

NEGOTIATION OF AUDIT LITIGATION SETTLEMENTS:
AN EXPERIMENTAL STUDY OF THE IMPACT OF
REPUTATIONAL CONCERNS
AND
THE LEVEL OF MERIT OF THE SUIT

by
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A thesis
presented to the University of Waterloo
in the fulfilment of the
thesis requirement for the degree of
Doctor of Philosophy
in
Accounting

Waterloo, Ontario, Canada, 1998

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ABSTRACT

NEGOTIATION OF AUDIT LITIGATION SETTLEMENTS: AN EXPERIMENTAL STUDY OF THE IMPACT OF REPUTATIONAL CONCERNS AND THE LEVEL OF MERIT OF THE SUIT

Auditor litigation has become more frequent over the past ten years. Investors, lenders, etc., often sue the auditor when a company goes bankrupt because of the auditors' deep pockets or ability to pay damages. When facing these lawsuits, auditors face a difficult decision: Should they fight the case in court or should they settle out of court. This paper investigates whether there are behavioural factors that interact with economic factors when auditors are making these decisions. In particular, it investigates whether reputational concerns influence the decisions and outcomes in the litigation process, whether the level of merit of the suit brought against the auditor influences the decisions and outcomes in the litigation process, and whether the role of the litigant influences the decisions made throughout the litigation process. The importance of perceived reputation costs and opportunity costs of fighting the case and settling the case are also investigated.

These research questions are addressed through a laboratory experiment where audit partners and auditing students are randomly assigned to the roles of either plaintiff advisors or defendants. The subjects are asked to negotiate two settlements based on case facts. The reputational concerns are addressed through a public announcement manipulation where the defendant has to announce the outcome of his first negotiation to the second negotiation partner. The settlement results of this condition are compared to a condition where the defendant does not report his first negotiation outcome to the second partner. The merit level manipulation is incorporated into the cases used in the experiment. There are two cases, one of high audit quality (low merit) and one of low audit quality (high merit). The settlement outcome of the high merit case is compared to the low merit case.

The results indicate that the public announcement manipulation does influence the negotiations and settlements. Reputation appears to be important to auditors as they seem to have a more difficult time settling in the public announcement condition, but, if they do settle, it is done more quickly and for a higher amount than they do in the non-public announcement condition. The results also show that role or litigation side does influence the decisions and negotiations and that the subjects were better at distinguishing between the two levels of merit than was expected, especially the students. Finally, it seems that the costs of fighting the case in court (reputation and opportunity) are perceived to be more important or influential when involved in a litigation than the costs of settling the case out of court.

ACKNOWLEDGMENTS

I would like to thank my dissertation supervisor, Dr. J. Efrim Boritz, for his guidance and support throughout my dissertation. I would also like to thank Dr. Jennifer Kao, Dr. Derek Koehler, Dr. Morley Lemon and Dr. Bill Scott, my dissertation committee members, for their comments and suggestions. In addition, thanks go to Dr. Ronald R. King who kindly consented to be the external reader of my thesis. My gratitude also goes to Dr. Tony Atkinson, Sally Gunz, Dr. Kathryn Kadous and Dr. Gord Richardson for their suggestions and guidance throughout the dissertation and the doctoral program.

I am also indebted to Dr. Howard Teall, Christopher Batch and Brad Lund of Wilfrid Laurier University and the ten accounting firms involved for providing participants for the study. I would like to make a special thank you to Kathryn Kadous for the use of her cases. Also, thanks go to Don Cockburn and Brian Morgan for their help and advice when revising the cases and to the legal counsel from a major accounting firm that acted as the judge. As well, thanks are owed to the Institute of Chartered Accountants of Ontario, the University of Waterloo and KPMG Peat Marwick who provided financial support.

I would also like to thank my fellow doctoral students, Kate Bewley, Shane Dikolli, Steve Fortin, Marie-Josée Ledoux, Theresa Libby, Raymond Morissette and Jeff Pittman, and everyone at the School of Accountancy, University of Waterloo who provided invaluable assistance, advice and encouragement.

As well, I would like to thank my parents for all of their support, inspiration and encouragement throughout the dissertation process, and always. Finally, a very special thanks to Tom; without his support, patience and encouragement, the completion of this thesis would not have been possible.

To Tom
&
My Parents

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CHAPTER 1.0

INTRODUCTION

1.0 Introduction and Motivation

Concerns about legal liability have been in the forefront of discussion in the auditing profession for some time (Andersen et al, 1992; Kadous, 1996). When facing a lawsuit, auditors, like any defendant, face a difficult decision. They must assess the facts of the case brought against them and determine what their chances are of winning the case if it goes to court, what it will cost them to go to court, and what it would cost them to settle the case out of court. There are many other costs besides the actual payout which need to be considered when making these decisions, including, reputation costs, lost business costs and lost billing time costs. In most court cases, and especially those with merit¹, defendants are economically better off to settle the case before going to court, as the costs of preparing for court and the actual court costs, not to mention any possible damages, far outweigh an acceptable settlement amount.^{2, 3}

Scott and Zhang (1996) study pretrial negotiation or settlement decisions of cases with merit in an economic analytical model. They find that if the case is to be tried before

¹ From the perspective of the plaintiffs, the higher (lower) the quality of their case or the more likely the defendant will lose (win) in court, the higher (lower) the merit of the case. One would expect that only cases with merit would be pursued, however, auditors believe that they frequently face meritless cases. The auditing profession's most commonly cited reason for this is that 'auditors have deep pockets' (or are wealthy, and therefore, can afford to pay out large settlements) (Palmrose, 1997a).

² This is summarized by the familiar legal axiom 'a bad settlement is almost always better than a good trial' (Alexander, J.C. 1991. "Do the Merits Matter? A Study of Settlements in Securities Class Action." *Stanford Law Review*, 43: 498). Also, it is 'commonly believed that settlements are an efficient means of settling legal disputes' (Dopuch, et al, 1997. "An Empirical Investigation of Multi-Defendant Bargaining in 'Joint and Several' and Proportionate Liability Regimes." *Journal of Accounting and Economics*, 23: 190). Holloway et al (1997) also support this claim, as they state in their paper that they have focused on settlements 'because settlements are an efficient means of settling legal disputes' (Holloway et al, 1997. "An Analysis of Settlement and Merit Under Federal Securities Law: What Will be the Effect of the Reform of 1995?" Working Paper, Olin School of Business, Washington University, August 1997: 3).

³ For example, in 1991 the average legal claim against all accounting firms in the United States was \$85 million, the average legal cost per settled claim was \$3.5 million and the average settlement was \$2.7 million (Arthur Andersen et al, 1992). This illustrates that settlement amounts can be much lower than the original legal claims for damages. This analysis only includes the legal costs of those cases that were settled, it does not include the legal costs for cases that went to court.

a jury, which is almost always the case in the United States, the auditor should settle the case out of court. For judge trials, they show that the auditor should sometimes take the case to court since the outcome is more predictable; however, they assume that the auditors or defendants are risk neutral, which is probably not true, and this assumption may be driving the result. A survey of litigation economic models by Daugherty (1996) also shows that in most situations settlement is the optimal choice.

However, auditors tend to be wary of settling out of court as they are afraid the reputation costs due to the bad publicity of settling may be too high. Auditors are very concerned with their reputation as a good reputation is one of a public accounting firm's most valuable assets and a good reputation is a very important part of an auditor's success (Wilson and Grimlund, 1990; Firth, 1990). Thus, since auditors fear that settling out of court may signal to the public that they are admitting guilt, auditors are willing to risk disadvantaging themselves economically by going to court (Palmrose, 1988).⁴ Also, they are concerned that settling with one party will signal to other parties that they would settle with them too, if these parties bring a court case against them (Alexander, 1991). There is evidence that the likelihood of audit litigation going to trial is twice as high as for other securities litigation (Palmrose, 1991) suggesting that auditors are more apprehensive of settling and may have different settling strategies than other defendants. These scenarios and evidence are interesting because they suggest auditors are willing to risk bankrupting

⁴ It also can be argued that auditors prefer to settle very quickly and quietly to avoid this bad publicity; however, if they can't do this, they would be concerned with the reputation costs of settling.

themselves by taking the case to court because they think that they can win the case and avoid the bad publicity from settling out of court.⁵

There is anecdotal and empirical evidence, however, suggesting that auditors may be changing their litigation strategies.^{6,7} Audit firms are becoming aware of the economic consequences of fighting court cases and are deciding that the costs of fighting the case in court is greater than the benefits and, therefore, are attempting to settle many of the cases brought against them. There could be problems with this strategy though, as auditors believe that they are often named as defendants in non-meritorious cases because 'they have insurance policies that enable them to pay large damages to the plaintiffs'.⁸ Therefore, a litigation strategy of settling may result in auditors paying out more than necessary in damages to undeserving plaintiffs. That is, auditors, similar to any defendant facing a lawsuit without merit, may agree to pay the plaintiff more than they should just to get a quick settlement and, thereby, avoid the legal costs of fighting a case, the possible damages, and any reputation costs and business costs, including the time spent preparing the case, incurred from a long drawn out settlement or court case. This type of litigation situation lends itself to a game-theoretic framework as is used in this thesis since there are two parties involved in the litigation and a variety of actions which impact the opposing party as well as the party making the decision.

⁵ In 1990, Lavenhol and Horwath, the seventh largest firm in the U.S., went bankrupt. As the former CEO of L&H puts it: "It wasn't the litigation we would lose that was the problem, it was the cost of winning that caused the greatest part of our financial distress" (Arthur Andersen et al, 1992: Big 6 Joint Position Statement. *Journal of Accountancy*, November: p.21). In other words, they believed that their bankruptcy was due to fighting court cases which they believed they could win.

⁶ This anecdotal evidence is based on discussions by the author with auditors about the current audit litigation setting.

⁷ Per Marino and Marino (1994), accountant settlements have been steadily increasing in number and dollar value (1989 - 6 disclosed cases averaging \$1.90 million; 1993 - 18 disclosed cases averaging \$7.37 million).

⁸ See footnote 1.

From the above arguments, it appears that there is a combination of psychological factors and economic factors involved in the settlement decisions of auditor litigants. Auditors could benefit from a better understanding of the settlement decision processes and the actual decisions being made when considering and negotiating a settlement. It also would be of benefit to understand how these processes and decisions are influenced by this mix of psychological and economic factors.

Researchers have become interested in the interaction of economic and psychological factors in multi-party decisions and outcomes and are using behavioural game theory, rather than just pure economic game theory, to attempt to understand this interaction. Since it appears that behavioural factors will be influencing the actions and decisions of the parties involved in a litigation, behavioural game theory seems to be an appropriate and logical method for attempting to understand the litigation and negotiation of litigation situations. Various experiments conducted by economists that test game theory predictions have indicated that people often do not behave as economics predicts they would; instead, they are influenced by 'non-economic' considerations, such as fairness, reputation, reciprocity, trust, and biases when dealing with others. This thesis studies some of these 'non-economic' considerations by trying to determine how they impact the settlement decision process.

Some recent research, in the behavioural game theory area, suggests that parties involved in making the decision to go to court versus to settle view the case with self-serving biases (Babcock et al, 1995). Plaintiffs overestimate the dollar values of fair settlements and defendants underestimate the dollar values of fair settlements, thereby

making it difficult for the parties to come to an agreement. A question of interest is whether such self-serving biases occur in audit legal cases as well.

Auditors may behave differently from other litigants as they are often repeat players in litigation; that is, there is a good possibility that they will be sued again or have been sued before.⁹ For example, Miceli (1993) finds analytically that the optimal litigation strategy for repeat defendants that are possibly facing nuisance suits or suits without merit is different from that of one-time defendants facing similar suits. He suggests that one-time defendants should always settle, whereas for repeat defendants, especially those with reputational concerns, an always settle strategy may not be optimal.

This likelihood of being a repeat defendant suggests that auditors would benefit from being better trained in making these litigation decisions and that they could also benefit from being made aware of potential biases. Also, since an auditor's reputation is important to his or her business success, a bad settlement or court ruling could seriously hurt an auditor's reputation and future success. These auditor characteristics (the importance of reputation to their future success and high probability of being a repeat defendant) may make auditors less prone to the self-serving biases in the negotiation of a legal case because these characteristics may influence them to be more concerned about the lawsuit which, in turn, will cause them to put more thought and effort into their decisions. On the other hand, the same characteristics may make auditors more susceptible to the self-serving biases that occur in a litigation for the very same reasons. This thesis investigates the extent and impact of these biases in auditors during the

⁹ The audit industry is unusual since a relatively small number of firms service a very large number of the public company clients. This alone increases the chances of an audit firm becoming a repeat defendant.

settlement decision process as well as the importance of reputation and opportunity costs in their decisions.

In another area of literature, research suggests that, contrary to economic predictions, merit does not matter in settlement agreements. In fact, a debate has been ongoing for a number of years as to whether the merits matter or not. Alexander (1991), one of the early and most controversial studies to address this debate, finds, in a sample of IPO cases, that all of the cases settled for approximately 25% of the potential damages being sued for, suggesting that the merits of the case did not come into the settlement decision and that defendants may not be paying appropriate settlement amounts according to the merit of the case against the auditor.¹⁰ This finding has been investigated in other studies dealing with auditors directly, for example, Carcello and Palmrose, 1994; Marino and Marino, 1994; Dunbar, Junega and Martin, 1995; Gilbertson, 1996 . The findings of these studies have been somewhat inconclusive. It is, therefore, necessary to determine if litigants are settling for a standard proportion of the damages, rather than an amount based on the merit of the case against them, in audit negligence legal cases as well. Auditors may not be settling when it serves them to do so or when they do settle they may be paying too much.¹¹ This thesis explores the impact of the level of merit of a case against an auditor (where merit is based on the audit procedures performed and how a judge would rule on the case) on the settlement process, and therefore, should shed some light on the appropriateness of the settlement decisions made by auditors.

¹⁰ They could be paying out more than they should be or less than they should be.

¹¹ Alternatively, auditors could also be paying too little when they settle. This means that plaintiffs are getting less than they could, given the case facts and the expected outcome of the case, if it went to court.

1.1 Purpose

The purpose of this thesis is to explore the audit litigation decision process by examining potential factors which could influence and hinder the settlement process and by assessing how these potential factors influence the settlement decisions made. This paper investigates (1) whether the role assigned to the subjects (plaintiff advisor vs defendant, see experimental procedures for a definition of the roles) affects the settlement process and beliefs of what a fair settlement amount is (Chapter 4.0); (2) whether the fear of bad publicity and a tarnished reputation influence auditors' litigation decisions (Chapter 5.0); (3) whether auditors are able to distinguish between different merit levels of the cases brought against an auditor, and if so, how the different merit levels impact the settlement decision process and settlement amount (Chapter 6.0); and (4) whether perceived legal and opportunity costs related to defending a case and/or settling the case influence auditors' litigation decisions (Chapter 7.0).

1.2 Experimental Procedures

The above questions are addressed through a laboratory experiment in which a group of audit partners and a group of auditing students are randomly assigned within their groups to roles of plaintiff advisors and defendants. They act as the audit firm being sued when assigned the role of defendant and as the plaintiff's current auditor and advisor when assigned the role of plaintiff advisor. The subjects are first asked to read a case adapted from the cases in the doctoral dissertation of Kadous (1996). Once they have

finished reading the case, they are asked to predict fair settlement amounts and judge rulings (both the side the judge will rule on and the dollar amount). The subjects in each group are then randomly paired and asked to negotiate a settlement based on the case facts. This negotiation involves an unspecified number of bargaining periods (offers and accept/reject decisions); however, it is limited to approximately 15 minutes. Each period has one litigant making an offer and the opposing litigant responding with either acceptance or rejection and a counteroffer. After this first negotiation, the subjects are randomly paired with a different opposing litigant from the same group and asked to negotiate another settlement. Therefore, each participant negotiates two settlements, thereby allowing the reputation effect to be tested. After each negotiation, the plaintiff advisors are asked to give the minimum settlement offer they would have accepted and the defendants are asked to give the maximum settlement offer they would have accepted. They are also asked to judge the importance of and the amount of opportunity and reputation costs that would be involved for both settling and going to court.

The reputation issue is addressed by comparing the results of a public announcement of the settlement condition (where the defendants' results of the first negotiation are passed on to their subsequent negotiation opponents) to a setting where the results of the first negotiation are not passed on to the subsequent negotiation opponent.¹²

Two cases with different merit levels randomly assigned to the subjects are used to determine if merit matters in the settlement negotiation. The level of merit of the case

¹² The reputation manipulation deals only with effective litigation resolution rather than the complete reputation effect present in a real litigation case which would include the reputation for effective auditing and ethical behaviour. However, it is expected that if a reputation effect is found from just the effective litigation resolution aspects of reputation that this effect would be stronger if the complete reputational effects were included.

depends on the quality of the audit procedures performed; an audit of high quality reflects a low merit case against the auditor and an audit of low quality reflects a high merit case against the auditor. The participants' ability to distinguish between cases with different merit levels or levels of audit quality is addressed by comparing the negotiation results of the high quality audit defense setting to the low quality audit defense setting.

1.3 Results

The results of this thesis indicate that the public announcement manipulation does influence the negotiations and settlements. The results suggest that reputation is important to auditors as they seem to have a more difficult time settling in the public announcement condition, but if they do settle, it is done more quickly and for a higher amount. The results also suggest that the subjects are better at distinguishing between the high and low merit cases than was predicted, especially the students. As well, role influences the negotiations as the perception of what is fair is influenced by the side the participant is on, as was predicted. Finally, it appears that the reputational costs and opportunity and lost business costs of fighting a case in court are perceived to be more important than the reputational costs and opportunity and lost business costs of settling a case out of court when litigants are deciding whether to settle the case out of court or fight the case in court.

1.4 Contributions of the Thesis

The contributions of this thesis are as follows. First, the thesis illustrates that behavioural game theory is a useful research method in the audit litigation research area. As well, it suggests that this research method would be useful in other areas of auditing research as well as other areas of accounting research. It is hoped that the research here will encourage the use of behavioural game theory based research in the future.

The second major contribution is that the study has audit partners negotiate a realistic negotiation case. In the past, studies in this area have used students and abstract negotiation exercises. This study brings in more of the real world factors to increase external validity. The use of audit partners is also valuable as it allowed the investigation of the impact of experience on the types of decisions and behaviours being studied. For example, the results show that the students behaved more like economic agents than the audit partners did when assessing and negotiating a litigation case. It appears that the audit partners' past experience and personal beliefs influenced their decisions.

It is a common perception by the profession and researchers that reputation is important to auditors. This study is one of the first to actually test the impact of reputational concerns on the decisions of audit partners in a situation where their reputation is a concern. The results indicate that reputational concerns are a factor in auditor decision making. They also suggest that more study of reputation and perceived reputation is necessary.

Finally, the study also contributes to the debate on whether merit matters or not in litigation settlements. Although most of the evidence is inconclusive, the auditing profession believes that many of the cases that they face are without merit. Most of the

studies in the past have been empirical analyses of settlements where it is difficult to assess the merit of the case. This study addresses the merit debate using an experimental design which manipulates merit. This direct manipulation of merit allows the testing of the impact of merit on settlement decisions and settlements. It is believed that this is one of the first studies to directly investigate whether auditors can distinguish between different merit levels of the lawsuits they face. The results suggest that some distinction between different merit levels is made; however, there is room for improvement.

1.5 Overview of the Thesis

The following is a brief outline of this thesis. Chapter 2 gives a brief description of behavioural game theory and some of the results from the work in this area. Behavioural game theory is used to develop the hypotheses in this thesis. The experimental procedures for the study are outlined in Chapter 3. Next, the results are given. The results have been separated into four chapters. Chapter 4 discusses the motivation, hypotheses and results for the research question regarding whether the role assigned influences the settlement process. The motivation, hypotheses and results regarding the impact of reputation and reputational concerns are discussed in Chapter 5. Level of merit of the case against the auditor is the focus of Chapter 6; again, the motivation, hypotheses and results are discussed. Chapter 7 is a descriptive results chapter on the perceived reputation and opportunity costs of settling and fighting a case. Firm differences and experience differences are also included in this chapter. Finally, the thesis is concluded in Chapter 8. This chapter discusses the general conclusions, the limitations of the study, the

implications of the study for researchers, the implications of the study for practitioners,
and some future research ideas.

