>exchange rate</i> , they will perhaps be able to recover a portion with the exchange rate.	Nonroutine transactions
Q2	CJ	I would say that between 30%...	
	AD	Under 30%, I would ask for verification,	
Q2	DS	because under 30%, they won't be making any money on it. It's mathematical in accounting. If they don't have a 30% margin, they won't make any money.	
Q2	CJ	If they are going to <i>China</i> to make a 30% margin, well they shouldn't go, as far as I'm concerned.	Nonroutine transactions
Q2	E	It's not enough.	
Q2	CJ	If they want to go there to make a good margin, with the cost of sales they'll be able to get, theoretically, they should be able to get a 40 to 45% gross margin... to ensure costs are covered.	
Q2	E	It is supposed to be cheaper.	
Q2	E	However, the cost of sales won't be cheaper [just] because the items were made in China.	
Q2	E	So they need to be careful.	
Q2	?	There are places... Sometimes... Take a product...	
Q2	IR	I knew a company that made chairs. It had them made in China. Why? Because, in the United States, it was making a 25% margin. In Canada, it was making a 28 to 29% margin. By having them made in China, the company was making a 45% margin.	
Q2	DS	Which means that, given that their gross margin is larger, they can allow themselves to take more time, and they can also allow themselves [to produce?] a lower quality, because they are not the same products.	
Q2	E	Therefore, that's where normally...	
Q2	CJ	I'd say if they make...	
Q2	DR	Theoretically, if they fall above 45%, I would be concerned, and if they fall below 30%, I would also be concerned.	
Q2	E	A realistic range would be between 30 and 45%.	
Q2	AD	The upper limit would be 45%.	
Q2	AD	And the absolute lowest limit would be 30%. That's what I would say.	
Q2	DS	Because... Forty-five percent (45%) in China, the same gross margin product, I wouldn't be terribly concerned, knowing that, even with the cost of transportation, it would be profitable.	
Q2	DS	At 30%, I would have it made in the United States. I would still make 30%, and I would sell the same amount in the end.	
Q2	E	So, that, as far as I'm concerned, is something that... Those would be the limits I'd set.	

Ricardo

Q1	E	So I am the auditor.	
Q1	E	There is no other procedures that have been performed.	
Q1	E	The values of the component accounts and ratios are based on the auditor's last two audit years and the current year twelve month audit the values produced are below.	
Q1	E	Based on discussions with the firm's previous auditors we know the business is not <i>seasonal</i> .	Nature of the client's business
Q1	E	So seasonality is not going to come to an effect there.	
Q1	GQ	Why are we seeing those dramatic changes in the gross profit between '08 and '09	
Q1	GQ	and then we see a drop in '10?	
Q1	E	Sales have dropped in '10.	
Q1	GQ	So is there something, is there some sort of <i>sensitivity in the marketplace</i> or dealing with issues?	Nature of the client's business
Q1	GQ	Have they basically been able to <i>move their production</i> over to ecofriendly products?	Nonroutine transactions
Q1	GQ	Have their incandescent products been discontinued?	
Q1	E	So we saw a nice increase in sales,	
Q1	E	their costs of goods sold.	
Q1	GQ	So what does that mean?	
Q1	CJ	Basically I guess that we are just absorbing something in there.	
Q1	AC	So we are seeing roughly a \$145,000 increase in sales between '08 and '09	
Q1	AC	and then we see a drop of roughly \$58,000 now, cost of sales.	
Q1	?	I don't know.	
Q1	OD	I would want to certainly do some work and check out the sales.	
Q1	?	I don't know.	
Q1	CJ	I think there may be sensitivity or some issues that are dealing with the <i>type of products they are selling</i> .	Nature of the client's business
Q1	GQ	I would be interested to know what the profile is of their sales	
Q1	GQ	and the reasons for the drop,	
Q1	GQ	you know, what happened in terms of their business.	
Q1	GQ	Have they lost any major clients during this period?	
Q1	GQ	Is it because they have had a <i>shift in the products</i> that they are selling	Nonroutine transactions
Q1	GQ	and there isn't as much attraction with the new products that are coming out	
Q1	GQ	or is it because there is a reduced demand for the products that they are currently selling?	
Q1	CJ	My expectation of the gross profit for '10, given the recent changes or anticipated changes and a certain, I guess, <i>legislation source of government</i> , I would guesstimate probably somewhere around 30%, 30%, 31% .	Reliance on the financial statements
Q1	DS	because I think that looks like probably an anomaly there, probably something that happened in '09	
Q1	AD	So I will just mark 30%.	
Q2	R	The upper and lower bounds of possible gross profit percentage to	