CHAPTER 2.0
LITERATURE REVIEW
BEHAVIOURAL GAME THEORY

2.0 Introduction

Behavioural game theory, a relatively new area in the literature, is rather unique in that it combines economics and psychology. It uses psychology to try to understand why people make decisions that deviate from the economic predictions of game theory. Numerous studies and experiments conducted by economic game theory researchers, such as Camerer, Guth and Roth, have found that people deviate from game theory predictions in two systematic ways: they do not appear to be purely self-interested as game theory would suggest, as they seem to care about outcome fairness; and they do not seem to always consider what others will do before making their own choices (Camerer, 1990).¹³

Camerer (1990) questions whether developing a behavioural game theory would be useful (he concludes that it would be) and suggests that, by trying to understand how subjects behave differently from the economic normative predictions, we should be able to better predict how people will behave in certain circumstances. In short, he suggests that 'we could make game theory more behavioural, and better' (Camerer, 1990: p. 332).

A variety of games has been used to study how and why people deviate from economic predictions. The most common games that have been used are the ultimatum

¹³ See Appendix 1 for a listing of papers in this area.

games (simple, multiperiod, and multirepetition), dictator games, investment games, binary lottery games, market games, best shot games, and bargaining games. This literature review will focus on the ultimatum games and variations of the ultimatum game (dictator game, investment game). A brief description of bargaining in general and market games will also be given. As these games are most closely related to the game studied in this thesis. For a description of the other games, see Boritz and McCracken (1997).

Previous research has found that small manipulations within experiments and studies can have significant effects on outcomes. Thus, this chapter also summarizes (see Appendix 2) the types of manipulations that have been performed and the outcomes that have resulted. It examines 'rules of the game' manipulations of variables such as role, reliability, complexity, discount rate, payoff value, information and communication. Also, it describes the different manipulations employed by researchers in this area to better understand the impact of factors such as fairness, reputations and beliefs, reciprocity and trust, and biases. A table summarizing key studies in this area and the manipulations included in each study is included in Appendix 1. Appendix 1 is more comprehensive than this literature review, as the following discussion will only focus on the studies relevant to this thesis.

Behavioural game theory research has applicability to the auditing area since much of auditing requires auditors to deal with others (clients, fellow workers, regulators, etc) in game-like settings such as bargaining or negotiating. For example, auditors negotiate with clients about the financial statement presentation, with fellow workers about appropriate accounting treatment of an accounting issue and with regulators about new

standards. This thesis uses behavioural game theory to develop hypotheses in the audit litigation area. The thesis involves the negotiation of a settlement regarding an audit litigation case. It is expected that behavioural factors and economic factors will interact during the negotiation of an audit litigation case.

This chapter is organized as follows. A description of the ultimatum games and their variations is next. This is followed by a discussion of the various manipulations studied by researchers to ascertain why people do not behave as economic game theory predicts and to discover what might induce people to behave as economics predicts they would. The chapter is then concluded with a brief summary.

2.1 Description of The Ultimatum Games and Variations

A variety of games has been used in an attempt to understand why people do not behave as economic game theory predicts. This section describes the basics of the most common ultimatum games and variations used, including the number of players, the order of play, the decisions or actions available to each player, the economic predictions and the experimental results.

2.1.1 The Ultimatum Bargaining Game

The ultimatum game is comprised of two players. In the simple one period game with no repetition, the proposer moves first by proposing a split of a $\$Y$ "pie". He or she suggests a split that gives $\$X$ to the acceptor/rejector (the second player) and keeps $\$Y - \X for herself. If the acceptor/rejector accepts this proposal or offer, the players are paid $\$X$ and $\$Y - \X , respectively. If the acceptor/rejector rejects the offer, then both players

receive nothing. The game theoretic prediction is for the proposer to offer ϵ or the smallest amount possible to the acceptor/rejector and for the acceptor/rejector to accept it.

Results have shown that subjects offer much more than game theory predicts (about 40% of the pie) and that subjects reject amounts higher than game theory predicts (up to 20% of the pie) (Guth, Schmittberger and Schwarze, 1982; Hoffman. et al, 1994; Forsythe, et al, 1994).

The ultimatum game can also be played as a multirepetition game. This is simply the above game repeated a number of times. The multirepetitive effect is accomplished by either having subjects play the same opponent a number of times or, more commonly, by having the subjects play the same game with different opponents. Usually, this type of game is used to test learning or reliability of results (Neelin, Sonnenschein and Spiegel, 1988; Roth, et al, 1991; Weg and Zwick, 1994). The predictions of these games are similar to the simple one period ultimatum game as discussed above. The results of the multirepetition ultimatum games do not differ significantly from those of the simple one period ultimatum game.

Another variation is the multiperiod ultimatum game where the proposer and acceptor/rejector exchange positions in each period.¹⁴ The game theoretic prediction of this game depends on which player has the last move.¹⁵ For the optimal economic result, the game should end in the first period with the player who would have the last decision if the game was played to the last possible period receiving a greater portion of the pie than

¹⁴ For example, in the second period the acceptor/rejector in the first period becomes the proposer and vice versa. Therefore, in the odd periods the first mover is the proposer and in the even periods the second mover is the proposer.

¹⁵ In even period games the acceptor/rejector has the last move, while in odd period games the proposer has the last move.

his or her opponent. The amount received by the last player depends on the players' discount factors, or the amount the pie decreases in value as each round is played.

Again, the multiperiod results differ from the game theory prediction. Subjects offer more than predicted and reject amounts larger than expected. Another interesting finding is that the acceptors/rejectors will reject an amount and then come back with a counter proposal that gives them less than they would have received if they had accepted the prior proposal (Neelin, Sonnenschein and Spiegel, 1988; Ochs and Roth, 1989; Weg and Zwick, 1994).

2.1.2 The Dictator Game

The dictator game is a variation of the ultimatum game. It was developed by Forsythe, et al (1994) and Hoffman, et al (1994) to test the fairness hypothesis that is often used to explain the difference between the game theoretic predictions and the laboratory results of the ultimatum game, as discussed above. It also involves two players; however, the acceptor/rejector has no decision to make. He or she must accept the amount the dictator proposes. In both studies, the proposer or dictator's offer is less than the proposer's offer in the ultimatum game; however, the offer still does not reach the game theoretic prediction which is the same as in the ultimatum game (nothing or ϵ).

2.1.3 The Investment Game

The investment game is also a variation of the ultimatum game. In this two-stage game, the first mover is given an amount $\$X$. In the first stage of the game, he or she decides how much of $\$X$ to send to the second mover. The amount sent to the second mover may increase in value at a random or specified rate. The second mover then ends the game by deciding how much of the money he or she received to send back to the first mover. So essentially, the second stage of the game is a dictator game. Examples of studies using this game are Camerer and Weigelt (1988), Berg, Dickhaut and McCabe (1995) and Dickhaut and McCabe (1997). The game theoretic prediction for this game is for the first mover to send nothing to the second mover since the second mover is not required to return anything to the first mover. Results of the studies show, however, that most first mover subjects send money and many second mover subjects send money back.

2.1.4 Bargaining

Bargaining can be done in a variety of ways; for example, face-to-face bargaining (Hoffman and Spitzer, 1985; Burrows and Loomes, 1994; Camerer and Loewenstein, 1993; Loewenstein, et al, 1993 and Babcock, et al, 1995) or communicating through a computer (Binmore, Shaked and Sutton, 1989; Babcock, Loewenstein and Wang, 1995). The results depend on the rules of the game being played; however, face-to-face bargaining appears to cause subjects to be more influenced by concerns about what their opponents think of them.

2.1.5 The Market Game

The market game can take a number of forms. Usually it has numerous buyers and either one seller (Roth, et al, 1991) or numerous sellers (Camerer, 1987; Kachelmeier, Limberg and Schadewald, 1991). The game can be played with the buyers moving first, the sellers moving first, or simultaneous bargaining. The game theoretic predictions and the results differ for each type of game. A summary of studies using this game is found in Appendix 2.

2.2 Manipulations of the Variables

As was stated in the introduction to this chapter, small manipulations of key variables, such as role, reliability, complexity, discount rate, payoff value, information, and communication can significantly affect the results of the experiments. However, as this section shows, often the impact is not sufficient to make the results consistent with game theoretic predictions. This section also discusses the results of experiments used to explore the effect of concepts such as fairness, reputations and beliefs, reciprocity and trust, and biases.

2.2.1 Role

In a behavioural game, subjects may take on a variety of roles. For example, the ultimatum games require one participant to propose an action or decision and another participant to respond to that proposal by accepting/rejecting or counter proposing. Another alternative, found in the dictator game, is to have only one participant make a

decision and the other participant accept whatever is decided. Therefore, in these different types of games the position or role the participant is assigned may affect the way the participant plays the game; i.e., a player may use a different strategy if his or her opponent is able to make a move than if his or her opponent cannot make a move or if he or she is the first mover or the second mover.

The most common assignment of role in the ultimatum games is to randomly assign subjects to the roles of proposers and acceptors/rejectors (Guth, Schmittberger and Schwarze, 1982; Guth, Ockenfels and Wendel, 1993; Forsythe, et al, 1994). Results suggest that this random assignment leads to a more equal division of the total amount to be split than game theory would suggest (Guth, Schmittberger and Schwarze, 1982; Guth, Ockenfels and Wendel, 1993; Forsythe, et al, 1994). Economists have tried to obtain a better understanding of why this result occurs by manipulating the assignment, classification and payoffs of roles.

The manipulation of assignment of role whereby the role of the proposer is earned by winning a game or auction results in the split moving closer to the game theory prediction as offers and rejection rates are lower (Hoffman, et al, 1994; Guth and Tietz, 1986).¹⁶

Some studies call the players by different names. That is, they may call the proposer the seller and the acceptor/rejector the buyer (Neelin, Sonnenschein and Spiegel, 1988; Hoffman, et al, 1994) or vice versa (Roth, et al, 1991).^{17, 18} This manipulation of the

¹⁶ Similar results are found when role is earned or won in the dictator game (Hoffman, et al, 1994) and bargaining game (Hoffman and Spitzer, 1985; Burrows and Loomes, 1994).

¹⁷ Babcock, Loewenstein and Wang (1995) have subjects take on roles of manager and worker. This assignment of roles does not have an important effect on the outcomes.

classification of role does not have a large impact on the movement of the outcome towards the game theory prediction.

Camerer and Weigelt (1988) employ the investment game. They manipulate role assignment as follows. Players are randomly assigned to the roles of the banker, the entrepreneur who should pay back the amount borrowed from the banker, and the entrepreneur who should renege on the repayment to the banker.¹⁹ Camerer and Weigelt (1988) also find that the results do not correspond with the game theory predictions as subjects pay back more often than they should. However, when the researchers debrief the subjects, the subjects suggest that they are paying back more than they should because they are trying to build up a positive reputation so that they can take advantage of their opponent in the future. This suggests that the subjects are developing strategies that take into account behavioural factors as well as economic factors.

Role is manipulated in a legal setting of negotiation in Loewenstein, et al (1993) and Babcock, et al (1995). Here, the researchers randomly assign subjects to the roles of plaintiff and defendant and ask them to negotiate a settlement based on an actual case. What is considered a fair settlement is significantly different depending on the role the subject plays. Also, the intensity with which the subjects assume their roles of plaintiff and defendant is very interesting. For example, not all pairs settled when given the chance to negotiate, even though an early settlement was the economically rational choice. Also, subject recall of arguments and the importance ratings of these arguments were

¹⁸ Chalos and Haka (1990); Ghosh (1994) and Luft and Libby (1997) assign the subjects to the roles of different division managers in a transfer price negotiation.

¹⁹ The payoff to the entrepreneur determines the role the entrepreneur is playing; one that should pay back or one that should renege. While the banker does not know which type he is lending money to, the entrepreneur knows her type based on the payoffs from the different decisions that could be made. This assumes that all players are wealth maximizers.

significantly different for plaintiffs and defendants; that is, plaintiffs recalled more arguments favouring the plaintiff's position and defendants recalled more arguments favouring the defendant's position. These findings suggest that subjects believed in and were committed to their assigned roles. This role commitment is made even more evident when the timing of the assignment of the role is manipulated. Those who are assigned their role earlier in the game are more committed to their role than those who are assigned to their role later. This finding suggests that the intensity and commitment to his or her position by a person who is involved in an actual court case would probably be even more intense than in a simulated case. The finding also offers a partial explanation for the difficulties encountered when parties try to settle a lawsuit.

Other studies manipulate role by assigning different expected payoff values to players. Examples are Guth, Schmittberger and Schwarze (1982) where payoffs depend on the number of chips each player has and the chips have different values for different players; and Ochs and Roth (1989) and Weg and Zwick (1994) where the discount rate²⁰ for each player is different. The different payoff values for roles move the outcome closer, although not all the way, to the game theory prediction.

Church and Zhang (1996) manipulate role using a different method. They assign players different payoff values, as above; however, in one condition, the payoff to one of the players is uncertain. Game theory predicts that this uncertainty about one player's payoff will cause the final agreement to be lower than the final agreement in the certain

²⁰ Discount rate here refers to the rate at which the value of the money to be split between the players increases or decreases as time passes.

payoff condition. Their results corroborate this prediction; however, the decrease in the final agreement is not as large as game theory would predict.

Overall, it can be concluded that manipulations of role assignment can have an impact on the outcomes in all of these behavioural games. Although, none of the role assignments used in prior research has moved the outcome all the way to the game theory prediction, some role assignment manipulations can be quite effective in moving outcomes from potentially undesirable solutions towards more economically rational solutions (assuming that economically rational outcomes are desirable).

2.2.2 Reliability

Reliability is an aspect of game outcomes which has also been tested to determine whether game theoretic outcomes are stable, repeatable or robust. It is often tested by comparing new experimental results with the results of past experiments. If the results are reliable they should be repeatable. The researchers have been testing to see if the results that subjects do not play as game theory predicts are repeatable and reliable.

The repeatability test for reliability has been done using two methods: repeating one's own experiments (Hoffman and Spitzer, 1985; Neelin, Sonnenschein and Spiegel, 1988; Forsythe, et al, 1994) or repeating prior experiments (Neelin, Sonnenschein and Spiegel, 1988; Burrows and Loomes, 1994; Hoffman, et al, 1994). Repetition does not produce significantly different results, suggesting that the general results are reliable.

Guth, Schmittberger and Schwarze (1982) "test" the reliability of their results by having the subjects state the lowest amount that they would accept in the ultimatum game.

While they find that subjects are usually willing to accept less than they have been offered, these amounts are still not as low as game theory would predict. These results suggest that the non-game-theoretic results are robust or reliable. Similar “tests” and results are also found in Hoffman, et al (1994) and Kahneman, Knetsch and Thaler (1986b).

Binmore, Shaked and Sutton (1985) have acceptors/rejectors switch positions after the first game so that they are proposers in the second round. They find that subjects after playing first as acceptors/rejectors know what they would have accepted and, therefore, offer less than the original proposers did. This offer is usually approximately the game theoretic offer, suggesting that the previous results may not be reliable. However, Neelin, Sonnenschein and Spiegel (1988) repeat a variation of this experiment. They extend the game from two periods to three or five periods. They find that subjects play the game theoretic way in the two period game, but in the three or five period games subjects play in a non game theoretic way. Some researchers believe that the setup of the Binmore, Shaked and Sutton (1985) experiment caused the subjects to play as they did (Thaler, 1988) since Binmore, Shaked and Sutton (1985) told the subjects how to behave. The instructions included the following: “*How do we want you to play?* YOU WILL BE DOING US A FAVOUR IF YOU SIMPLY SET OUT TO MAXIMIZE YOUR WINNINGS” (Thaler, 1988: p.199, emphasis in original).

The dictator game is, in itself, a test of the reliability of the ultimatum game results. Hoffman, et al (1994) and Forsythe, et al (1994) both use the dictator game as a check on their ultimatum game results. They find that, even when the second player does not have an accept/reject decision to make, the proposer does not offer the game theoretic predicted amount; indeed, the amount offered is larger than the predicted ultimatum game

amount. The results from these two studies confirm the reliability of the ultimatum game results that subjects do not play as game theory predicts.

Finally, Hoffman, et al (1994) and Berg, Dickhaut and McCabe (1995) tackle the reliability of their results and past results in a different manner. Both of these studies implement a double blind rule so that the experimenter does not know each subject's offer and the subject does not know his or her opponent. They hypothesize that this decreased accountability or observability will cause subjects to play more in accordance with the game theoretic prediction. Interestingly, outcomes do move somewhat, but, not all the way to the game theoretic prediction.

In conclusion, reliability tests indicate that the findings that outcomes in game theoretic settings deviate from game theory predictions are fairly robust.

2.2.3 Complexity

A criticism that is often made about game theoretic predictions is that they require computational sophistication that is beyond the capabilities of most humans. Hence, it is irrational to predict outcomes which require subjects to perform complex calculations; e.g., Simon's (1955) "bounded rationality" concept is a well known challenge to the models proposed by economists.

A few studies, therefore, vary the complexity of games to determine the impact of complexity on the outcome (e.g., Guth, Schmittberger and Schwarze, 1982; Hoffman, et al, 1994). For example, Guth, Schmittberger and Schwarze (1982) compare the results of a simple ultimatum game to a more complicated game where the players had to allocate a bundle of different coloured poker chips which had different values for both players.

Hoffman, et al (1994) add complexity to their game by embedding either the ultimatum or dictator game into a payoff chart so that the players have to figure out themselves that they are playing the ultimatum or dictator game and what the rules of the game are. Both of these studies find, in contrast with the *a priori* hypothesis, that game complexity contributes to, rather than detracts from, economically rational behaviour, that is, the added complexity (chips or payoff chart) moves outcomes closer to the game theory prediction of the game in question. Researchers suggest that by making the game more difficult, more thought is given to the actions taken and possibly this leads to more economically rational behaviour.

2.2.4 Discount Rate

Discount rate is the rate at which an asset or an opportunity to obtain an asset deteriorates or appreciates in value over time. The effect of discount rates in multiperiod games, for example, by increasing (Guth, Ockenfels and Wendel, 1993) or decreasing (Binmore, Shaked and Sutton, 1985; Neelin, Sonnenschein and Spiegel, 1988; Ochs and Roth, 1989; Weg and Zwick, 1994) amounts to be split as the game continues, has also been studied. These manipulations show that subjects end the game earlier than game theory predicts when the pie is increasing and keep the game going longer than game theory predicts when the pie is decreasing; however, in other respects the discount rate does not have a significant effect on subjects' payoffs.

In bargaining experiments, costs of delay are imposed based on the amount of time taken to reach an agreement (Babcock, Loewenstein and Wang, 1995; Babcock, et al,

1995). Babcock, Loewenstein and Wang (1995) ask subjects to take on roles of either managers or workers and to then negotiate a wage for the worker. The manager was charged 15 cents for every minute of negotiation time until settlement whereas the worker was only charged 10 cents. These costs of delay did not seem to influence the bargaining pattern of the subjects. Babcock, et al (1995) impose costs of delay in a similar manner, however, they use a litigation settlement for the negotiation setting. Again, these costs of delay do not significantly affect the outcome of the game, in terms of subjects' payoffs.

In conclusion, discount rates do not seem to make much difference to the outcomes of the games played in the laboratory.