		the nearest 1/10 of 1% you feel that an investigation should be conducted to explain the change of gross profit percentage for prior years, where would you need to follow up if the percentage was too different from what you expect for this company's upper bound of range.	
Q2	?	I guess what I would say, I would say this should be more appropriate. Best estimate of the upper bound of range.	
Q2	AD	The upper bound of the range, so it would be 35%,	
Q2	AD	I would say roughly I would say 30%. I don't know.	

Rosie

Q1	DS	The reason it should be lower because the <i>past auditors</i> it sounds like they didn't have any changes	Client's relationship with preceding auditors
Q1	CJ	and if I am coming in and asking more questions and being more definitive, looking for more definitive answers there are probably going to be changes to the gross profit.	
Q1	CJ	It is probably going to come out lower.	
Q1	CJ	There is probably going to be some <i>major adjustments</i> that they are going to have to make that are material, that just won't pass through.	Results of previous audits
Q1	AD	I decided to bring it down 2%, to 29%.	
Q1	R	Indicate your best estimate of what the audited gross profit percentage will be for the year.	
Q1	GQ	Isn't that what I did here?	
Q2	R	Indicate the upper and lower bounds of possible gross profit to the nearest 1/10 of 1% where you feel an investigation should be conducted to explain...	
Q2	E	.5%, this is a big change and they are not changing it.	
Q2	E	I am not answering the question right.	
Q2	R	When would you need to follow up on this percentage because it is too different from what you expect it to be in this company.	
Q2	E	So this is .5%	
Q2	IR	and you are asking me what my range is here.	
Q2	R	Upper and lower bounds of possible gross profit to the nearest 1/10 beyond which you feel an investigation should be conducted to explain the change in gross profit from prior years.	
Q2	GQ	Of my 29% or of the 31%?	

Samuel

Q1	E	... matches I guess the sales and it doesn't fluctuate that much.	
Q1	E	So I think here we are about, *** goods sold about 80%	
Q1	CN	and here it is a little, it went down a bit	
Q1	E	and here it seems to be, so it seems to be reasonable in that sense.	
Q1	E	And the gross profit same thing,	
Q1	CN	so it is about one third, it is about a little more here than one third	

		and then back I guess around one third.	
Q1	E	So it sounds reasonable.	
Q1	E	It doesn't sound like <i>something major happened</i> or something is wrong.	Nonroutine transaction
Q1	E	These are the audited.	
Q1	E	What we don't know though is what was the figures presented.	
Q1	E	We don't know what are the <i>adjustments</i> without having seen or talked to the previous auditor.	Results of previous audits
Q1	AD	So the estimated audited gross profit for 2010, and this is what they are presenting here as far as percentage, so in percentage I guess it would be, I would say it would be close to 31%, a third or 31%.	
Q2	CJ	I don't see... But that we don't know. Had we done the analysis of the financial statements then we would be...	
Q2	CJ	So it is the same thing here, you can see the upper bound and lower bound range could be, I would have a variance of probably about 3% either way, so about 28% to 33% roughly, even a little higher,	
Q2	AD	I would probably make it closer to 29%.	
Q2	E	There is probably the <i>risk</i> .	Risk in general
Q2	E	I don't think it would go lower than that. It shouldn't go lower than that I think.	