2.2.5 Payoff Value

Experimenters also vary the payoff values of the players involved to determine whether this influences the results of the experiments. Tactics used are changing the amount to be split (Guth, Schmittberger and Schwarze, 1982; Hoffman and Spitzer, 1985; Neelin, Sonnenschein and Spiegel, 1988; Guth, Ockenfels and Wendel, 1993; Forsythe, et al, 1994); not paying subjects (Forsythe, et al, 1994); having different payoffs for players combined with uncertain payoffs (Church and Zhang, 1996); having different costs of not settling (Loewenstein, et al, 1993); having the payoff represented as either a gain or a loss to the subject (Camerer, et al, 1993) and having the payoff determined by the negotiated agreement between the players (Chalos and Haka, 1990).

The following discussion describes the results of the different payoff value manipulations. Changing the amount to be split does not influence the results. Forsythe,

et al (1994) are unable to replicate their original results when they do not pay the subjects. They find that the distributions of proposals in the ultimatum game are significantly different in an April experiment versus a September experiment when they do not pay the subjects; however, the distributions in April and September are not significantly different when they pay the subjects.

In the auditor-manager negotiation study by Church and Zhang (1996), the auditor subject's payoff could be either certain or uncertain; and both of these payoffs are different from the manager subject's payoff.²¹ The experiment involves the subjects negotiating a final agreement in no more than 3 negotiating periods. The authors find, as game theory predicts, that the final agreements are lower when the auditor subject's payoff is uncertain. This finding is even more apparent in the cases where the agreement is not reached until the final period.

Loewenstein, et al (1993) manipulate the payoff value by having four different cost scenarios if a settlement is not reached.²² They predicted that these different costs would feed directly into different settlement amounts, however, this turned out not to be the case. The different settlement amounts lead to mixed results - sometimes the different costs feed directly into the settlement amount and other times they do not.

Camerer, et al (1993) take a different approach to manipulating payoffs. They use the ultimatum game and break subjects up into a win condition and a loss condition. In the win condition, the proposer is trying to win money by coming to an agreement with

²¹ The subjects were assigned roles of player A and player B, however, these roles were meant to represent an auditor and a manager.

²² Scenario A imposed a penalty of \$10,000 on each plaintiff if settlement was not reached, scenario B imposed a penalty of \$20,000 on the defendant and none on the plaintiff if settlement was not reached, scenario C imposed a penalty of \$20,000 on the plaintiff and none on the defendant if settlement was not reached, and scenario D imposed a penalty of \$5,000 on each if settlement was not reached.

her opponent. In the loss condition, the proposer is given the amount of money to be split up front so that if he or she comes to an agreement with his or her opponent he or she has to give up money. Subjects behave differently in the two conditions as the loss subjects are more strategic as they expend more time and effort when making their decisions; however, the average offers are the same.

Chalos and Haka (1990) manipulate an incentive scheme which determines the subjects' payoffs in their study on the negotiation of transfer prices. In one setting, the subjects negotiate a transfer price within a strictly divisional incentive scheme and in the other setting the subjects negotiate a transfer price within a mixed incentive scheme that includes divisional profit and company profit. It was hypothesized that the divisional incentive scheme would result in larger differences in divisional profits than the mixed incentive scheme. The results did not support this hypothesis, but rather, the divisional profit differences were not greater under the divisional incentive scheme.

In conclusion, manipulating payoff values can lead to a variety of results. However, none of the manipulations of payoff values causes the results to conform to the game theory predictions.

2.2.6 Information

Information about an opponent can affect a player's tactics in a game. For example, information regarding the potential payoff of the opponent, the information the opponent is privy to, or the moves available to the opponent, may cause a player to play the game differently than if he or she did not have this information. To deal with these questions, the information attribute has been tested in a variety of ways.

Economic theory suggests that giving subjects more information should facilitate bargaining.²³ This theory is contradicted in many studies (Camerer, Loewenstein and Weber, 1989; Camerer and Loewenstein, 1993; Babcock, Loewenstein and Wang, 1995; Luft and Libby, 1997). These studies find that if subjects are given more information about themselves, even though it is also given to their opponents, the additional information causes them to become more attached to their role and less able to understand their opponent's position and, therefore, making it more difficult to reach an agreement. However, other studies do show that more information pushes the outcome closer to the game theoretic prediction (Prasnikar and Roth, 1992; Berg, Dickhaut and McCabe, 1995). These studies give past results of other subjects' bargaining to both players. This type of information seems to illustrate to subjects what mistakes previous subjects have made and how they should play to overcome these previous mistakes.

Camerer and Loewenstein (1993) perform an experiment using the ultimatum game. They have two conditions: a certain condition where both players know the amount to be

²³ This is based on the economic assumption that an inefficient allocation is more likely to arise when parties have incomplete or incorrect information. For example, Hicks (1932) states that 'any means which enables either side to appreciate better the position of the other will make settlement easier, adequate knowledge will always make a settlement possible'. This is supported in a number of studies (Black and Bulkeley, 1988; Crampton, 1984) which suggest that incomplete information can result in bargaining inefficiencies.

split and the uncertain condition where only the proposer knows the amount to be split. They find that the offers are much lower in the uncertain condition. Also, there are more disagreements in the uncertain condition, probably because acceptors/rejectors think they are being cheated.

King (1996) supports the idea that acceptors/rejectors think they are being cheated when their information is uncertain. In his study on reputation formation in an adverse selection setting where a seller gives a report to potential buyers regarding the liquidating dividend of an asset he or she wants to sell, he finds that subjects did not report truthfully even when it was in their best interests to report truthfully. The study also found that the buyers did not believe the reports as much as was predicted by the theory.

The impact of uncertainty is also studied in Church and Zhang (1996). The authors compare outcomes in conditions where the payoffs of both players are known to conditions where the payoff of one of the players is uncertain. They find that the final outcomes are lower when the payoff of one player is uncertain. They also find that rather than the uncertainty causing the player whose payoff is uncertain to play differently, it causes the opponent to play less aggressively. This result is very interesting as the less aggressive play by the opponent only benefits the payoff of the player with the uncertain payoff.

Another manipulation of information is carried out by Camerer, et al (1993) who have subjects search for information in the context of a three period ultimatum game, and then evaluate the search behaviour using a process tracing approach. According to game theory, optimal decisions (i.e., ones that maximize payoffs) are made by looking at the last

period payoffs first and then working back sequentially to the first period payoffs, each time selecting the optimal choice for each player, so that the best strategy can be determined and then played; a process called backward induction. It is interesting to note that the subjects' actual search behaviour is very different than one would expect from game theory predictions as they do not use backward induction. In this study, the subjects tended to only concentrate on the current round payoffs when making their decisions. They did not start with the last round and work backwards as expected.

The impact of information has also been tested in a market setting (Kahneman, Knetsch and Thaler, 1986a; Kahneman, Knetsch and Thaler, 1986b). In these studies, subjects are asked, through telephone surveys, to determine whether different scenarios related to price hikes, wage cuts, rent increases, and other issues are fair. The results are very sensitive to the information provided. For example, it is considered acceptable for prices to be raised or wages to be cut when profits are threatened; however, it is not considered acceptable to raise prices or cut wages just to exploit demand or if no information regarding the reason for the price hike or wage cut is provided. Kachelmeier, Limberg and Schadewald (1991) find analogous results when they test similar fairness questions in an experimental market setting.

Information effects are also evaluated in the legal negotiation study of Babcock, et al (1995) who manipulate the timing of the release of information regarding the role of the player. They find evidence of self-serving biases²⁴ which are more pronounced when subjects know their role before they begin the game than if they do not know their role

²⁴ Here, the self serving biases are evident as subjects acting as plaintiffs believe they deserve a higher settlement than subjects acting as defendants believe they do.

until after they read the case materials, suggesting that when participants know their role or side they are on, they read the case in such a way that the facts favour their side. One would think that this is probably even worse in a real litigation case.

In conclusion, information can be very important to the play of the game; but, more information is not always better than less. Also, different types of information such as information about the rationale or motive behind an action can have very different impacts (Kahneman, Knetsch and Thaler, 1986a), and the timing of the receipt of information can also cause different outcomes (Babcock, et al, 1995).

2.2.7 Learning

Researchers have also questioned whether increasing subjects' experience can help the subjects to learn to play a game in a manner more consistent with game theoretic expectations. Numerous studies have been performed that involve repeated iterations of games to study the effect of experience. Examples are Guth, Schmittberger and Schwarze (1982); Camerer (1987); Neelin, Sonnenschein and Spiegel (1988); Camerer and Weigelt (1988); Ochs and Roth (1989); Roth, et al (1991); Prasnikar and Roth (1992); Guth, Ockenfels and Wendel (1993); Camerer, et al (1993); Weg and Zwick (1994); Burrows and Loomes (1994); and Church and Zhang (1996). Binmore, Shaked and Sutton (1985) also look at learning within a multi-period game. By and large, the results suggest that, although experience does move the outcome towards the game theory prediction, this movement is not large.

2.2.8 Communication and Observability

Most games studied do not allow participants to communicate with each other or even know who their opponent is. However, face-to-face bargaining is found in Hoffman and Spitzer (1985); Chalos and Haka (1990); Loewenstein, et al (1993); Burrows and Loomes (1994); and Babcock, et al (1995); and via the computer in Ghosh (1994); King (1996) and Luft and Libby (1997).

The ability to communicate directly with each other usually causes players to take longer to come to an agreement and, in an ultimatum game context, the split of the pie, if an agreement is reached, is usually more even than in anonymous ultimatum bargaining (Sutton, 1987). This suggests that people are concerned with others' opinions of them when they know or are aware of who the other person is, and generally like to be nicer to these other people than economics predicts. It seems to be easier to ignore the impact of one's decisions on others when one does not know one's opponents.

Communication and observability are also addressed in the double blind games of Hoffman, et al (1994) and Berg, Dickhaut and McCabe (1995). Both of these studies find that subjects behave in a more self-regarding manner when the experimenter/researcher is unable to know their individual decisions.²⁵ This research also suggests that people care about what others think of them. It is quite fascinating to think that people behave differently, or less fairly, when they are completely anonymous as compared to when their identity is known. This research suggests that people generally make decisions in a self-

²⁵ Subjects behave in a self-regarding manner when they disregard the impact of their actions on others and only care about the impact on themselves.

regarding manner, adjusting their decision according to the intensity of the behavioural factors influencing or influenced by that decision.

In conclusion, the type of communication available to the participants and the observability of their choices can significantly influence the play of the game. Communication and Observability are very closely related to reputation as reputational concerns are expected to be greater when outcomes and/or decisions are observable. Therefore, communication and observability can play an important role in the testing of reputation effects (as is the case in this study).

2.2.9 Fairness vs Fear of Consequences; and Punishment

Many studies explain the difference between the experimental results of the ultimatum game and the game theory prediction of the results as stemming from the subjects' desire to be fair (Guth, Schmittberger and Schwarze, 1982; Neelin, Sonnenschein and Spiegel, 1988). However, further investigation suggests that subjects' behaviour is influenced by considerations beyond concerns about fairness. It seems that people often play strategically, influenced by concerns about what others may think is fair rather than what is "objectively fair" (Weg and Zwick, 1994; Forsythe, et al, 1994). Studies also find that acceptors/rejectors are willing to punish their opponents for perceived "unfair" proposals even if it hurts themselves. For example, they will reject what they believe is an unfair offer and respond with a disadvantageous counteroffer (Guth, Ockenfels and Wendel (1993); Weg and Zwick, 1994). This suggests strategic behaviour by which acceptors/rejectors signal to their opponents that they are willing to hurt themselves in

order to punish their opponents for offering what they consider to be an unfair offer. In this sense, they appear to be more concerned with perceived fairness and not being taken advantage of than maximizing their own payoffs.

Researchers have tried to study the fairness issue in a variety of ways. Hoffman, et al (1994) and Forsythe, et al (1994) use the dictator game. Both studies find that when the proposer does not have to worry about the other player rejecting an offer, the offer is lower and closer to the game theory prediction. This implies that fairness is not the only factor driving the non-game theoretic results observed in the previous studies. Weg and Zwick (1994) perform a similar manipulation where they allow players to have the option to quit the game after any offer as opposed to choosing to keep the game going. This game is compared to the same game with no option to quit. They find significant differences due to the quit option as first and final offers are lower than in the no-quit option. Their results suggest that there is some factor other than concern about fairness causing the results.

Church and Zhang (1996) were also concerned with the impact of fairness on their results. They found that many of their subjects' agreements were equal splits and wondered if this was due to the subjects wanting to be fair to their opponents. To address this issue, they asked the subjects, in a post-experimental questionnaire: 1) the primary reason that they offered a particular number of points and 2) the primary reason underlying their decision to accept or reject an offer. Although 'being fair to my partner' was one of the responses available, the majority of the subjects answered to both questions that profit maximization was the primary objective.

Luft and Libby (1997), in their study of the negotiation of transfer prices, test the influence of market price on the negotiation of the transfer price. In one setting, the subjects only knew the market price of the item being transferred. In the other setting, the subjects knew the accounting profit for the division selling the item as well as the market price. The influence of the market price on the negotiated transfer price was less when it resulted in a more unequal (unfair) distribution of profits between divisions.

As discussed earlier, a number of studies use contests, quizzes or auctions to assign roles. The winner is given the role of the proposer. It is interesting to note that participants are less apt to split the amount less evenly when they win or earn the right to be the proposer, resulting in much lower offers and lower levels of rejection (Hoffman and Spitzer, 1985; Guth and Tietz, 1986; Burrows and Loomes, 1994; Hoffman, et al, 1994). Thus, it appears that winning or earning the first-mover role makes it more fair to impose an unequal distribution on an opponent. This suggests that these games or auctions may be causing subjects to think more strategically about their position, so they play differently than if just randomly assigned to their role (Sutton, 1987). In other words, there does not appear to be a standard fair approach that subjects attempt to apply in every context.

Roth, et al (1991) perform an interesting study which looks at bargaining behaviour across four countries (United States, Yugoslavia, Israel and Japan) in the ultimatum game and in a market game. The results of the market game in each country converge to the equilibrium prediction.²⁶ However, the ultimatum game results in each country do not converge to the equilibrium prediction and, in fact, are quite different between the

²⁶ It has been suggested that markets average out or are unbiased because all of the individual differences or biases average out (Camerer, 1987).

countries. For example, subjects' offers were highest in the U.S. and Yugoslavia, lowest in Israel and in the middle in Japan. Also, these differences in bargaining outcomes between the countries grew larger as the subjects gained experience. These results suggest, according to the authors, that perceptions of fairness may be different in different countries.

Fairness is also the topic of interest in the telephone surveys of Kahneman, Knetsch and Thaler (1986a) and Kahneman, Knetsch and Thaler (1986b). In these studies the researchers ask respondents a variety of questions regarding price hikes, wage cuts, and rent increases, and other issues. The overall conclusion is that fairness depends on the particulars of the scenario. For example, the subjects considered it fair for prices to be maintained when costs diminished, but did not consider it fair to raise prices to exploit demand. Kachelmeier, Limberg and Schaedewald (1991) test these results using a laboratory market setting and come up with similar results.

Finally, fairness is also the issue in the legal negotiation study of Loewenstein, et al (1993).²⁷ They conclude that judgements of fairness are susceptible to self-serving biases as the subjects' predictions of fair judge's awards and fair settlement amounts differed depending on the role they were playing (plaintiff or defendant). The plaintiffs' assessments were higher than the defendants' assessments; therefore, the subjects' fairness assessments differed in a manner that maximized outcomes for themselves (or were self-serving).

²⁷ Similar experiments and results are found in Camerer and Loewenstein (1993) and Babcock, et al (1995).

As has been illustrated, subjects' concern about fairness has been used to explain the discrepancy between experimental results and game theory predictions in the past; but, recent work is suggesting that subjects' desire for fairness cannot completely explain observed outcomes, and therefore, is not the sole driver of subjects' behaviour in various game settings. As was pointed out, various strategic, psychological and social acceptance factors play important roles in shaping the outcomes in various game settings. Some of these factors that have been identified include concerns about reputation, reciprocity and cognitive biases.

2.2.10 Reputations and Beliefs

Several studies attempt to study reputation-building by the players by using multiperiod models. For example, in games where the payoffs are increasing as time passes, it is worthwhile for players to build up positive reputations and to encourage their opponents to believe that they will keep the game going in order to maximize their joint payoffs (Guth, Ockenfels and Wendel, 1993). However, the game theory equilibrium is to quit the game in the first round implying that reputation should not be built up. The experimental results suggest that, since the game often goes past the first period, reputation-building is occurring. Camerer and Weigelt (1988) also provide evidence of reputation-building in their experiment using the investment game.

Reputation formation has also been studied in accounting studies dealing with moral hazard and adverse selection. Economics predicts that reputations should not be built up in situations of moral hazard (King, 1991);, however, they should be built up in situations

of adverse selection (King, 1996). The experimental results show opposite outcomes. Reputations develop in the moral hazard situations (King, 1991) and do not develop in the adverse selection situations (King, 1997).

Recent research explores beliefs about other players. Researchers are just beginning to investigate how one player's beliefs about how their opponents will behave influences final outcomes. They are trying to determine whether subjects consider their opponents' behaviour and if this method of playing the game is effective. This idea is known as social meta-cognition (thinking about the thinking of others) (Camerer, 1997). Preliminary results show that people do think about others' beliefs when making decisions.²⁸

2.2.11 Reciprocity and Trust

Reciprocity and trust are also areas of interest in multiperiod experiments. Reciprocity occurs when one person returns the favour or trust of another player.²⁹ Trust is the precursor of reciprocity, it occurs when one does a favour for another person, who is not compelled to reciprocate, trusting the other person to return the favour and to not take advantage of him or her. Therefore, there is a risk involved when one trusts another.³⁰

In Guth, Ockenfels and Wendel (1993), trust is required for games to go beyond the first round, which they typically do. Guth, Ockenfels and Wendel (1993) find that trust

²⁸ This strategic approach is also suggested and further improved upon in the Adversarial Problem Solving area (Thagard, 1992). This area suggests that when involved in a game players should think about what their opponents will do and about what their opponents think that they will do when making decisions.

²⁹ A repeated relationship is not required for reciprocity to occur, therefore reciprocity is not the same as building a reputation. A repeated relationship means that the two period game of one person doing a favour and the other returning the favour is repeated a number of times. A reciprocity game can occur in just one two period game.

³⁰ Trust can occur in single and multi period games.

induces fairness as the offers become more equal in their repeated ultimatum game with an increasing pie as the game progresses and trust is built up between the players.

Berg, Dickhaut and McCabe (1995) deal with reciprocity and trust directly in their one-period investment game. The investment game is similar to the ultimatum game; however, there is an extra decision. The second player can choose to send some money back to the first player. Also, the amount sent by the first player increases in value when it is sent to the second player. The predicted outcome is for the first player to not send any money to the second player since there is no guarantee that the second player will send back any money. Interestingly, in the Berg, Dickhaut and McCabe (1995) experiment, first movers do send money to the second movers even though there is no guaranteed payoff from doing so. This result suggests that the first movers are displaying trust. However, they obtain mixed results regarding reciprocity as 23% of the second movers did not send money back to the first movers and 18% of the second movers only sent \$1 back to the first movers.³¹

2.2.12 Biases

Biases that may be present in the participants, such as self-serving or framing biases, have also been studied in a variety of ways. As alluded to earlier in the 2.2.9 Fairness section, Loewenstein, et al (1993); Camerer and Loewenstein (1993) and Babcock, et al (1995) find that people view fairness with self-serving biases. That is, the subjects' assessments of fairness are biased so as to maximize outcomes for themselves and the

³¹ Negative reciprocity or punishment of one's opponent is also prevalent in many of the studies, particularly the ultimatum games (Guth, Ockenfels and Wendel, 1993; Weg and Zwick, 1994).

subjects do not necessarily consider the impact of their decisions on others. It should be pointed out however, that this self-serving bias could actually hinder subjects' outcomes (as will be studied in this thesis) as the bias may result in the subjects not being able to reach an agreement in the ultimatum game, so that they both receive nothing.

Camerer, et al (1993) find evidence to support framing biases when they compare subjects' behaviour when the payoff is framed as a loss or as a gain. Subjects are more strategic and take more time in their decisions if facing the loss condition. Also, although the average offers were the same in both conditions, they were more widely dispersed and rejected twice as often in the loss condition. Camerer, Loewenstein and Weber (1989) and Camerer (1987) find that curse of knowledge biases are less severe in markets as compared to individuals.³² Camerer, Loewenstein and Weber (1989) explore causes of this phenomenon and test the common argument that "markets correct irrationalities because the more rational traders drive less rational traders into bankruptcy (or somehow correct the errors of less rational traders)". Their findings suggest that the markets are able to correct the errors of individuals because in a market setting there is a disproportionate amount of activity from the more rational traders which adjusts or corrects the activity from the irrational traders.

³² Curse of knowledge biases occur when better-informed individuals or markets are unable to accurately anticipate the judgments of less-informed individuals. It is often assumed that the better-informed are able to accurately anticipate the judgments of the less informed. However, many experiments, such as Camerer, Loewenstein and Weber (1989) show that they are not able to accurately anticipate the judgments of the less informed.

2.3 Summary

This literature review has illustrated that behavioural game theory is still in its early stages and that further research is required for a more complete understanding of human behaviour in game-like settings. Nevertheless, the following conclusions are offered regarding some key attributes of games. Very small role manipulations can have quite large impacts on the experimental outcomes; however, none of the role assignments studied thus far has been able to move the outcome all the way to the game theoretic prediction. Reliability tests suggest that the results from these types of experiment are fairly robust. Also, results reveal that the more complex the game, the closer the outcome is to the game theoretic prediction. However, none of the manipulations of payoff values lead to the game theoretic solution.

Information manipulations have resulted in very interesting findings. For example, contrary to economic predictions, more information is not always better, and the type of information and the time at which it is received can have large impacts on subjects' decisions. Experienced players do not seem to play the games any better or differently than naive players; but, the ability to communicate with opponents seems to lead players to play more fairly, suggesting that they care about what others think about them.

In sum, although some of the above manipulations of the attributes of the game have been able to affect the subjects' actions, they have not been overly successful in identifying ways to move people to act more in accordance with game theoretic principles.

The testing of such concepts as fairness, reputations, trust, and biases has resulted in several conclusions. While the early studies used fairness to explain the difference between the experimental results and the game theoretic predictions, the later studies have

shown that there is more involved than just concern about fairness. It appears that the subjects are playing strategically, with reputation, trust and biases all coming into play. Reputations are developed, even though game theory suggests that they should not be and trust and reciprocity are evident in the results, even though they are not expected to be. Self-serving biases are often used by researchers to explain the actions of the subjects that are inconsistent with the predictions.

CHAPTER 3.0

EXPERIMENTAL METHOD

3.0 Introduction

This chapter outlines the experimental method to be employed. It includes a description of the subjects, the experimental method, the experimental design, the instruments, the experimental procedures, and the variables measured.

3.1 Subjects

The participants in the study were 48 audit partners from ten of the largest public accounting firms in Canada and 66 auditing students from Wilfrid Laurier University. The audit partners were obtained by the researcher contacting a partner at each of the firms to ask for their assistance in obtaining volunteer participants. The students were part of two auditing classes at Wilfrid Laurier. The study used students in addition to practitioners to increase the power of the tests. Ideally, one would prefer all practitioners; however, the availability of this type of subject is limited. The use of students and audit practitioners allows the testing of experience on the decisions being made in the study, however, *a priori*, no significant differences were expected.

The demographics of the audit partners are as follows. There were 43 males and five females. The average age of the full sample of auditors was 45 years. The male participants' average age was 46.1 years and the female participants' average age was 36.6 years. Overall, the partners had an average audit experience level of 22.6 years (23.58

years for the males and 14.8 years for the females). The firm representation ranged from two partners to eight partners.

Twenty-five percent of the audit partners had experience dealing with audit litigation. All participants from one firm had been involved in an audit litigation case in the past. About 25% of the participants from four of the other firms had been involved in an audit litigation. The participants in the remaining five firms had no involvement with an audit litigation case.

The student group was comprised of 44 males, 20 females, and 2 non-responses. The average age was about 23.7 years and they had about six months auditing experience, on average. Four of the subjects stated that they were senior accountants and 35 stated that they were staff accountants. The representation from each of the top 10 firms in Canada ranged from ten participants to zero participants. One subject stated that he had experience in an audit litigation case.

The experiment took place in the fall of 1997 and the winter of 1998. The participants were asked to voluntarily participate in the experiment, which took approximately one hour.

3.2 Research Method

This thesis used an experimental research method. This research method was selected because of the nature of the task, decisions and behaviours to be observed. By performing an experiment, it was possible to study the behaviours and decisions the subjects made as they took on their roles and negotiated the litigation case. In an ideal world, a field study methodology may have been better as external validity issues may not

have been as prevalent; however, it would have been difficult to gain access to field study settings. It was decided that an experimental research method was the best method at this point in time, especially since the subjects would be audit partners and students. A field study, however, would be an interesting extension to the thesis.

3.3 Experimental Design

Three independent variables were manipulated in a 2 x 2 x 2 design with subject type (practitioner vs student) as an additional factor. The three independent variables that were manipulated were: 1) the role assigned to the subject (plaintiff advisor vs defendant), 2) the announcement condition (public vs non-public announcement of the defendant's first negotiation results to the second negotiation plaintiff advisor) and 3) the merit level of the case against the auditor (high audit quality which would lead to a low merit case vs low audit quality which would lead to a high merit case). Subjects were randomly assigned to the cells. The breakdown of subject by condition is outlined in Table 3-1.

Table 3-1

Breakdown of Subjects by Condition (Both Auditors and Students)

	Public Announcement		Non-Public Announcement		Total
	Plaintiff Advisor	Defendant	Plaintiff Advisor	Defendant	
Auditor- High Merit / Low Audit Quality	6	6	6	6	24
Auditor- Low Merit / High Audit Quality	6	6	6	6	24
Total Auditors	12	12	12	12	48
Students - High Merit / Low Audit Quality	9	9	8	8	34
Students - Low Merit / High Audit Quality	8	8	8	8	32
Total Students	17	17	16	16	66
Total - High Merit / Low Audit Quality	15	15	14	14	58
Total - Low Merit / High Audit Quality	14	14	14	14	56
Total	29	29	28	28	114

3.4 Instruments

The instrument consisted of an introduction and explanation of the experiment, a legal case, some questions about the case, an explanation of the negotiation procedures to be followed, a negotiation worksheet to be used for the first negotiation, a set of questions regarding the first negotiation, a brief description of the second negotiation, a negotiation worksheet to be used for the second negotiation, a set of questions regarding the second

negotiation and a set of demographic questions. Refer to Appendix 3 for the instrument used by the students and Appendix 4 for the instrument used by the audit partners.

The litigation case was a legal dispute based on the cases in Kadous (1996). The legal cases from Kadous' dissertation were reworked and refined in order to ensure that, based on economic theory, they had a high probability of being settled before going to court. These cases involve a plaintiff suing the defendant (audit firm) for not performing appropriate audit procedures regarding inventory valuation during the audit. All parties were given the same information and case and knew that the information they were given was identical to that of the others. Instructions regarding the public announcement procedures were given only to those subjects in the public announcement condition; however, the remainder of the instructions were the same.

The same information was sent to a member of the legal counsel staff for a major accounting firm, who acted as a judge and ruled on the case. The judge ruled on the case according to the case facts and her past experience in these types of cases. She also consulted with a litigation consultant who specializes in these types of cases. The judge's ruling was required to improve the external validity of the study as well as to motivate the subjects to negotiate the best settlement possible since part of their payoff could depend on the judge's ruling (see 3.5 Experimental Procedures). The fact that a lawyer had acted as judge and provided a ruling on the case was made known to the subjects; the ruling made by the judge was not disclosed during the experiment.

Merit level was represented by the level of audit work performed by the auditor in the case. There were two cases of different levels of merit (high or low). Both cases

involved a bankrupt gravel company. The audit firm in both the high and low merit cases was being sued for \$10 million in damages by the investors in the bankrupt company who had relied on the financial statements to make their investment. Also, in both cases, the management of the company had been involved in some fraudulent behaviour.

In the high merit level variation of the case, the audit quality was low as the auditor had not hired a specialist to help estimate the quantity of gravel at year end and had given the client too much notice of the inventory count sites and times. The judge ruled that the auditor had been negligent while performing the audit and was liable for the full \$10 million. In contrast, in the low merit level variation of the case, the audit quality was high as the auditor had hired what they thought was an independent specialist. The independent specialist turned out to be involved in the fraud. In this case, the judge ruled that the auditor had not been negligent, and therefore, was not liable for any amount of the damages. The two variations of the cases were randomly distributed to the subject pairs.

The judge's rulings, discussions with auditors and lawyers that represent auditors, and pilot testing suggested that the two cases were of significantly different merit levels, and therefore, should allow the testing of the impact of different merit levels on the subjects' decisions and settlement processes.

3.5 Experimental Procedures

This section discusses the experimental procedures involved in the study. It begins with the procedures for the student subjects and ends with the procedures for the auditor subjects.

3.5.1 Student Procedures

The students were randomly assigned to cells as they arrived at the classrooms used for the experiment. Subjects assigned to the role of the defendant went to one classroom and subjects assigned to the role of plaintiff advisor went to another. Those assigned to the defendant role took on the role of the auditor being sued and those assigned the plaintiff advisor role took on the role of the plaintiff's current auditor and advisor for the lawsuit. The plaintiff advisor role was used because it was thought that the subjects would identify with the plaintiff advisor role more easily than that of the plaintiff. Since in the plaintiff advisor role they would be acting as an auditor. A random assignment was used since it was the simplest and prior research has found that other methods of assignment to roles have not made major differences in the outcome results.

The participants first read the introduction and explanation of the experiment which outlined the procedures that would be followed. It explained that there would be two negotiations with two different partners and that each negotiation would be approximately 15 minutes in length. The subjects were then asked to read the litigation case individually and afterwards to make a series of judgments: (i) what they think a fair settlement would be; (ii) their prediction of the judge's ruling - in favour of the plaintiff or the defendant; and (iii) their best guess of the amount of the judge's award. Once these assessments were made, each of the defendant subjects was randomly assigned to a plaintiff advisor subject and asked to negotiate a settlement using the negotiation worksheet. All communication between the two parties was done via this negotiation worksheet. Both subjects within a pair read the same case (either high merit or low merit) and were in the same public

announcement condition (public or non-public). After the negotiation, the subjects were asked to answer some questions about the outcome of the first negotiation and to make another series of judgments: (i) their maximum (minimum) settlement amount they would have accepted if they were defendants (plaintiff advisors); (ii) their judgment of the importance and amount of the business and opportunity costs of fighting this case in court and of settling; and (iii) their judgment of the importance and amount of the reputation costs of fighting this case in court and of settling. Following this first negotiation, the subjects were asked to negotiate another settlement based on the case they read for the first negotiation and under the same experimental conditions with a new opponent. Following this negotiation, they were asked to answer the same questions about this negotiation and to give the same judgments as they did after the first negotiation.³³ By having the second negotiation with a new opponent, the public announcement condition (which is used to study the impact of reputation and reputational concerns) is able to be manipulated.

The subjects were paid a flat fee of \$10 for participating in the experiment. They also were each given a chance to enter a lottery for a prize of up to \$500 for participating in the negotiation. The \$10 was used to encourage the student subjects to participate and the lottery was used to motivate the student subjects to play the game appropriately (if they won the lottery their payout depended on the outcome of their negotiation). Each subject received one lottery ticket for each negotiation they participated in. Thus, subjects received two lottery tickets since they were asked to participate in two negotiations. One

³³ Again, both individuals in the pair read the same case (high merit or low merit) and were in the same public announcement condition (public or non-public).

ticket was randomly drawn from all tickets entered in the lottery. This ticket would determine the negotiation pair that would split the \$500 as it would indicate one of the members of the pair's name and whether it was the first or second negotiation. The \$500 was then split between the selected pair according to their negotiated outcome.³⁴ If they did not reach a settlement in the allotted time, then the split of the \$500 would be based on the judge's ruling on the case. This payout (both if a settlement was reached or if based on the judge's ruling) was adjusted by legal fees and other costs (\$12.50 per period) that the subjects were required to pay for each period that they negotiated in and did not reach a settlement. For example, if the subjects agreed to a settlement of \$5,000,000 in the fifth period, the original claim was for \$10,000,000 and the legal fees and other costs were \$250,000 per period per subject, each subject would receive \$200.³⁵

The pair that was ultimately selected did not reach a settlement. Thus, the \$500 was split according to the judge's ruling. The pair selected was from the low merit case where the judge had ruled that the auditor was not at fault and the defendant won. Therefore, the full amount went to the defendant. The pair was also subject to legal fees and other costs for the five negotiation periods they used ($\$125 = 5 \times \25). The defendant received \$375.

While the subjects had an unspecified number of periods to negotiate, the researcher did not let the negotiation go beyond approximately 15 minutes. The researcher announced the end of the first negotiation to both classrooms when the allotted time was

³⁴ See footnote 35 for a description of how the payout is calculated.

³⁵ The \$200 was calculated as follows: The total amount to be split \$500, was represented by \$10,000,000, therefore \$1 of the \$500 represents \$20,000 of the \$10,000,000. A settlement of \$5,000,000 would mean that each participant would receive \$250 ($\$5,000,000/\$20,000$) from the negotiation. Since the settlement was reached in the fifth period, each participant would be required to pay legal fees of \$50 ($\$250,000/\$20,000 * 4$ periods). Thus, both participants would receive \$200. Alternatively, if the subjects agreed to a settlement of \$8,000,000 in the third period, the defendant would receive \$100 ($\$2,000,000/\$20,000$) from the negotiation less legal fees and costs of \$25 ($\$250,000/\$20,000 * 2$ periods) for a total of \$75. The plaintiff advisor would receive \$400 ($\$8,000,000/\$20,000$) from the negotiation less legal fees of \$25 ($\$250,000/\$20,000 * 2$ periods), for a total of \$375.

up. The arbitrary 15 minute time limit was used rather than a fixed number of periods in order to avoid any first mover or last mover advantages that are predicted to occur in economic game theoretic models with a limited number of periods. As stated above, if agreement was not reached at the end of a period, both parties were assessed legal fees and other costs to enter the next period of negotiation.³⁶ These legal fees and other costs represented the lawyer's fees, business, opportunity, reputation costs, etc. that continued to accrue until the resolution of the case.

Each negotiation began with the defendant offering a settlement amount to the plaintiff advisor. The plaintiff advisor then was given the chance to accept or reject the offer. If she accepted, the game was over. If she rejected, then she made a counteroffer. This constituted one period. If the game continued, the defendant was given the plaintiff advisor's offer and a chance to accept or reject. This continued until either an agreement was reached or the researcher ended the negotiation. All of the communication was via a sheet of paper that was transferred back and forth between the classrooms by the researcher or her assistants. By always having the defendant begin the negotiation, a smaller number of subjects was required. It would have been ideal to have conditions where the plaintiff advisor started the negotiation to test whether this made a difference in the negotiations. However, since both negotiations did not have a fixed time limit or number of negotiation periods, the first mover and last mover advantage was eliminated, so this should not be a significant problem. As stated earlier, the second negotiation was run in the same manner as the first negotiation.

³⁶ The format of this lottery does not influence the utility function of the players. The lottery just scales the utility function down by the probability of winning.

The defendant subjects in the public announcement condition were told before they began the experiment that they would have to announce their settlement amount, if any, and the time to settle of their first negotiation to the plaintiff advisor in the second negotiation via a sheet of paper transferred by the researcher. Also, in the public announcement condition, the plaintiff advisor was told that they would be receiving the first negotiation outcome of the defendant they faced in the second negotiation. In the non-public announcement condition defendant subjects did not have to pass along the results of their first negotiation to their second opponent. This manipulation was used to determine whether reputation and reputational concerns influence auditor litigation decisions. This type of manipulation (public announcement) was chosen because it represents the public or private reports required to be made in some cases when litigants are involved in a lawsuit.

3.5.2 Practitioner Procedures

The procedures for the practitioners were very similar to the procedures for the students; however, they were not paid, and the experiment was performed via the telephone, not at the university. The telephone was used because it would have been difficult to gather the audit partners in one location to do the study in the same manner as the students; however, the audit partner procedures were kept as close to the student procedures as possible. The slight differences in the procedures were not expected to influence the results.

The subjects made their offers and acceptance/rejections over the phone to the researcher. The researcher first spoke to the defendant who made the first offer and argument and/or reason for that offer. The researcher then confirmed the offer with the defendant. Next, the researcher repeated the offer and argument to the plaintiff advisor. The plaintiff advisor either accepted or rejected and made a counteroffer. The researcher confirmed the plaintiff advisor's response and then repeated it to the defendant. This continued until a settlement was reached or time was up. Practitioners were each given an equal chance at winning a charitable donation of up to \$500 in their name. The \$500 donation was to be split according to the agreement the selected pair negotiated or the judge's ruling if a settlement was not reached. The lottery was used to motivate the audit partner subjects to play the game appropriately. As with the students, the pair that was selected in the lottery had not reached a settlement. The pair was from the low merit case, where the judge had ruled in favour of the auditor or defendant. The \$500 was reduced by the legal fees and other costs for the four periods ($4 \times \$25 = \100) used in negotiation. The defendant received \$400 to donate to a charity.

The practitioners were professionals and performed the task during work, and therefore, should have behaved in a professional manner, so not paying the subjects a show-up fee was not considered to be a problem.³⁷

³⁷ Many auditing studies have not paid their subjects if they were actual practitioners and motivation has not been a problem (Bonner, Libby and Nelson, 1996; Asare and McDaniel, 1996; Kennedy, 1995).

3.5 Variables

The dependent variables measured are:

1. the initial prediction of a fair settlement
2. the initial prediction of the judge's ruling (plaintiff vs defendant)
3. the initial prediction of the judge's award
4. the ratio of number of pairs that settle to total number of pairs (settlement rate)
5. the time to settle in bargaining periods
6. the settlement amount
7. the minimum/maximum acceptable amount
8. the assessment of business and opportunity costs involved in going to court
9. the assessment of business and opportunity costs involved in settling
10. the assessment of reputation costs involved in going to court
11. the assessment of reputation costs involved in settling
12. the assessment of a fair settlement amount after the negotiation process
13. the assessment of the judge's ruling after the negotiation process

The independent variables are:

1. type of subject (student or practitioner)
2. role (plaintiff advisor or defendant)
3. announcement (public announcement or non-public announcement)
4. level of audit work or merit of the case (high quality / low merit or low quality / high merit)

CHAPTER 4.0

RESULTS

ROLE, SELF- SERVING BIASES AND SETTLEMENT RATES

4.0 Introduction

This chapter discusses the hypotheses and results relating to the role assigned to the participants (plaintiff advisor versus defendant). The research question is given first, followed by the development of the hypotheses and then the results from testing the hypotheses. Next, some descriptive statistics relating to role and the settlement are discussed and finally a brief chapter summary is given at the end.

4.1 Research Question

Game theory suggests that decisions should be made through the use of backward induction. Backward induction is the process whereby optimal decisions are made by first examining final period payoffs to determine the optimal choice at that point and then working back sequentially to the first period by choosing the optimal choice at each period given the choice made in the subsequent period. This process should ensure that optimal economic decisions are made.

As stated in the literature review chapter (Chapter 2.0), the game in this study is a sequential bargaining or negotiation game with an unknown number of negotiation periods. The two players, the plaintiff advisor and the defendant, alternate between making the offers and the accept / reject decisions. This continues until a settlement is

reached or the allotted negotiation time is up. The game is also quite similar to the multi-period ultimatum game; however, if no settlement is reached, the parties do not automatically receive nothing as is the case in the ultimatum game, but rather, their payoffs depend on the judge's ruling. In this study, the use of backward induction would require that the participants have some expectation or assessment regarding the outcome if no settlement is reached and the case goes to court. Once they have made this assessment, they should then be able to figure out what they would be willing to accept as a settlement amount based on the costs of negotiating. An alternative way to play the game, given its setup, would be for the player to wait until the very last minute to make an offer making it more like an ultimatum game and avoiding the legal costs that are incurred for each negotiation period (offer and accept / reject decision) used. This did not occur in this study as all subjects made offers continuously.