Stuart

Q1	E	They haven't entered into a <i>foreign market</i> yet.	Nonroutine transactions
Q1	E	So then their product supply and their product costing will be similar as in past years.	
Q1	E	So the gross profit would be in line with past years.	
Q1	CJ	So probably I would think it would be around 32%, 33%.	
Q1	DS	I don't think it would change from last year.	
Q1	GQ	My concerns would be once they started manufacturing in the <i>Orient</i> then I would wonder if it will be as profitable than the early years.	Nonroutine transactions
Q1	CJ	You know, if the quality is there then probably the gross profit will go up because it is less expensive to operate in the <i>Orient</i> .	
Q1	AD	So right now I would say, I would put it around 32%.	
Q2	AD	And then my thinking is if it would drop below the 30% range beyond the lower end, if it would drop to like 28%	
Q2	GQ	I would wonder whether I had <i>problems with the product</i> and that there were large returns and that I would have to do more work on subsequent events	Nonroutine transactions
Q2	IR	because certain manufacturers, such as retailers like Walmart send all their goods back after December, so there is like always a huge, there is always markdowns in February. You usually have to take an allowance.	
Q2	E	So to me that would be a concern.	
Q2	CJ	And then the upper range would still be I would say 32% because I don't know the extent of what the product would be.	
Q2	AD	If it was higher than 32%, perhaps to 34% I would go. But	

		anything above that I would question as well.	
--	--	---	--

Victor Steel – inaudible

Wolfgang

Q1	R	So with respect to question number 1 to indicate the best estimate of what the audited gross profit percentage will be,	
Q1	CJ	I would say that it would in all likelihood be lower than it was in 2009 just based upon the trend that I am seeing happening.	
Q1	CJ	However, I don't perceive that the 2009 is really that comparable because of the fact that the <i>new business</i> isn't so new.	Nonroutine transactions
Q1	E	So I am not really convinced that the sales or the costs of sales have been necessarily or unnecessarily captured.	
Q1	CJ	So I would have to not really, actually I really can't estimate other than to look at the historical range and expect it would be somewhere around 30%.	
Q1	E	But I have to say I wouldn't be surprised if it was way less.	
Q1	E	I would be surprised if it would be way more.	
Q1	AD	So as a ballpark I would say 30%	
Q1	E	but, as I said, it would not be, I wouldn't be surprised if it did not amount to that because of the factors indicated.	
Q2	R	For question number 2, the upper and lower bounds of possible gross profit percentages for 2010 beyond which you feel an investigation should be conducted to explain the change in gross profit.	
Q2	AD	Okay. So if the upper bound of the range went up to I would say 32%, I would start to do more work because I would feel that it was not what I expected.	
Q2	E	So which really means that I really do expect it to be lower because of the <i>new circumstances</i> .	Nonroutine transactions
Q2	AD	And the lower bound of the range if it went lower than 28% I would also, for the same reasons, do more investigation.	

X211

Q1	CN	I think when I am going through the numbers and looking at the prior years, the current year, no,	
Q1	IR	based on what I saw on the movie you are thinking the company is growing and they are <i>expanding</i> ,	Nonroutine transactions
Q1	E	the sales are down,	
Q1	CJ	it could be <i>foreign exchange</i> ,	Nonroutine transactions
Q1	CJ	there could be several factors there.	
Q1	GQ	But I would want to understand what is happening with the sales,	
Q1	GQ	probably where the sales are happening	
Q1	GQ	also and why the gross profit,	
Q1	CN	I mean there seems to be a bit of a spike in 2009,	
Q1	CN	it seems the 2010 levels are more similar to 2008 on a gross margin	

		percentage.	
Q1	OD	And then I would probably investigate what is happening to the gross margin percentages.	
Q2	?	But I guess putting a range I would expect 2010 to be,	
Q2	E	to be honest I think it is hard for me to estimate the range when I don't know <i>what is pretty much going on in the business this year.</i>	Nature of the client's business
Q2	E	So to be honest I don't know what I would put as my estimate at this point.	
Q2	E	To give a range, you know, obviously there is not much information.	
Q2	CJ	My range might be something like 29.5% to maybe 31.5%.	
Q2	IS	So in looking at 2010	
Q2	AD	probably I guess I could put somewhere in the 31%, 30%, 31%, 30.5%, somewhere in the middle of the range.	