In contrast to economic theory, behavioural game theory suggests that decisions will not be influenced as much by backward induction as they should be, but instead, will probably be influenced by role (among other behavioural factors), as role is expected to elicit self-serving biases. (Self-serving biases occur when subjects make decisions that maximize outcomes for themselves and do not necessarily consider the impact of their decisions on others even though they think they are being fair and unbiased.)

The research question to be investigated in this chapter is: does the role assigned (plaintiff advisor vs defendant) influence the subjects' decisions in the settlement process?

4.2 Development of Hypotheses

This thesis builds on prior research in the behavioural game theory area. In particular, it draws upon results from studies by Loewenstein et al (1993) and Babcock et al (1995). In these studies, subjects were required to negotiate the settlement of a legal dispute regarding a motorcycle accident. Subjects were randomly assigned to the roles of either plaintiff or defendant. Both studies addressed causes of impasses in the settlement process. They found that subjects have self-serving biases that hinder the settlement process. For example, plaintiffs overestimate the amount of a fair settlement and defendants underestimate the amount of a fair settlement (Loewenstein et al, 1993; Babcock et al, 1995). They also found that subjects appear to be more concerned with fairness than maximizing their own payoff when negotiating a settlement; however, these assessments of fairness seem to be self-serving (Loewenstein et al, 1993).

Self-serving biases have not only been investigated in legal situations, but also have been studied in many other areas as well. For example, a classic study by Hastorf and Cantril (1954) was the first to illustrate that people's perceptions are often biased in a self-serving way. They asked students from both Dartmouth and Princeton viewing a football game between their two schools to count the number of infractions committed by both teams. The Princeton students thought that the Dartmouth team committed twice as many penalties as their own team, however, the Dartmouth students thought that both teams committed about the same number of penalties. This suggests that the plays of the game were being interpreted by the students from each school in a manner that was biased by their school affiliation.

In another well-known study in this area, Messick and Sentis (1979) also show that judgments are biased in a self-serving manner. In their study, the participants have been told that they have worked either seven (ten) hours at a task and that another participant has worked ten (seven) hours. They are told that the participant that worked seven hours has received \$25. The researchers then ask them how much the participant who worked ten hours should be paid. The findings are as follows: when the participant has worked ten hours, he or she believes that a payment of \$35.24 was fair, but, when the other participant has worked ten hours, he or she believed that a fair payment was \$30.29. The authors conclude that the difference, \$4.95, is due to the self-serving bias.

Many other studies, based on the above two, have tried to gain a better understanding of when the self-serving bias is prevalent. Bargaining contexts have been one of the areas of interest. Self-serving biases have been found when parties are bargaining over abstract issues in economic experiments (Roth and Murnighan, 1982; Kagel, Kim and Moser, 1996) and in realistic contexts such as labour-management negotiations of public school teachers (Babcock, Wang and Loewenstein, 1997) and legal negotiations (Loewenstein, et al; Babcock, et al, 1995).

This thesis involves the negotiation of a legal dispute regarding the possible negligence of an auditor in performing an audit. Self-serving biases (a behavioural game theory factor) associated with the role assigned to the subject are expected to interact with economic factors when the subjects are making their initial assessments and negotiation decisions.

Other factors, closely related to the self-serving biases, may also be influencing the decisions. For example, these biases may be of different magnitude for the plaintiff advisors and defendants because of the endowment (willingness to pay / willingness to accept) effect (Thaler, 1980) or what is commonly called loss aversion (Kahneman and Tversky, 1984). Studies in this area of the literature suggest that an object is worth much more when a person is giving it up or losing it as compared to receiving or winning the same object (Thaler, 1980; Knetsch, 1989; Kahneman, Knetsch and Thaler, 1990; Tversky and Kahneman, 1991)

The hypotheses posited in this chapter will be discussed in the order of the events in the experiment; therefore, the hypothesis relating to the initial assessments made after reading the case will be discussed first, followed by the hypothesis regarding the negotiation process and finally the hypotheses regarding the assessments made after the negotiation.

4.2.1 Hypotheses - Initial Assessments

Role is manipulated by randomly assigning subjects to the roles of plaintiff advisor and defendant as in Loewenstein et al (1993) and Babcock et al (1995). It is expected that self-serving biases will be prevalent (i.e., plaintiff advisors will overestimate outcomes and defendants will underestimate outcomes) when subjects are asked to make their initial assessments regarding a fair settlement amount, a judge's ruling and a judge's award. It should be noted though, that self-serving biases may not necessarily hinder a negotiator's negotiation strategy. For example, self-serving biases may actually make a person a more

effective negotiator as he or she would be maximizing his or her expected outcome. Therefore, a negotiator may agree to a better settlement amount (one that maximized his or her outcome) than if the self-serving biases were not present. However, the concern is that the self-serving biases will lead to a stalemate and failure to reach a settlement because the parties' opinions on fair settlement amounts are too diverse. This is a problem when settlement is the optimal outcome for both parties and society as a whole, which as was stated in the introduction chapter, is often the case in litigation cases.

This leads to the first hypothesis (stated in the alternative form):³⁸

H1: *Self-serving biases will be prevalent in the plaintiff advisors' and defendants' initial fair settlement assessments, judge ruling predictions and judge's award predictions.*

These self-serving biases are measured by comparing the plaintiff advisors' and defendants' predictions of fair settlement amounts, judge rulings and judge's awards. The plaintiff advisors' assessments of all three factors are expected to be higher (or more in favour of the plaintiff) than the defendants' assessments.

It is important to replicate this manipulation in an auditing context since, as mentioned previously, auditors may behave differently than other defendants in a legal case because of the probability of being sued by other plaintiffs in the future. Also, an auditor's success is based on his or her reputation of providing high quality audits. Therefore, being

³⁸ All hypotheses will be stated in the alternative form.

sued and subsequently settling or fighting a long, drawn out court case may affect an auditor's reputation. These factors may cause an auditor to make different decisions than other defendants who do not face the possibility of being sued again and whose future success does not depend on their reputation. It should also be pointed out that in a real world context the involvement of lawyers, who have faced many suits and are more objective than the litigants, may mitigate the intensity of the self-serving bias.

The endowment effect may also be prevalent in these assessments as follows. Since the defendants will be required to pay out the amount in the settlement and the plaintiff advisor would be essentially receiving the amount, the beliefs of what is fair may differ by role. For example, since the amount a person is willing to pay for something is often much less than what a person is willing to accept to give up the same thing. In this study, the object is a fair settlement, what the defendant is willing to pay to get a fair settlement may be much less than what the plaintiff advisor is willing to accept for a fair settlement.

4.2.2 Hypotheses - Settlement Process

In economic theory, it is predicted that more information should improve or facilitate the bargaining process, that is if both sides have the same information and more is given, it should be easier to come up with an agreement.³⁹ In Babcock et al (1995), all information was shared as subjects read the same materials and knew that they were doing so. They also knew that they were following the same procedures. These conditions are

³⁹ This assumption is based on the economic assumption that an inefficient allocation is more likely to arise when parties have incomplete or incorrect information. For example, Hicks (1932) states that 'any means which enables either side to appreciate better the position of the other will make settlement easier, adequate knowledge will always make a settlement possible'. This is supported in a number of studies (Black and Bulkley, 1988; Crampton, 1984) which suggest that incomplete information can result in bargaining inefficiencies.

expected to facilitate settlement and cause parties' expectations to converge (Posner, 1986). However, the results of Babcock et al (1995) suggest that common information does not necessarily lead to a convergence of viewpoints nor promote settlement. For example, in their study, the plaintiffs' and defendants' assessments of fair settlements and judge's awards were significantly different from each other when the subjects knew their roles prior to reading the case. For example, the predictions of fair settlements and judge's awards differed between plaintiffs and defendants an average of \$19,756 and \$18,555 on a \$100,000 lawsuit, respectively, when subjects knew their roles before reading the case. Also, the settlement rates were significantly different from 100% (they were 72%) when the subjects knew their roles prior to reading the case.⁴⁰ It appears that the self-serving biases discussed earlier made it difficult for the parties to reach a settlement. Also, the findings suggest that settlement is more difficult when the self-serving biases are stronger.

Therefore, if settlement does not always occur under conditions that are expected by economic reasoning to facilitate settlement because of factors such as self-serving biases, the endowment effect and the effects of loss aversion, plaintiffs and defendants should have even more difficulty in achieving a settlement in a typical real world legal setting where such conditions do not exist. The next hypothesis is based on these ideas:

H2: *Settlement rates will not be 100% in all conditions.*

⁴⁰ Dopuch et al, (1997) also found that settlements were more difficult than expected in their study on optimal legal regimes for auditors.

4.2.3 Hypotheses - Final Assessments

Past study of the ultimatum game in behavioural game theory has found that subjects often would have accepted less than they were offered by their opponent (Guth, Schmittberger and Schwarze, 1982; Hoffman et al, 1994, Forsythe et al, 1994). This finding is expected to carry over to the sequential bargaining game in this study suggesting that plaintiffs, after negotiation, may have been willing to accept less than they actually received in the agreement. If this is the case, then defendants may be paying out more in settlements than they should be and plaintiffs may be accepting less than they should be. These results are counter-intuitive as one would think that plaintiff advisor subjects' minimum acceptable amount would not be more than they accepted and defendant subjects' maximum acceptable amount would not be less than they accepted in the negotiations. An interesting question is how much lower the plaintiff advisors' minimum acceptable amount is and how much higher the defendants' maximum possible amount is.

The following hypothesis is based on this reasoning.

H3: *The plaintiff advisors' minimum (defendants' maximum) acceptable settlement amount will be lower (higher) than the agreed-upon settlement amount.*

It is expected that when the subjects are asked to make fair settlement assessments subsequent to the negotiation that these assessments will be less extreme (or less biased in a self-serving manner) than the initial fair settlement assessments. This is based on the

following reasoning. First, it is expected that hearing the other side's arguments will mitigate the self-serving bias as it will make the subjects more aware of the weaknesses of their case (Brenner, Koehler and Tversky, 1996; Babcock, Loewenstein, and Issacharoff, 1997). Second, it is expected that the negotiation process will make the subjects more aware of the opportunity and business costs of being involved in a court case which may encourage them to reach a settlement. The next hypothesis captures this:

H4: *The plaintiffs advisors' (defendants') initial fair settlement assessments will be greater (less) than the plaintiff advisors' (defendants') final fair settlement assessments.*

4.3 Results

This section outlines the results of the tests for each hypothesis. Analysis of Variance (ANOVA) and Chi-square analysis was used to test the first hypothesis. Chi-square analysis was used to test the second hypothesis and t-tests were used for the third and fourth hypotheses. The analysis is done for the two samples individually (audit partner sample and student sample) and the combined sample. Differences between the audit partners and students will be discussed as appropriate.

4.3.1 Results - Initial Assessments

As Table 4-1 shows, the defendants' average assessments of the amount of a fair settlement were significantly lower than the plaintiff advisors' assessments for all three

samples (audit partner, student and combined). This result indicates the presence of self-serving biases. For the student and combined samples, self-serving biases were also apparent when the participants were asked to predict the judge's ruling as the plaintiff advisors' predictions were marginally significantly higher than the defendants'. Fifty-five percent and 59% of the plaintiff advisors in the student sample and combined sample, respectively, indicated that the judge would rule in favour of the plaintiff whereas only 34% and 43% of the defendants in the student and combined samples, respectively, predicted that the judge would rule in favour of the plaintiff ($F=2.70$, $p=0.10$ - students; $F= 2.96$, $p=0.0882$ - combined). However, significant differences were not found between plaintiff advisors' and defendants' predictions of the judge's award amount in any of the samples.

These results also support Thaler's endowment (willingness to pay / willingness to accept) effect and Kahneman and Tversky's loss aversion theory. It appears that the defendants thought that a fair amount for a settlement was less than what the plaintiff advisors thought. In this situation, it is the defendant who has been endowed and required to pay out the settlement amount, whereas the plaintiff advisor is on the receiving end of the transaction. So, as this theory suggests, the defendant is willing to pay out less than the plaintiff advisor is willing to accept. Also, when making the assessments regarding the judge's award, an amount which neither of them has control over, their assessments do not differ significantly, suggesting that the endowment effect may not be present in these types of situations.

Table 4-1
Results of H1 - Self Serving Biases
Average Initial Fair Settlement Assessments, Judge Ruling Predictions
and Judge Award Predictions by Plaintiff Advisor and Defendant

Panel A: Audit Partner Sample

	Plaintiff Advisor	Defendant	F(X ²)-statistic*	p-value
Fair Settlement	\$3.4 million	\$1.1 million	6.74	0.01
Judge Ruling**	65% (plaintiff)	55% (plaintiff)	0.53	0.47
Judge Award	\$5.1 million	\$5.4 million	0.09	0.76

Panel B: Student Sample

	Plaintiff Advisor	Defendant	F(X ²)-statistic*	p-value
Fair Settlement	\$4.6 million	\$2.4 million	4.85	0.03
Judge Ruling**	55% (plaintiff)	34% (plaintiff)	2.70	0.10
Judge Award	\$6.4 million	\$6.4 million	0.00	0.99

Panel C: Combined Sample

	Plaintiff Advisor	Defendant	F(X ²)-statistic*	p-value
Fair Settlement	\$4.1 million	\$1.9 million	10.36	0.002
Judge Ruling**	59% (plaintiff)	43% (plaintiff)	2.94	0.09
Judge Award	\$5.8 million	\$6.0 million	0.05	0.83

* F-tests were used for the fair settlement amount assessments and judge award predictions and X² was used for the judge ruling predictions.

** This is the percentage of subjects that predicted that the judge would rule in favour of the plaintiff.

Manipulation checks performed on the combined sample for role indicate that 84% of the subjects knew their correct role (defendant vs plaintiff advisor) and 97% knew their correct side (defendant vs plaintiff). The auditors' responses were more accurate on the role manipulation check than the students. The auditors always knew their side (defendant

vs plaintiff) and 94% knew their role (defendant vs plaintiff advisor); 95% of the students knew their side (defendant vs plaintiff) and 77% knew their role (defendant vs plaintiff advisor).

4.3.2 Results - Settlement Process

Settlement rates were not 100%; the combined sample settlement rate was 30% in the first negotiation and 42% in the second negotiation. The overall rate was 36%. Also, the auditor overall settlement rate of 42% (38% in first settlement and 46% in the second settlement) was higher than the student overall settlement rate of 32% (24% in first settlement and 40% in second settlement). All of these settlement rates are significantly different from 100% at less than the .001 confidence level and the student settlement rates did not differ from the audit partner settlement rates at conventional significance levels. These results suggest that subjects were committed to their assigned role and the negotiation exercise.

This settlement rate is much lower than the settlement rate of about 90% for litigation cases brought against auditors in practice (Palmrose, 1991); however, in actual litigation cases, most settlements occur once the case goes to court and the rate of settlement increases the closer it gets to the judge's ruling. Therefore, the settlement rates in this study might have increased if the subjects actually had to go to court. This is supported in the study by Roth, Murnighan and Schoumaker (1988) on the deadline effect in bargaining. They find that settlements become much more frequent when the end of the negotiation period approaches. Since, in the study in this thesis, the actual deadline for the

negotiation was not known, last minute agreements were not possible. This may have been part of the reason for the low the settlement rate.

Table 4-2
Results of H2 - Settlement Rates
Settlement Rate for Negotiation 1 and Negotiation 2

	Audit Partners	Students	Combined
Negotiation 1	38%	24%	30%
Negotiation 2	46%	40%	42%
Total	42%	32%	36%

4.3.3 Results - Final Assessments

Hypothesis 3 predicted that the plaintiff advisors' minimum settlement amount would be lower than the agreed upon settlement amount and that the defendants' maximum settlement amount would be greater than the agreed upon settlement amount.

The results, not surprisingly, support this hypothesis. The defendants' maximum settlement amount is significantly higher than the agreed upon settlement amount in both negotiations for all three samples and the plaintiff advisors' minimum acceptable settlement amount is significantly lower in both negotiations for the student and combined samples and in the first negotiation for the audit partner sample (refer to Table 4-3).⁴¹ This hypothesis was tested by calculating the difference between the minimum/maximum settlement amount and the agreed upon settlement amount. This difference was then tested using a one-tailed t-test to determine if it was significantly different from zero. The

⁴¹ The difference is marginally significant for the audit partner sample in the second negotiation.

results suggest that the defendant subjects did not negotiate optimally as the plaintiff advisors indicated that they were willing to accept less than the agreed upon amounts. Also, the defendants were willing to pay out more than the agreed amount, suggesting that improvements can be made in the defendants' negotiation strategies. These differences, or gains that can be made, are larger for the students. Thus, suggesting that experience may actually improve the negotiation strategies of the litigants.

Table 4-3
Results of H3 - Final Assessments
Comparison of Actual Settlement Amount to
Minimum (Maximum) Settlement Amount
for Plaintiff Advisor (Defendant)

Panel A: Audit Partner Sample

		Settlement Amount*	Minimum (Maximum) Acceptable Amount**	Difference	t-statistic	p-value
Plaintiff Advisor	Settlement 1	\$2.4 million	\$1.8 million	\$0.6 million	2.03	0.04
	Settlement 2	\$2.6 million	\$2.4 million	\$0.2 million	1.64	0.07
Defendant	Settlement 1	\$2.2 million	\$2.8 million	-\$0.6 million	-1.94	0.05
	Settlement 2	\$2.4 million	\$2.9 million	-\$0.5 million	-2.54	0.02

Panel B: Student Sample

		Settlement Amount*	Minimum (Maximum) Acceptable Amount**	Difference	t-statistic	p-value
Plaintiff Advisor	Settlement 1	\$3.2 million	\$2.4 million	\$0.8 million	2.80	0.01
	Settlement 2	\$3.8 million	\$2.1 million	\$1.7 million	2.75	0.009
Defendant	Settlement 1	\$2.8 million	\$4.1 million	-\$1.3 million	-2.30	0.04
	Settlement 2	\$3.6 million	\$4.1 million	-\$0.5 million	-2.72	0.01

Panel C: Combined Sample

		Settlement Amount*	Minimum (Maximum) Acceptable Amount**	Difference	t-statistic	p-value
Plaintiff	Settlement 1	\$2.8 million	\$2.1 million	\$0.7 million	3.42	0.002
Advisor	Settlement 2	\$3.3 million	\$2.3 million	\$1.0 million	2.70	0.006
Defendant	Settlement 1	\$2.5 million	\$3.4 million	-\$0.9 million	-2.96	0.006
	Settlement 2	\$3.0 million	\$3.5 million	-\$0.5 million	-3.82	0.001

* This analysis was only completed for those subjects that settled and answered the question regarding the minimum(maximum) acceptable settlement amount.

**It is the minimum acceptable amount for the plaintiff advisors and maximum acceptable amount for the defendants.

Hypothesis 4 is not supported. It predicted that the plaintiff advisors' (defendants') initial fair settlement assessments would be larger (smaller) than the final fair settlements because the negotiation process may decrease the self-serving biases as hearing the other sides arguments may help participants to see the weaknesses in their case (see Table 4-4). The audit partner sample, however, provides some interesting results: the final fair settlement assessments were significantly higher than the initial fair settlement assessments for the defendant subjects in both negotiations and also higher, though not significant, than the initial settlement assessments (which is opposite to the predicted direction) for the plaintiff advisor subjects. Overall, the results might be suggesting that the subjects became more committed to their argument and side as the negotiation continued rather than the negotiation process influencing them to reach a settlement quickly, as was hypothesized. This hypothesis was also tested using a one-tailed t-test on the difference between the initial and final fair settlement assessments.

Table 4-4
Results of H4 - Final Assessments
Comparison of Initial Fair Settlement Assessments to Final Fair Settlements
by Plaintiff Advisor and Defendant

Panel A: Audit Partner Sample

		Initial Fair Assessment*	Final Fair Assessment	Difference	t-statistic	p-value
Plaintiff Advisor	Settlement 1	\$3.0 million	\$3.7 million	-\$0.7 million	-1.35	0.12
	Settlement 2	\$5.2 million	\$5.3 million	-\$0.1 million	-0.14	0.45
Defendant	Settlement 1	\$1.3 million	\$1.9 million	-\$0.6 million	-2.15	0.04
	Settlement 2	\$0.9 million	\$3.4 million	-\$2.5 million	-2.51	0.04

Panel B: Student Sample

		Initial Fair Assessment*	Final Fair Assessment	Difference	t-statistic	p-value
Plaintiff Advisor	Settlement 1	\$6.0 million	\$5.2 million	\$0.8 million	0.61	0.29
	Settlement 2	\$6.6 million	\$5.8 million	\$0.8 million	0.65	0.27
Defendant	Settlement 1	\$2.9 million	\$3.2 million	-\$0.3 million	-0.28	0.39
	Settlement 2	\$2.3 million	\$2.1 million	\$0.2 million	0.16	0.44

Panel C: Combined Sample

		Initial Fair Assessment*	Final Fair Assessment	Difference	t-statistic	p-value
Plaintiff Advisor	Settlement 1	\$4.4 million	\$4.4 million	0	0.00	0.50
	Settlement 2	\$6.1 million	\$5.6 million	\$0.5 million	0.62	0.27
Defendant	Settlement 1	\$2.2 million	\$2.6 million	-\$0.4 million	-0.87	0.20
	Settlement 2	\$1.9 million	\$2.6 million	-\$0.7 million	-0.76	0.23

* The initial fair settlement assessment value was calculated as the average of those subjects (plaintiff advisor / defendant) that answered both questions: 1) what they considered a fair settlement would be prior to the negotiation; and 2) what they considered a fair settlement would be after the negotiation.

4.4 Descriptive Statistics re: Role and Settlement Rates

Some descriptive statistics on other variables in relation to role and the settlement rates were also calculated. The results are given below.

First, analysis was performed on the subjects' responses to what they believed the likelihood was that the judge would rule as they had predicted for both the ruling and the award. The confidence assessment for the likelihood of the judge's ruling (plaintiff versus defendant) was on average 72 and the confidence assessment for the likelihood for the judge's award was on average 58, both on a scale of 0 - 100. This suggests that subjects were more confident when predicting the side the judge would rule (a 50/50 chance of being right) than when predicting the amount the judge would award in damages (an infinite number of amounts). These confidence assessments were compared by type of subject (audit partner versus student) and by role (for all three samples); none of these comparisons differed significantly.

The plaintiff advisor's minimum acceptable settlement amount and the defendant's maximum acceptable settlement amount for each negotiation pair that did not settle were compared to determine if there was an overlap in these assessments which would suggest that settlement may have occurred if more time had been given. The comparisons suggest that the settlement rate for the first negotiation could have increased by 10% from 30% to give a total settlement rate of 40%. However, it should be noted that all of the additional settlements were in the student sample. For the second negotiation, the settlement rate could have increased by 4% to give a total settlement rate of 46%. Again, all of the additional settlements would have taken place in the student sample. These additional

settlements that probably would have occurred had the subjects been given more time to negotiate would have brought the total settlement rate up to 43%.

Analysis was also done on the subjects' satisfaction with their settlement, whether they thought they could do better at court, and what they thought the damages would be if they went to court.

For negotiation 1, those that settled were fairly satisfied with their settlement as they ranked their satisfaction at an average of 7 on an 11 point scale. However, the plaintiff advisors (7.6) were more satisfied than the defendants (6.4) ($F=4.93, p=0.003$). This result also supports the endowment effect (willingness to pay / willingness to accept) theory as the plaintiff advisors who received the payment were happier with the same amount than the defendants who had to give up the amount. Also, the students (7.5) were marginally more satisfied than the audit partners (6.6) ($F=3.05, p=0.09$). On average, the participants did not think that they would do better if they went to court as the average response was 4 on a scale of 0 - 10. This result did not differ for the role they were assigned (plaintiff advisor vs defendant) or for the type of subject (audit partner vs student). And finally, the average response to the amount in damages the judge would award if the case went to court was about \$4 million.⁴² This amount did significantly differ for the defendants and the plaintiff advisors as the defendants stated that the damages (\$2.9 million) would be less than what the plaintiff advisors stated (\$5.2 million) ($F=11.00, p=0.0009$). These results held for the audit partner sample and the student sample.

⁴² There were two cases, a high merit case and a low merit case (see Chapter 6). The judge ruled that the defendant was negligent and liable for the full amount in the high merit case and not negligent and not liable for any amount in the low merit case.

The results were very similar for the second negotiation. The participants' average satisfaction with the settlement was about 7; however, this did not differ for role or type of subject in this negotiation. The average response to the question regarding whether they thought they would do better at court was about 3.8. Again, this did not significantly differ by role or type of subject. The participants still thought that the court would award damages of about \$4 million, and the responses differed significantly by role; the defendants thought that the damages would be about \$2.9 million whereas the plaintiff advisors thought that the damages would be \$5.4 million ($F=13.66$, $p=0.0005$). All of these results did not change significantly for just the audit partner sample or just the student sample.

Analysis was also performed on the relationship between the first offer by both the defendant and the plaintiff advisor and whether a settlement was reached or not. The results (in Table 4-5) show that the probability of settlement depended mainly on the first offer of the plaintiff advisor. For those negotiation pairs that settled, the average first offer by the plaintiff advisors was always significantly lower than the average first offer by those that did not settle. However, in the first negotiation, the first offer of the student defendants and combined defendants were significantly higher than those of their counterparts that did not settle. In the second negotiation, none of the defendant offers in the three samples differed significantly.

Table 4-5
Comparison of Average First Offers
of Plaintiff Advisors (Defendants) that Settled
versus Plaintiff Advisors (Defendants) that Did Not Settle

Panel A: Auditor Sample

		Settled	Did Not Settle	t-ratio	p-value
Negotiation 1 First Offer	Plaintiff Advisor	\$4.9 million	\$8.3 million	4.5394	0.0002
	Defendant	\$0.42 million	\$0.42 million	0.0301	0.98
Negotiation 2 First Offer	Plaintiff Advisor	\$4.9 million	\$7.3 million	2.2592	0.04
	Defendant	\$0.86 million	\$0.68 million	-0.3748	0.71

Panel B: Student Sample

		Settled	Did Not Settle	t-ratio	p-value
Negotiation 1 First Offer	Plaintiff Advisor	\$4.3 million	\$8.1 million	2.6354	0.01
	Defendant	\$2.6 million	\$0.63 million	-2.9538	0.006
Negotiation 2 First Offer	Plaintiff Advisor	\$5.6 million	\$8.1 million	2.6882	0.01
	Defendant	\$1.7 million	\$1.2 million	-0.7963	0.43

Panel C: Combined Sample

		Settled	Did Not Settle	t-ratio	p-value
Negotiation 1 First Offer	Plaintiff Advisor	\$4.7 million	\$8.2 million	4.6537	0.0001
	Defendant	\$1.5 million	\$0.55 million	-2.2325	0.03
Negotiation 2 First Offer	Plaintiff Advisor	\$5.3 million	\$7.7 million	3.5556	0.0008
	Defendant	\$1.3 million	\$0.96 million	-0.8013	0.43

Given the above results and findings in behavioural game theory that suggest that the more extreme the self-serving biases the more difficult it is to reach an agreement (Loewenstein et al, 1993, Babcock et al, 1995) some tests were also performed on the

relationship between the difference between the plaintiff advisor and defendant pairs' fair settlement assessments and first offers and the settlement rate. It was expected that the difference would be larger in the non-settlement pairs. The results suggest that this is the case. In most cases, the difference between the defendants' fair settlement assessments and first offers and the plaintiff advisors' fair settlement assessments and first offers for those pairs that did not settle was significantly larger than the difference for those pairs that did settle (Table 4-6 and Table 4-7).

Table 4-6
Comparison of Difference Between Fair Settlement Assessments
for Defendant/Plaintiff Advisor Pairs that Settled
versus Defendant/Plaintiff Advisor Pairs that Did Not Settle

Panel A: Auditor Sample

	Defendant - Plaintiff Advisor Settled	Defendant - Plaintiff Advisor Did Not Settle	F-statistic	p-value
Negotiation 1	-\$0.94 million	-\$5.2 million	12.13	0.003
Negotiation 2	-\$0.17 million	-\$4.1 million	3.41	0.08

Panel B: Student Sample

	Defendant - Plaintiff Advisor Settled	Defendant - Plaintiff Advisor Did Not Settle	F-statistic	p-value
Negotiation 1	-\$0.07 million	-\$2.7 million	1.14	0.30
Negotiation 2	-\$1.9 million	-\$2.2 million	0.01	0.91

Panel C: Combined Sample

	Defendant - Plaintiff Advisor Settled	Defendant - Plaintiff Advisor Did Not Settle	F-statistic	p-value
Negotiation 1	-\$0.50 million	-\$3.4 million	6.36	0.02
Negotiation 2	-\$1.2 million	-\$2.8 million	1.13	0.30

Table 4-7
Comparison of Difference Between First Offers
for Defendant/Plaintiff Advisor Pairs that Settled
versus Defendant/Plaintiff Advisor Pairs that Did Not Settle

Panel A: Auditor Sample

	Defendant - Plaintiff Advisor Settled	Defendant - Plaintiff Advisor Did Not Settle	F-statistic	p-value
Negotiation 1	-\$4.0 million	-\$7.9 million	19.78	0.0002
Negotiation 2	-\$2.7 million	-\$6.6 million	8.51	0.008

Panel B: Student Sample

	Defendant - Plaintiff Advisor Settled	Defendant - Plaintiff Advisor Did Not Settle	F-statistic	p-value
Negotiation 1	\$0.5 million	-\$7.2 million	25.13	0.0001
Negotiation 2	-\$3.0 million	-\$6.9 million	7.82	0.009

Panel C: Combined Sample

	Defendant - Plaintiff Advisor Settled	Defendant - Plaintiff Advisor Did Not Settle	F-statistic	p-value
Negotiation 1	-\$1.9 million	-\$7.4 million	32.73	0.0001
Negotiation 2	-\$2.8 million	-\$6.8 million	16.53	0.0002

4.5 Conclusion

This chapter looked at the impact of role on the participants' decisions and the ultimate settlement. The results suggest that role did influence the subjects' decisions as the self-serving biases appear to be prevalent in the assessments, predictions and decisions made. For example, the plaintiff advisors' assessments of a fair settlement were significantly higher than the defendants' assessments. Also, it appears that settlement was more difficult for those pairs where the self-serving biases were more extreme.

The results also suggest that settlement was difficult since the settlement rate was so low. Also, there may be room for improvement in the negotiation strategies as, for those negotiation pairs that did reach an agreement, the plaintiff advisors (defendants) were willing to accept a lower (higher) settlement amount than was agreed upon.

Finally, some descriptive statistics on role and the subjects' beliefs regarding the negotiation and the outcome, show that those that settled were satisfied with their agreement and did not think that they would do better at court. However, the self-serving biases appear to remain after the negotiation as the responses as to how much they think the court will award in damages subsequent to each negotiation are significantly higher for the plaintiff advisors as compared to the defendants.

CHAPTER 5.0
RESULTS
REPUTATIONAL CONCERNS

5.0 Introduction

The objective of this chapter is to study the impact of reputation and reputational concerns on the subjects' assessments, predictions, decisions and outcomes of the negotiations. The chapter begins with the motivation for the research question. Next, the hypotheses are presented and the results are discussed. Then, some other interesting responses and comments are discussed and finally, the chapter is summarized.

5.1 Research Question

Reputation is believed to be an important part of an auditor's success. For example, Wilson and Grimlund (1990) state that 'a good reputation is one of a public accounting firm's most valuable assets' and that 'it is an asset that firms devote considerable effort and expenditure to develop and maintain'. Also, it is commonly accepted, since audit quality is difficult to observe, that auditor reputation is a reasonable proxy for audit quality (Dopuch and Simunic, 1982). And since for most clients the value of the audit depends upon the reputation of the accounting firm performing the audit (Firth, 1990), auditors have a better chance of being successful, if they have a reputation of providing high quality audits. In other words, clients are not as apt to hire an auditor with a reputation of providing low quality audits. This belief is supported in a number of studies that look at

the impact of SEC enforcement actions or similar government investigations on an auditor's future success (Firth, 1990; Wilson and Grimlund, 1990; Rollins and Bremser, 1997). These studies consistently find that audit firms incur economic losses (such as lost clients, decreased audit fees, increased probability of lawsuit brought against them and an increased probability of being successfully sued) from damage to their reputation after being investigated for possibly performing low quality audits. If this is true, a similar effect is expected from a litigation case brought against an audit firm claiming that the audit firm had provided a negligent or low quality audit. Since it has been suggested that these economic losses will occur to firms whose reputation is damaged, these threats may motivate audit firms to maintain a reputation of a high quality auditor. Therefore, a lawsuit against the auditor for providing a negligent audit may influence the decisions and behaviours of the auditor involved even more so than would normally be expected (i.e., when reputation is not as important to a litigant's success).

This study attempts to address these possible reputational impacts and concerns from facing a lawsuit by having the participants negotiate two settlements and by manipulating the occurrence of a public announcement. There are two conditions: 1) a public announcement condition where the defendant subjects announce the results of the outcome of their first negotiation to their second negotiation partner, and 2) a non-public announcement condition where no announcement is made. It is expected that the public announcement condition will cause the subjects to be more concerned about their reputation and the impact of the lawsuit citing their negligence on their reputation than those subjects in the non-public announcement condition since their previous actions will

be visible making them somewhat less anonymous and may make them more concerned about what others think of them as has been found in previous Behavioural Game Theory studies (Sutton, 1987).

While all of the reputational concerns that face an auditor in a real lawsuit and all of the economic losses expected to incur from a tarnished reputation cannot be replicated in a laboratory experiment, some of the reputational concerns and economic losses are expected to be invoked in this study. For example, the study at hand allows subjects to build a reputation as an effective litigator or negotiator since in the public announcement condition the outcome of the first negotiation is made known to the second negotiation partner. The study also allows for some potential economic losses from the loss of reputation from being involved in a lawsuit since there are two lawsuits / negotiations and the outcome of the first lawsuit / negotiation is made known to the second negotiation partner in the public announcement condition. As stated above, an audit firm's reputation has a much greater potential to be damaged in the public announcement condition than in the non-public announcement condition since the settlement outcome with the first negotiation partner may indicate to the second negotiation partner that the auditor had been negligent (or was not a high quality auditor) and therefore will probably settle with them or be found guilty at court. Also, this second lawsuit is expected to increase the reputational damage to the auditor. In summary, it is expected that if a reputation effect is found from these incomplete reputational concerns and potential economic losses in the experiment, then this effect would be stronger in a more complete real-world situation.

However, the exact impact of this public announcement manipulation that combines reputation with communication and observability is not readily predictable. As stated in the introductory chapter, some research has found that auditors are less likely to settle litigation cases than are other litigants (Palmrose, 1991), even though settling is the economically rational choice. The researchers in this area conclude that possible reasons for auditors going to court more often than other litigants are that they fear the public will think that they are admitting guilt when they settle and that if they settle with one litigant, they will settle with others as well (Palmrose, 1988; Alexander, 1991). This would damage their reputation, one of their most important assets and may also impact their future success. If such is the case, it is expected that the public announcement condition with its hint of bad publicity and tarnishing of reputation will cause the defendant subjects to worry more about what others think of them than those defendant subjects in the non-public announcement condition where there is not as large of a reputation effect since the prior outcome is not observable. These types of worries about reputational damage and possible economic losses would cause auditors to be less prone to settle with the plaintiffs.

However, auditors' litigation strategies do appear to be changing. According to anecdotal evidence and discussions by the author with auditors and lawyers that defend auditors, auditors are becoming more aware of the economic consequences, such as the economic costs, the reputation costs and the lost business costs of fighting a court case. Also, Marino and Marino (1994) find that settlements have been steadily increasing in number and dollar value over the past years. These discussions and findings suggest that auditors are realizing that the benefits of settling may be greater than the costs of settling

in most situations as has been shown in many analytical studies (Scott and Zhang, 1996; Daughety, 1996). These discussions and findings also suggests that the public announcement condition with its hint of bad publicity will cause defendant subjects to behave differently than those defendant subjects in the non-public announcement condition. It is expected that the public announcement condition will cause defendant subjects to be more concerned with their reputations and what others think of them than if their outcomes were not made public as the reputation costs and damages may be greater from going to court and losing or simply by having the audit firm's name dragged through the media in a long drawn out court case than the costs of settling out of court.

If this is the case, then, in this study, they would be more likely to settle with the plaintiff advisors. For example, if the auditor (defendant) could get a quick settlement for a relatively low dollar amount indicating that the audit firm does not believe it was negligent, but rather, that it would just like the lawsuit to go away quickly in order to avoid future costs from the lawsuit, then he or she might believe that this strategy is less harmful to his or her reputation than an outcome of not being able to reach a settlement and going to court.

Since the actual impact of the public announcement condition cannot be predicted, the research question is quite general in nature: Do reputational concerns influence defendant auditors' litigation decisions?

5.2 Development of Hypotheses

Since the effect of the public announcement condition is not readily predictable, the hypotheses relating to this manipulation will be stated in a non-directional form. It is only expected that the public announcement condition will cause subjects to behave differently than the non-public announcement condition subjects. This is contrary to purely economic game theory predictions which would predict that the disclosure of results of a previous negotiation with another person should not significantly influence the behaviour of the subjects. The subjects should not be overly concerned with their reputation, especially since they are playing with different negotiation partners in each game and it is a finite number (2) of negotiations. According to game theory, the participants should try to settle quickly and for the lowest possible amount if they are the defendant and the highest possible amount if they are the plaintiff advisor in both negotiations in both the public announcement condition and the non-public announcement condition.

The hypotheses are discussed in the order of the experimental procedures; the hypothesis dealing with the initial assessments is discussed first, followed by the hypotheses regarding the actual negotiation process.

5.2.1 Hypotheses - Initial Assessments

Behavioural game theory findings show that 1) communication and observability and reputational concerns may cause subjects to behave differently than if these factors are not present (Sutton, 1987) and 2) subjects do not always behave as game theory predicts when these factors are present (Sutton, 1987, McKelvey and Palfrey, 1992; Guth, Ockenfels and

Wendel, 1993). Because of these findings and the importance of reputation and possible reputational damages to an auditor, it is expected that the public announcement manipulation which requires the defendant subjects to report their results from the first negotiation to their opponent in the second negotiation will cause subjects to behave differently than those subjects in the non-public announcement condition which does not require reporting of the first negotiation. The actual impact of this manipulation on the initial assessments cannot be predicted as there is evidence, as discussed previously, to support both directions (settle or fight in court).

H1: *Subjects' assessments (plaintiff advisors / defendants) of a fair settlement, judge ruling and judge award will be different in the public announcement condition than in the non-public announcement condition.*

5.2.2 Hypotheses - Settlement Process

Again, the public announcement manipulation is expected to cause subjects to be concerned about their reputation and possible damages to it during the settlement process; however, as was discussed in the development of the research question, the outcome is not predictable. There is support for both directions: the public announcement condition may influence defendant subjects to settle quickly to avoid the bad publicity of a court case and possibly losing the court case or it may influence the subjects to fight the case in court to avoid the bad publicity and possible tarnishing of their reputations from settling and possibly admitting to a negligent audit.

Consequently, this next series of hypotheses is non-directional.