**Appendix V. Counts of Operators Used by Individual Auditor for the Complete
Verbal Protocol**

Task Structuring and Information Acquisition Operators

Alias	Set Goal	Information Search	Read	Algebraic calculation	Information retrieval
18121972					
4480xyz			4		1
Adbills					
Al					2
Barney			2	1	
BM				3	
Conrad			2		1
Grump			1		
Gupp					
Jack			1		
Jane					
John	1		2		
Julie			1		1
Julie81	1		1		1
Lawrence					
Lindsay			1		2
Minnie			1		
Miramar			1		1
Olivier				1	2
Ricardo			1	2	
Rosie			4		1
Samuel					
Stuart					1
Wolfgang			2		
X211		1			1
Total	2	1	24	7	14
Average/Auditor	.08	.04	.96	.28	.56

Information Evaluation Operators

Alias	Assumption	Conditional Judgment	Evaluation	Comparison	Decision Support	Generate Query
18121972		3	3			
4480xyz	1	5	3		2	6
Adbills		1	3	2	1	3
Al		12	6		2	1
Barney		1	8	2	3	1
BM		1	4	2	1	1
Conrad	1	3	7	1	2	2
Grump		5	4	1	2	2
Gupp		3	5		1	3
Jack		1	1	2		3
Jane		2	5	3		1
John		4	4	1		1
Julie		3	5	4	3	2
Julie81	3	12	11	5		3
Lawrence		1	1		1	
Lindsay		5	1		2	
Minnie	1	3	6		1	
Miramar		3	8	3	1	4
Olivier		7	15		5	1
Ricardo		3	8		1	13
Rosie		3	3		1	2
Samuel		2	11	2		
Stuart		3	4		1	2
Wolfgang		3	5			
X211		3	4	3		3
Total	6	92	135	31	30	54
Average/Auditor	.24	3.68	5.40	1.24	1.20	2.16

Action/Choice Operators

Alias	Generate Alternative	Audit Decision	Decision Rule	Other Decisions	?	Total
18121972		3				9
4480xyz		3	2	1	1	29
Adbills		3	2	1		16
Al		1	4	1		29
Barney		1		1	2	22
BM		3				15
Conrad		3		1		23
Grump		1			1	17
Gupp		3				15
Jack		3	1	2		14
Jane		2				13
John		3	1			17
Julie		3				22
Julie81		3		1		41
Lawrence		4				7
Lindsay		3				14
Minnie		2	1			15
Miramar		3				24
Olivier		3	1		1	36
Ricardo		3		1	3	35
Rosie		1				15
Samuel		2				17
Stuart		3				14
Wolfgang		3				13
X211		1		1	1	18
Total	0	63	12	10	9	490
Average/Auditor	0	2.52	.48	.40	.36	19.6

Appendix W. Counts of Operators Used by Individual Auditor to Estimate the Audited Gross Profit Margin

Task Structuring and Information Acquisition Operators

Alias	Set Goal	Information Search	Read	Algebraic calculation	Information retrieval
18121972					
4480xyz			1		
Adbills					
Al					
Barney			1	1	
BM					
Conrad			1		1
Grump					
Gupp					
Jack					
Jane					
John	1		1		
Julie					
Julie81	1				1
Lawrence					
Lindsay					2
Minnie					
Miramar					
Olivier				1	1
Ricardo				2	
Rosie			1		
Samuel					
Stuart					
Wolfgang			1		
X211					1
Total	2	0	6	4	6
Average/Auditor	.08	0	.24	.16	.24

Information Evaluation Operators

Alias	Assumption	Conditional Judgment	Evaluation	Comparison	Decision Support	Generate Query
18121972		3	3			
4480xyz		3	2		1	
Adbills		1	3	2	1	3
Al		8	6			1
Barney		1	4	2	2	1
BM		1	1			
Conrad		3	7	1	1	2
Grump		1	4	1		2
Gupp		1	5		1	3
Jack		1	1	2		3
Jane		2	5	3		1
John		2	4	1		
Julie		2	5	4	3	2
Julie81	2	9	10	5		3
Lawrence		1	1		1	
Lindsay		4				
Minnie	1	3	6		1	
Miramar		3	8	3	1	4
Olivier		3	8		1	1
Ricardo		3	8		1	13
Rosie		3			1	1
Samuel			9	2		
Stuart		2	3		1	1
Wolfgang		3	4			
X211		2	1	3		3
Total	3	65	108	29	16	44
Average/Auditor	.12	2.6	4.32	1.16	.64	1.76

Action/Choice Operators

Alias	Generate Alternative	Audit Decision	Decision Rule	Other Decisions	?	Total
18121972		1				7
4480xyz		1		1	1	10
Adbills		1	1	1		13
Al						15
Barney		1		1		14
BM		1				3
Conrad		1		1		18
Grump		1			1	10
Gupp		1				11
Jack		1		1		9
Jane		1				12
John		1	1			11
Julie		1				17
Julie81		1		1		33
Lawrence		2				5
Lindsay		1				7
Minnie		1	1			13
Miramar		1				20
Olivier		1				15
Ricardo		1		1	2	31
Rosie		1				7
Samuel		1				12
Stuart		1				8
Wolfgang		1				9
X211				1		11
Total		23	3	8	4	321
Average/Auditor		.92	.12	.32	.16	12.84

Appendix X. Counts of Operators Used by Individual Auditor for Extent of Audit

Testing Decision

Task Structuring and Information Acquisition Operators

Alias	Set Goal	Information Search	Read	Algebraic calculation	Information retrieval
18121972					
4480xyz			3		1
Adbills					
Al					2
Barney			1		
BM				3	
Conrad			1		
Grump			1		
Gupp					
Jack			1		
Jane					
John			1		
Julie			1		1
Julie81			1		
Lawrence					
Lindsay			1		
Minnie			1		
Miramar			1		1
Olivier					1
Ricardo			1		
Rosie			3		1
Samuel					
Stuart					1
Wolfgang			1		
X211		1			
Total	0	1	18	3	8
Average/Auditor	0	.04	.72	.12	.32

Information Evaluation Operators

Alias	Assumption	Conditional Judgment	Evaluation	Comparison	Decision Support	Generate Query
18121972						
4480xyz	1	2	1		1	6
Adbills						
Al		4			2	
Barney			4		1	
BM			3	2	1	1
Conrad	1				1	
Grump		4			2	
Gupp		2				
Jack						
Jane						
John		2				1
Julie		1				
Julie81	1	3	1			
Lawrence						
Lindsay		1	1		2	
Minnie						
Miramar						
Olivier		4	7		4	
Ricardo						
Rosie			3			1
Samuel		2	2			
Stuart		1	1			1
Wolfgang			1			
X211		1	3			
Total	3	27	27	2	14	10
Average/Auditor	.12	1.08	1.08	.08	.56	.40

Action/Choice Operators

Alias	Generate Alternative	Audit Decision	Decision Rule	Other Decisions	?	Total
18121972		2				2
4480xyz		2	2			19
Adbills		2	1			3
Al		1	4	1		14
Barney					2	8
BM		2				12
Conrad		2				5
Grump						7
Gupp		2				4
Jack		2	1	1		5
Jane		1				1
John		2				6
Julie		2				5
Julie81		2				8
Lawrence		2				2
Lindsay		2				7
Minnie		1				2
Miramar		2				4
Olivier		3	1		1	21
Ricardo		2			1	4
Rosie						8
Samuel		1				5
Stuart		2				6
Wolfgang		2				4
X211		1			1	7
Total	0	40	9	2	5	169
Average/Auditor	0	1.6	.36	.08	.20	6.76

**Appendix Y. Counts of Operators That Mention Risk or Trustworthiness by
Individual Auditor**

Alias	For Estimate of Audited Gross Profit %		For Extent of Audit Testing Decision	
	Risk	Trustworthiness	Risk	Trustworthiness
18121972	3	2		
4480xyz	1		3	
Adbills	2		1	
Al	5	1	4	1
Barney				
BM				
Conrad	5		1	
Grump	3	1	2	1
Gupp	1		1	
Jack				
Jane	3			
John				
Julie	2			
Julie81	9			
Lawrence	1			
Lindsay	2	1	3	
Minnie	4			
Miramar	3			
Olivier	3		1	
Ricardo	6			
Rosie	2			
Samuel	2		1	
Stuart	2		1	
Wolfgang	1		1	
X211	2		1	
Total	62	5	20	2
Average/Auditor	2.48	.20	.8	.08