H2: *The settlement rate will be different in the public announcement condition than in the non-public announcement condition.*

H3: *The time to settle will be different in the public announcement condition than in the non-public announcement condition.*

H4: *The settlement amount will be different in the public announcement condition than in the non-public announcement condition.*

5.2.3 Hypotheses - Interaction Between Public Announcement & Level of Merit

As the next chapter discusses, this thesis also manipulates the level of merit / audit quality of the case against the auditor. It is expected that the level of merit will not influence the decisions and behaviours of the participants as much as economic game theory would expect. However, the level of merit / audit quality and public announcement manipulations are expected to interact. Although exact predictions cannot be made, since it is not known how the public announcement manipulation is going to influence the decisions and behaviours of the subjects, the following general prediction can be made.

H5: *The reputation effect from the public announcement manipulation will be more intense in the low merit / high audit quality condition than in the high merit / low audit quality condition.*

In other words, the public announcement condition combined with the high quality audit condition should give a higher reputation effect than that of the public announcement condition combined with the low quality audit condition. This result is posited based on the following reasoning: the outcome of the high quality audit condition (condition where the level of merit is low) is expected to be more uncertain since it is commonly believed that auditors typically do not fare well at court. For example, in a case where the auditors have been negligent, it is highly probable that the auditors will lose the case. However, if they have performed a high quality audit, there is still a good chance that they will lose the case in court, that is, the outcome is not as predictable. Thompson and Loewenstein (1992) found that when an outcome is more uncertain, subjects become more committed and attached to their roles. This would suggest that in the more uncertain outcome condition the subjects' reputations will become more important to them. If this is the case, it is expected that the reputation effect from the public announcement condition in the high audit quality / low merit case will compound with the reputation effect from the uncertain outcome to give a more intense reputation effect than in the more certain outcome condition in the low audit quality / high merit case.

5.3 Results

This section gives the results of the tests of the five hypotheses relating to the public announcement condition and possible reputational concerns and damages. Analysis of Variance has been used to test part of the first, the third, the fourth and the fifth hypotheses; and chi-square analysis has been used to test the rest of the first and the

second hypotheses. The analysis is broken down, as was done in the previous chapter, into the audit partner sample only, the student sample only, and a combined sample. Any differences between the audit partner sample and the student sample are discussed when they arise.

5.3.1 Results - Initial Assessments

Hypothesis 1 predicted that the initial assessments would differ in the public announcement from the non-public announcement condition. None of the initial assessments were significantly different (see Table 5-1). Therefore, the public announcement manipulation did not influence the initial assessments. It did, however, influence subsequent decisions, as will be discussed later.

Table 5-1
Results of H1 - Initial Assessments
Comparison of Fair Settlement Assessments,
Judge Ruling Predictions and Judge Award Predictions
by Announcement Condition for Defendants and Plaintiff Advisors

Panel A: Audit Partner Sample

Defendant

	Public	Non-Public	F(X ²)-statistic*	p-value
Fair Settlement	\$1.1 million	\$1.1 million	0.00	0.99
Judge Ruling**	42% (plaintiff)	70% (plaintiff)	1.77	0.18
Judge Award	\$6.3 million	\$5.0 million	0.68	0.42

Plaintiff Advisor

	Public	Non-Public	F(X ²)-statistic*	p-value
Fair Settlement	\$4.1 million	\$2.8 million	0.74	0.40
Judge Ruling**	82% (plaintiff)	50% (plaintiff)	2.56	0.11
Judge Award	\$5.8 million	\$4.4 million	1.17	0.30

Panel B: Student Sample**Defendant**

	Public	Non-Public	F(X ²)-statistic*	p-value
Fair Settlement	\$3.0 million	\$1.9 million	0.97	0.33
Judge Ruling**	44% (plaintiff)	25% (plaintiff)	1.25	0.26
Judge Award	\$7.0 million	\$5.7 million	0.52	0.48

Plaintiff Advisor

	Public	Non-Public	F(X ²)-statistic*	p-value
Fair Settlement	\$4.0 million	\$5.2 million	0.51	0.48
Judge Ruling**	47% (plaintiff)	63% (plaintiff)	0.79	0.37
Judge Award	\$6.5 million	\$6.4 million	0.01	0.93

Panel C: Combined Sample**Defendant**

	Public	Non-Public	F(X ²)-statistic*	p-value
Fair Settlement	\$2.2 million	\$1.6 million	0.61	0.44
Judge Ruling**	43% (plaintiff)	42% (plaintiff)	0.00	0.97
Judge Award	\$6.7 million	\$5.3 million	1.68	0.20

Plaintiff Advisor

	Public	Non-Public	F(X ²)-statistic*	p-value
Fair Settlement	\$4.1 million	\$4.2 million	0.01	0.90
Judge Ruling**	61% (plaintiff)	57% (plaintiff)	0.07	0.79
Judge Award	\$6.1 million	\$5.8 million	0.30	0.59

* F-tests were used for the fair settlement amount assessments and judge award predictions and X² was used for the judge ruling predictions.

** This is the percentage of subjects that predicted that the judge would rule in favour of the plaintiff.

The subjects' confidence in their predictions regarding the judge ruling and judge award were also analysed by comparing the likelihood ratings for those subjects in the public announcement condition with those subjects in the non-public announcement condition. The likelihood assessment for the judge's ruling did not differ by announcement condition, however, the judge's expected award was higher in the public announcement condition (63 - auditor partners, 63 - combined sample) than the non-public announcement condition (48 - audit partners, 53 - combined sample) (F=4.21, p=0.05 - audit partners, F=4.12, p=0.05 - combined sample) for the audit partner and combined samples. This might suggest that those subjects in the public announcement setting were more motivated and gave more thought to their assessments since part of their results were being observed, thereby making them more confident when making their assessments regarding the judge's award.

5.3.2 Results - Settlement Process

The public announcement hypotheses predicted that the settlement rate, time to settle and the settlement amount would be different in the public announcement condition

than in the non-public announcement condition. The results are displayed in Table 5-2. The settlement rate was mostly lower in the public announcement condition than in the non-public announcement condition for both negotiations, but significantly lower only in the first negotiation for the audit partners and marginally significantly lower in the second negotiation for the student and combined samples, suggesting that the subjects were worried about the bad publicity from settling out of court and gaining the reputation of being a poor negotiator. The time to settle was mainly shorter, though not significantly, in the public announcement condition. So, even though it took them less time to settle in the public announcement condition, they were less likely to settle. And finally, the settlement amount was marginally significantly higher in the public announcement condition in the first negotiation for the student and combined samples (see Table 5-2).

Table 5-2
Results of H2- H4 - Settlement Process
Comparison of Settlement Rates, Settlement Times and Settlement Amounts
by Announcement Condition

Panel A: Audit Partner Sample

	Public	Non-Public	X ² (F) -statistic*	p-value
Settlement Rate - 1**	17%	58%	5.00	0.04
Settlement Rate - 2**	42%	50%	0.15	0.70
Settlement Time - 1	3 periods	3.1 periods	0.03	0.86
Settlement Time - 2	3 periods	3 periods	0.00	1.00
Settlement Amount - 1	\$3.0 million	\$1.8 million	0.76	0.41
Settlement Amount - 2	\$3.5 million	\$1.8 million	2.29	0.16

Panel B: Student Sample

	Public	Non-Public	X ² (F) -statistic*	p-value
Settlement Rate - 1**	30%	19%	0.64	0.43
Settlement Rate - 2**	24%	56%	3.38	0.08
Settlement Time - 1	2.2 periods	2.0 periods	0.03	0.87
Settlement Time - 2	2.3 periods	4.0 periods	2.41	0.15
Settlement Amount - 1	\$4.6 million	\$1.3 million	5.49	0.07
Settlement Amount - 2	\$4.9 million	\$3.4 million	1.59	0.23

Panel C: Combined Sample

	Public	Non-Public	X ² (F) -statistic*	p-value
Settlement Rate - 1**	25%	36%	0.74	0.39
Settlement Rate - 2**	32%	54%	2.66	0.10
Settlement Time - 1	2.4 periods	2.8 periods	0.34	0.57
Settlement Time - 2	2.7 periods	3.6 periods	1.43	0.25
Settlement Amount - 1	\$4.1 million	\$1.7 million	5.49	0.06
Settlement Amount - 2	\$4.1 million	\$2.8 million	1.58	0.23

* X² was used for the settlement rate comparisons and F-tests were used for the settlement time and settlement amount comparisons.

** 1 refers to the first negotiation and 2 refers to the second negotiation.

To summarize, the public announcement manipulation seemed to somewhat influence the negotiating behaviour of the subjects. It appears as though the public announcement of the results of the first negotiation caused the subjects to settle less; however if they did settle, they did it quickly and for a higher amount. This suggests that the defendants might settle quicker and at a higher cost to avoid the bad publicity of being involved in a litigation case; but, if they cannot settle quickly, they fight the case in court to avoid the bad publicity of settling a case.

5.3.3 Results - Interaction Between Public Announcement and Level of Merit

It was hypothesized that the reputation effect would be greater in the public announcement x low merit / high audit quality condition than in the public announcement x high merit / low audit quality condition. This hypothesis was based on the argument that in the low merit / high audit quality condition the outcome is less certain and that the subjects will become more committed to their role and beliefs because of this uncertain condition (Thompson and Loewenstein, 1992).

The data do not support this hypothesis. An interaction effect was tested for the settlement rate, settlement time, and settlement amount for both negotiations and all three samples. Although, there are a few significant interactions between the public announcement manipulation and the level of merit manipulation, none of the results are meaningful (see Table 5-3).

Table 5-3
Results of H5 - Interaction Between Level of Merit Manipulation
and Public Announcement Manipulation:
Comparison of Settlement Rates, Settlement Times and Settlement Amounts

Panel A: Audit Partner Sample

	F-statistic	p-value
Settlement Rate - 1*	5.95	0.02
Settlement Rate - 2*	0.15	0.70
Settlement Time - 1	-	-
Settlement Time - 2	0.36	0.57
Settlement Amount - 1	-	-
Settlement Amount - 2	1.09	0.33

Panel B: Student Sample

	F-statistic	p-value
Settlement Rate - 1*	0.61	0.44
Settlement Rate - 2*	4.07	0.05
Settlement Time - 1	14.68	0.02
Settlement Time - 2	0.19	0.67
Settlement Amount - 1	0	1.00
Settlement Amount - 2	0.88	0.37

Panel C: Combined Sample

	F-statistic	p-value
Settlement Rate - 1*	4.22	0.05
Settlement Rate - 2*	1.17	0.29
Settlement Time - 1	1.13	0.31
Settlement Time - 2	0.00	1.00
Settlement Amount - 1	0.00	1.00
Settlement Amount - 2	1.85	0.19

* 1 refers to the first negotiation and 2 refers to the second negotiation.

5.4 Other Interesting Responses from the Participants

At the end of the experiment, the subjects were asked to give their opinion of the impact of settling on an auditor's reputation or success. The response rate for this question was quite high: over 81% of the audit partners, and about 85% of the students responded. The responses are summarized as follows.

Most of the audit partners (61%) thought that the impact of settling on an auditor's reputation and success was minimal; however, the remaining 39% thought that the impact

was great. For those audit partner participants with experience in dealing with litigation cases, the response as to lack of impact was even stronger: 75% thought that the impact was minimal while 25% of those with experience thought that the impact was great. The student response is fairly consistent with this difference between those audit partners with experience and those without experience, reflecting their inexperience: 70% of the students thought that the impact of settling was great and 30% thought that there was minimal impact.

Other comments were that: 1) it was better to settle than to go to court and lose (18% - audit partners and 14% - students); 2) if they settle with one client, the settling might signal to other clients that they would settle with them as well (8% - audit partners and 7% - students); 3) they should fight the case in court if they believe the audit procedures were appropriate (8% - audit partners and 13% - students); and 4) the choice to settle or go to court depends on how much publicity there will be regarding the settlement (13% - audit partners and 9% - students). It was also mentioned more than once that the reputational impact differed for the size of the firm; i.e., the larger firms have to worry more about firm reputation, whereas in smaller firms it is the reputation of the individual partner that is important.

5.5 Conclusion

Reputation and reputational concerns were the focus of this chapter. It was hypothesized that the public announcement of participants' results from the first negotiation to the second negotiation opponent would influence the participants to behave

differently than those who did not have to announce their outcome from the first negotiation. No directional impact was hypothesized as there was support for both directions.

The results suggest that the public announcement did influence subjects to behave differently which also suggests that reputation and reputational concerns were important to the subjects. For example, the subjects in the public announcement condition had a tougher time reaching a settlement; however, if they did, the settlement was reached more quickly and at a higher amount. The public announcement manipulation had no effect on the initial assessments and predictions made by the subjects regarding a fair settlement and judge's ruling. This might suggest that auditors are worried about their reputation and the impact of being involved in a court case on their future success. For example, the results might be interpreted as suggesting that auditors are willing to settle if a settlement can be reached relatively quickly so that the litigation is not dragged through the press and that to get this quick settlement, they are willing to pay out a higher amount. However, if they are unable to get a quick settlement, then reputational concerns cause them to be less willing to settle because they are worried about signalling to the public that they have provided a low quality audit and were possibly negligent in the performance of that particular audit.

Finally, descriptive summaries of the participants' comments regarding the impact of settling on an auditor's reputation and success show that students seemed to think that the reputational impact was greater than the auditors did, especially those auditors with litigation experience.

CHAPTER 6.0

RESULTS

LEVEL OF MERIT / AUDIT QUALITY

6.0 Introduction

The impact of the level of merit of the case against the auditor on the decisions and negotiation process of the participants is the focus of this chapter. The chapter begins with the development of the research question followed by the development of the hypotheses. The results from testing the hypotheses are presented and discussed next. The chapter is then concluded with a brief summary.

6.1 Research Question

The audit profession has been preoccupied with legal reform for the past several years. This preoccupation continues because the profession as a whole believes that securities law which is based on joint and several liability provisions results in defendants being forced to accept non-meritorious settlements (Holloway, Ingerbarn and King, 1997). They also profess that the joint and several liability provisions encourage plaintiffs to name auditors as defendants because of their deep pockets or ability to pay out large amounts in damages. This preoccupation (that auditors are being treated unfairly) has brought about one of the most contentious debates among legal reform advocates and opponents: Do the merits of the suits matter? (Palmrose, 1997b).

Economic theory, in general, would predict that the level of merit of the case against the auditor should influence the settlement process. That is, the amount of the settlement should vary proportionately with the merit of the case. For example, the higher the level of merit of the case, the higher should be the amount agreed to in the settlement process. This is an assumption of the legal profession as they believe that the settlement process approximates the accuracy of the courts.

However, previous empirical studies that have addressed the merit debate suggest that settlements may not reflect the level of merit of the case, and therefore, may not approximate the courts (Alexander, 1991; Dunbar, Junega and Martin, 1995; Palmrose, 1997a). For example, Alexander (1991), one of the earliest and most influential explanations for non-meritorious litigation, argues that settlements will only reflect the merits of the suit if a trial is a viable alternative. Her research suggests that trial is no longer a viable option to defendants involved in securities litigation because, among other reasons, trials are very expensive and provisions in insurance policies often pressure defendants to settle. This implies that if trial is not a viable option, settlements are no longer linked to trial outcomes and therefore, settlements will no longer depend on merit. She also singles out the audit profession as she states that auditors may be an exception to the 'trial is not an option' group of litigants, since auditors may be more aggressive litigators than other litigators. This belief is based on the argument, as stated in Chapter 5, that auditors have a good chance of being repeat defendants and have a reputation of providing high quality audits to protect. These characteristics may cause auditors to behave differently than other litigants.

Alexander's (1991) controversial and influential findings have led to a number of empirical studies in the auditing area, as well as analytical studies, that have questioned whether the merits of the suit matter in audit litigation. The results have been quite indecisive and often can be interpreted as support for the arguments of both the advocates and opponents of legal reform. For example, Palmrose (1994) states that about 45% of lawsuits against the large accounting firms are either dismissed or settled with the auditor paying no part of the settlement to the plaintiff. Proponents for the merits do not matter debate interpret this as indications that almost 50% of the cases against an auditor are without merit. However, the opponents interpret this as though the legal system is effectively getting rid of the weak claims, and therefore, working as it should be. Of course, defending these weak claims is very time consuming and costly; thus, ideally, if the legal system was working efficiently, these weak claims would not get very far before being set aside.

Carcello and Palmrose (1994) studied the relationship between modified reports issued before a client firm went bankrupt and the likelihood that the auditor would be sued. They found that in the cases that resulted in litigation (about 24%), the auditor was named as defendant in a majority of the cases (> 70%). They also found that the rate of dismissal by the court in the bankrupt situations was lower for the auditor defendants and that the auditors payments were, on average, high as compared to other defendants. They interpret these results as meaning that either the cases involving a bankruptcy had a higher level of merit or the auditors were paying out more than their share of the damages or settlement amount. Marino and Marino (1994) supported these results as they also found

that auditors often pay out more in settlements than their share when a company goes bankrupt.

Since none of the previous studies addressed merit directly, but rather used their findings to interpret the impact of merit, Dunbar, Junega and Martin (1995) attempted to directly test the impact of merit on the settlement process. They came up with some merit proxies or surrogates (a security offering during the class period and a government agency investigation) and tested whether the settlement amounts and rates were related to these merit determinants. They were unable to find a relationship. This outcome caused them to conclude that the debate about merits is still ongoing.

Given the above empirical results and the legal reform debate, Holloway, Ingerbam and King (1997) compare the impact of the two legal regimes, the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995, on settlement incentives and the merit-to-settlement relationship. Interestingly, in their study which assumes that the legal system is working appropriately and that merit should matter, they find that there are situations in both legal regimes where settlements will not reflect the merits of the case. These findings also suggest that actual settlements may not reflect merits. Also, Palmrose (1997a), in her review article on audit litigation research and whether the merits matter, indicates that the outcome of the merit debate has not been decided and that future research is necessary.

So, since these empirical and analytical results suggest that the level of merit may not always be reflected in the settlement process and given the inconclusive results regarding the merit debate, this study will investigate the impact of merit in an

experimental setting. Hopefully, the use of an experimental setting will contribute to determining whether merit matters or not. The research question for this chapter is as follows: Are auditors able to distinguish between the high and low merit levels of the cases, and if so, how do the two different merit levels influence the settlement decision process and settlement amount?

The impact of merit on the settlement process will be studied by comparing the negotiated outcomes of two audit litigation cases of different levels of merit. Both cases involve a bankrupt gravel company. The auditor is being sued for \$10 million because of problems in the estimation of the amount of gravel at year end. Fraud had occurred in both cases; however, the audit procedures and magnitudes of the frauds differ. One case is of high merit where the auditor did not perform appropriate audit procedures (gave two weeks lead time on inventory count sites and times and did not hire a specialist to estimate the quantity of gravel at year end) and would probably be found negligent by the courts if the case went to court. Since the judge that ruled on the case prior to the experiment found that the auditor was negligent and would be liable for the full amount, it is expected ex ante that litigants would be able to determine that this case is of some merit and therefore would predict that the judge will rule in favour of the plaintiff. However, since most cases settle for a substantially lower amount than the damages being sued for (Palmrose, 1991) and behavioural game theory findings show that the multiperiod ultimatum games and sequential bargaining games typically result in an even split of the total amount to be divided (Guth, Schmittberger and Schwarze, 1982; Roth and Murnighan, 1982; Prasnikar and Roth, 1992; Hoffman et al, 1994; Forsythe et al, 1994), it

is expected that the settlement amounts in the high merit case will be around \$5 million, the midpoint of the \$10 million in damages being sued for by the plaintiff. The other case is of low merit where the auditor did perform appropriate procedures (however, the independent specialist hired was involved in the fraud) and would not be found negligent in the courts if the case went to court. In this case, the judge ruled that the auditor would not be liable for any amount. However, there is a common belief among the auditing profession that auditors typically do not do well in court (Andersen et al, 1992). Based on this belief, it is expected *ex ante* that litigants would predict that the judge would rule in favour of the defendant about 50% of the time and in favour of the plaintiff 50% of the time for this low merit case. Also, it is expected that the settlement amounts will be much lower than the \$10 million damages being sued for; however, they will still be a non-trivial amount since evidence exists that suggests that auditors often settle to avoid the costly expenses of going to trial. Also, behavioural game theory evidence suggests that when negotiating in a multiperiod ultimatum game or a sequential bargaining game, the acceptor typically rejects offers less than 20% of the total amount to be split (Guth, Schmittberger and Schwarze, 1982; Hoffman et al, 1994; Forsythe et al, 1994). Thus, the expected settlement amount for the low merit case is about \$2 million.

6.2 Development of Hypotheses

As stated in the previous section, even though economic theory (and the legal profession) would suggest that the settlement process should mirror the court process, prior research has suggested that this is not always so. Instead, prior research suggests

that the settlement process (once a lawsuit has commenced) may not reflect the level of merit of the case. However, as will be shown in this section, it appears that litigants often are able to distinguish between the two different levels of merit when deciding whether or not to pursue a case as many of the cases pursued do seem to have merit (Palmrose, 1997a).

It should be pointed out at this time, that the level of merit of the case is proxied by the level of audit quality of the case. The higher the level of audit quality, the lower the level of merit of the case.

6.2.1 Hypotheses - Initial Assessments

6.2.1.1 Level of Merit / Audit Quality

Prior research has shown that litigants are somewhat able to distinguish between different merit levels when deciding to pursue a case. For example, Gilbertson (1996) finds that plaintiffs only pursue cases with merit in his study on securities class action suits. He proxies the level of merit by the level of earnings management, so that the level of merit of the case is assumed to be higher when the earnings management is higher. He finds that the 113 securities lawsuits in his sample (1990-1994) have merit and that auditors are named as codefendants when the earnings management is substantially greater.

Kadous (1997) also investigates the impact of the level of merit in an experimental study based on real cases. She does so by investigating the impact of the level of quality

of the auditor's work on the jurors' assessment of the auditor's guilt. She finds that the jurors' assessments of auditor liability are lower when the audit quality is higher.

Also, the Palmrose (1994) study that investigates the relationship between auditor litigation cases and merit finds that a large number of the cases against auditors result in the case being dismissed by the court. This result also suggests that merits matter and that litigants and the courts can distinguish between different merit levels.

Carcello and Palmrose (1994), in their study that tests whether there is a relationship between modified audit reports of clients that go bankrupt and the likelihood of the auditor being sued, find that auditors are not always named as defendant. Once again, this result suggests that litigants are making some distinction between merit levels.

These findings, which are consistent with the economic theory predictions, suggest that the subjects should be able to distinguish between different merit levels when making the initial assessments regarding the case. Therefore, the initial assessments of fair settlement amounts and predicted judge rulings and judge awards made by the subjects subsequent to reading the case and prior to the negotiation exercise should be higher in the high merit case than in the low merit case. The following hypothesis is based on this reasoning.

H1: *Subjects' assessments (plaintiff advisors / defendants) of a fair settlement, judge ruling, and judge award will be higher in the high merit / low audit quality condition than in the low merit / high audit quality condition.*

6.2.1.2 Self-serving Biases & Level of Merit / Audit Quality

In Chapter 4, it was suggested that self-serving biases would be prevalent when the participants were making their initial assessments and predictions regarding the case. For example, it was hypothesized that the plaintiff advisors would overestimate fair settlements and judge rulings and judge awards and that the defendants would underestimate fair settlements and judge rulings and judge awards.

It is expected that there will be an interaction between these self-serving biases and the level of merit of the case. That is, the self-serving biases are expected to be more prevalent in the case where the level of merit is low. This expectation is based on the following reasoning.

The predicted outcome of a low merit / high audit quality case is expected to be more uncertain for both parties than the predicted outcome of a high merit / low audit quality case, since auditors often do not fare well at court. For example, even though auditors performed a high quality audit which should mean that they should have only a small chance of losing at court, their actual chances of losing at court are probably still relatively high. However, if they have performed a low quality audit, it is very highly probable that they will lose the case in court. This uncertainty in the low merit / high audit quality case is expected to cause both plaintiff advisor subjects and defendant subjects to become more committed to or attached to their position and beliefs (Thompson and Loewenstein, 1992), and therefore, should increase the impact of the self-serving biases on the initial assessments. The next hypothesis is based on this:

H2: *Self-serving biases or differences between the plaintiff advisors' and defendants' initial assessments will be larger in the low merit / high audit quality condition than in the high merit / low audit quality condition.*

6.2.2 Hypotheses - Settlement Process

As stated earlier in the chapter, Alexander (1991) investigates the importance of merit in the settlement of legal cases and finds that merit does not matter. She examined the settlement amounts agreed to in a sample of class action suits involving initial public offerings of computer-related companies in the first half of 1983. The companies in the sample are very similar in nature, thereby reducing the differences in the case outcomes to different merit levels. She assumes that the cases differ in merit; however, she has no way of proving it. Her assumptions seems reasonable as it would be very unlikely for all cases to have the same level of merit. Surprisingly, she found that the settlement amount did not reflect the level of merit of the case, but rather, it seemed that there was a "going rate" for the settlement of approximately 25% of the potential damages being sued for by the plaintiffs. (Potential damages were calculated as the per share market loss times the number of shares in the share offering. In other words, the author took the share offer price minus the share price after the bad news was disclosed and multiplied this by the number of shares in the initial public offering to calculate the potential damages. This method of calculating the potential damages required no evaluation of the facts of the case regarding the merit of the case. Therefore, the potential damages being sued for in the

cases in her study do not differ in relation to the level of merit of the case, but rather, are solely based on the potential loss incurred by the investors.)

The Alexander (1991) study spawned numerous studies, many of which were in the audit litigation area. For example, Carcello and Palmrose (1994) find, in their study on litigation of bankrupt companies, that, even though auditors are not always named as defendants, the auditors' payments are on average higher than their proportional share. This finding was also supported by Marino and Marino (1994) who also found that auditors paid out more than their share in settlements regarding cases dealing with bankrupt clients.

Dunbar, Junega and Martin (1995) attempt to address the merit debate directly by adding merit proxies to the empirical analyses done in the past. Using settlement amounts as the dependent variable, they add two variables to represent the merit of the case (whether there was a security offering and whether there was a harmful government agency investigation). They are unable to find a relationship between settlement amounts and their merit proxies.

In a related study of securities class action suits, Gilbertson (1996) investigates empirically the merits of securities class actions and finds that plaintiffs only pursue cases with merit. He proxies the level of merit of the case by the level of earnings management: the higher the level of earnings management, the higher the level of merit in the case. His results indicate an absence of a meaningful relationship between the level of earnings management and the size of the settlement amount and also corroborate Alexander's (1991) argument that defendants, including auditors, are not settling for the appropriate amounts.

Fuerman (1997) investigates the relationship between merit and the likelihood of an auditor being named as defendant. He compares securities lawsuits cases in which the auditor is named as defendant to securities lawsuit cases in which the auditor is not named as defendant. He uses a variety of factors to represent the following causal factors: merit-due-to-management-culpability, merit-due-to-auditor-culpability and auditor's deep pockets. The results suggest that the causal factors in naming the auditor as defendant are: 1) the merit-due-to-management-culpability; and 2) the auditor's deep pockets. No relationship is found between the auditor being named as defendant and her culpability, suggesting that the merit of the case against the auditor is not a causal factor in the auditor being named as defendant in the case.

In an analytical study, Holloway, Ingerbarn and King (1997) find similar results. They model the settlement process under two different legal regimes (the 1934 Securities and Exchange Act and the 1995 Private Security Litigation Act) and find that settlement is the optimal choice when involved in a lawsuit. They also find that, even in this hypothetical world where the legal system is assumed to operate appropriately, the settlement amounts are not necessarily proportional to merit, but rather, a variety of factors such as expected legal costs and wealth of codefendants influence the settlement process and amount.

Given the ongoing merit debate and based on these results, even though only cases with merit seem to be pursued, it is expected that the different merit levels will not influence the settlement process as much as game theory and the legal profession would predict. In other words, even though the auditor's negligence is much lower in the low

merit case, the settlement process will not necessarily reflect the auditor's lower negligence. Litigants appear to be able to distinguish between cases with merit and without when deciding to pursue a case, but once a case has been pursued, the actual outcomes do not reflect the level of merit. The following hypotheses are based on this reasoning.⁴³

- H3:** *The settlement rate will not reflect the level of merit of the case.*
- H4:** *The time to settle will not reflect the level of merit of the case.*
- H5:** *The settlement amount will not reflect the level of merit of the case.*

6.3 Results

This section summarizes the results from the tests of the hypotheses regarding the impact of the level of merit of the case against the auditor. Analysis of Variance is used to test part of the first, second, fourth and fifth hypotheses and Chi-square analysis is used to test the remainder of the first and the third hypothesis. The analysis is performed on the audit partner sample, the student sample, and the combined sample. Differences between the audit partners and students are described when appropriate.

⁴³ Since these hypotheses are null hypotheses, power of test calculations were performed after the experiment was complete to ensure that the tests were powerful enough to reject a false null. Tests were not performed prior to the experimental procedures because there was no basis to predict the outcomes of the experiment.

6.3.1 Results - Initial Hypotheses

6.3.1.1 Level of Merit / Audit Quality

The first hypothesis that all subjects' assessments of a fair settlement and judge ruling and judge awards would be higher or more in favour of the plaintiff in the high merit / low audit quality condition than in the low merit / high audit quality condition was supported for the defendant subjects but not supported for the plaintiff advisor subjects in the student sample and the combined sample (see Table 6-1). Therefore, the defendant subjects, especially the student defendant subjects, seemed to distinguish more strongly between the two merit levels, but the plaintiff advisor subjects did not make the same distinction. This may be due either to the prevalence of the self-serving bias or to the plaintiff advisor subjects' applying strategy when making the initial assessments, and therefore, viewing both cases as having merit.

Table 6-1
Results of H1 - Initial Assessments
Comparison of Fair Settlement Assessments,
Judge Ruling Predictions and Judge Award Predictions
by the Level of Merit of the Case for the Plaintiff Advisors and Defendants

Panel A: Audit Partner Sample

Plaintiff Advisor

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$3.5 million	\$3.3 million	0.03	0.88
Judge Ruling**	75% (plaintiff)	55% (plaintiff)	1.06	0.30
Judge Award	\$5.3 million	\$4.9 million	0.08	0.79

Defendant

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$1.5 million	\$0.8 million	0.71	0.41
Judge Ruling**	70% (plaintiff)	42% (plaintiff)	1.77	0.18
Judge Award	\$6.3 million	\$4.5 million	1.46	0.25

Panel B: Student Sample**Plaintiff Advisor**

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$5.5 million	\$3.8 million	0.92	0.30
Judge Ruling**	58% (plaintiff)	50% (plaintiff)	0.26	0.61
Judge Award	\$6.7 million	\$6.1 million	0.33	0.66

Defendant

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$4.1 million	\$0.8 million	9.69	0.003
Judge Ruling**	63% (plaintiff)	6% (plaintiff)	11.22	0.001
Judge Award	\$6.8 million	\$5.5 million	2.2	0.48

Panel C: Combined Sample**Plaintiff Advisor**

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$4.7 million	\$3.6 million	0.92	0.34
Judge Ruling**	66% (plaintiff)	52% (plaintiff)	1.08	0.20
Judge Award	\$6.0 million	\$5.5 million	0.33	0.57

Defendant

	High Merit	Low Merit	F(X²)-statistic*	p-value
Fair Settlement	\$3.1 million	\$0.8 million	9.69	0.003
Judge Ruling**	65% (plaintiff)	21% (plaintiff)	10.65	0.001
Judge Award	\$6.6 million	\$4.9 million	2.2	0.15

* F-tests were used for the fair settlement amount assessments and judge award predictions and X² was used for the judge ruling predictions.

** This is the percentage of subjects that predicted that the judge would rule in favour of the plaintiff.

A similar analysis which combined the plaintiff advisors' and defendants' assessments and predictions together was also performed (Table 6-2). This analysis compared the total subjects' (both plaintiff advisor and defendant) assessments in the low merit case to the total subjects' assessments in the high merit case. The results are very similar to the above analysis (especially with respect to the defendants) which considered the plaintiff advisors and defendants separately.

Also, based on the ex ante expectations as to how litigants would distinguish between the two cases, as discussed in section 6.1 Research Question, in both cases, the subjects' predictions of the judge ruling were lower than was expected in the combined sample and the student sample. However, the audit partner sample was closer to the expectations of a high probability of a plaintiff ruling in the high merit case (72%) and a 50% probability ruling in the low merit case (48%). These results suggest that the audit partners are more influenced by the profession's belief that auditors do not fare well in court.

The fair settlement amount assessments did reflect what was expected ex ante. For example, the student samples' assessments of a fair settlement for the high and low merit cases were very close to what was predicted; they believed a fair settlement in the high merit case would be \$4.8 million (the ex ante prediction was \$5 million) and a fair settlement in the low merit case would be \$2.3 million (the ex ante prediction was \$2 million). The audit partner and combined samples' fair settlement assessments for the low merit case were close to the ex ante predictions, however, the fair settlement assessments were lower than what was expected ex ante for the high merit case, especially for the audit partners.

Table 6-2
Results of H1 - Initial Assessments
Comparison of Fair Settlement Assessments,
Judge Ruling Predictions and Judge Award Predictions
by the Level of Merit of the Case
with the Plaintiff Advisors and Defendants Combined

Panel A: Audit Partner Sample
Plaintiff Advisors and Defendants

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$2.5 million	\$1.9 million	0.44	0.51
Judge Ruling**	72% (plaintiff)	48% (plaintiff)	2.91	0.09
Judge Award	\$5.7 million	\$4.7 million	1.08	0.31

Panel B: Student Sample**Plaintiff Advisors and Defendants**

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$4.8 million	\$2.3 million	6.35	0.01
Judge Ruling**	61% (plaintiff)	28% (plaintiff)	6.94	0.008
Judge Award	\$6.8 million	\$5.9 million	0.70	0.41

Panel C: Combined Sample**Plaintiff Advisors and Defendants**

	High Merit	Low Merit	F(X ²)-statistic*	p-value
Fair Settlement	\$3.9 million	\$2.1 million	6.10	0.02
Judge Ruling**	66% (plaintiff)	36% (plaintiff)	9.31	0.002
Judge Award	\$6.3 million	\$5.3 million	2.16	0.15

* F-tests were used for the fair settlement amount assessments and judge award predictions and X² was used for the judge ruling predictions.

** This is the percentage of subjects that predicted that the judge would rule in favour of the plaintiff.

Also, the subjects' beliefs of the likelihood of their judge ruling and judge award predictions were analysed by comparing the average assessments for the two levels of merit. None of the comparisons in all three samples in both the first and second negotiations differed.

6.3.1.2 Self-serving Biases & Level of Merit / Audit Quality

Hypothesis 2 was tested two ways. The first method compared the difference for each defendant and plaintiff advisor pair's assessments of fair settlements, judge rulings and judge awards for the high merit case and the low merit case (Table 6-3). Under this method, while the self serving biases did not seem to be significantly stronger in the low

merit condition, the difference in the low merit condition was larger than the difference in the high merit condition for the fair settlements, the judge ruling and judge award predictions, as predicted.⁴⁴

Table 6-3
Results of H2 - Level of Merit & Self-Serving Biases
Comparison of Differences Between Plaintiff Advisor and
Defendant Initial Assessments
by Level of Merit

Panel A: Audit Partner Sample

Defendant - Plaintiff Advisor	High Merit	Low Merit	F-statistic*	p-value
Fair Settlement Difference	-\$1.7 million	-\$2.5 million	0.13	0.72
Judge Ruling Difference	-10%	- 9%	0.00	0.98
Judge Award Difference	\$0.58 million	-\$1.8 million	0.62	0.45

Panel B: Student Sample

Defendant - Plaintiff Advisor	High Merit	Low Merit	F-statistic	p-value
Fair Settlement Difference	-\$1.9 million	-\$3.0 million	0.39	0.54
Judge Ruling Difference	0%	- 44%	3.85	0.06
Judge Award Difference	\$0.22 million	-\$1.8 million	0.55	0.48

⁴⁴ However, the defendant - plaintiff advisor predictions of the judge's ruling (defendant vs plaintiff) were marginally significantly larger in the low merit condition in the student sample.

Panel C: Combined Sample

Defendant - Plaintiff Advisor	High Merit	Low Merit	F-statistic	p-value
Fair Settlement Difference	-\$1.8 million	-\$2.8 million	0.52	0.48
Judge Ruling Difference	- 4%	- 30%	1.99	0.16
Judge Award Difference	\$0.37 million	-\$1.8 million	1.34	0.26

The second method compared the plaintiff advisors' and defendants' initial assessments for each of the cases separately. The results from this analysis suggest that the self-serving biases were stronger in the low merit case than in the high merit case as the plaintiff advisors' fair settlement assessments and judge ruling predictions are significantly higher than the defendants' for the low merit case in the student and combined samples. Only the fair settlement assessments for the low merit case are significantly different for the audit partners. In contrast, the initial assessments do not differ significantly by role in the high merit case where the outcomes are less uncertain. Therefore, it appears that a more uncertain outcome has a positive influence on the intensity of the self-serving biases.

Table 6-4
Results of H2 - Level of Merit and Self-serving Biases
Comparison of Fair Settlement Assessments,
Judge Ruling Predictions and Judge Award Predictions
by Role for the Two Merit Levels

Panel A: Audit Partner Sample

High Merit

	Plaintiff Advisors	Defendants	F(X²)-statistic*	p-value
Fair Settlement	\$3.5 million	\$1.5 million	1.68	0.21
Judge Ruling**	75% (plaintiff)	70% (plaintiff)	0.07	0.79
Judge Award	\$6.3 million	\$5.3 million	0.40	0.54

Low Merit

	Plaintiff Advisors	Defendants	F(X²)-statistic*	p-value
Fair Settlement	\$3.3 million	\$0.75 million	6.32	0.02
Judge Ruling**	55% (plaintiff)	42% (plaintiff)	0.38	0.54
Judge Award	\$4.9 million	\$4.5 million	0.15	0.71

Panel B: Student Sample

High Merit

	Plaintiff Advisors	Defendants	F(X²)-statistic*	p-value
Fair Settlement	\$5.5 million	\$4.1 million	0.84	0.37
Judge Ruling**	63% (plaintiff)	59% (plaintiff)	0.05	0.83
Judge Award	\$6.8 million	\$6.7 million	0.02	0.89

Low Merit

	Plaintiff Advisors	Defendants	F(X²)-statistic*	p-value
Fair Settlement	\$3.8 million	\$0.8 million	7.12	0.01
Judge Ruling**	50% (plaintiff)	6% (plaintiff)	7.58	0.006
Judge Award	\$6.1 million	\$5.5 million	0.07	0.79

Panel C: Combined Sample**High Merit**

	Plaintiff Advisors	Defendants	F(X²)-statistic*	p-value
Fair Settlement	\$4.7 million	\$3.1 million	1.98	0.17
Judge Ruling**	66% (plaintiff)	65% (plaintiff)	0.00	0.99
Judge Award	\$6.6 million	\$6.0 million	0.35	0.56

Low Merit

	Plaintiff Advisors	Defendants	F(X²)-statistic*	p-value
Fair Settlement	\$3.6 million	\$0.8 million	13.40	0.0006
Judge Ruling**	52% (plaintiff)	21% (plaintiff)	5.50	0.02
Judge Award	\$5.5 million	\$4.9 million	0.28	0.60

* F-tests were used for the fair settlement amount assessments and judge award predictions and X² was used for the judge ruling predictions.

** This is the percentage of subjects that predicted that the judge would rule in favour of the plaintiff.

6.3.2 Results - Settlement Process

The settlement rate did not significantly differ for the high and low merit cases in both the first and second negotiations, as was predicted.⁴⁵ However, the time to settle differed significantly in the first negotiation for the combined sample and differed marginally significantly in the first negotiation for the audit partner sample; the high merit time to settle (2 periods - combined sample; 2.5 periods - audit partners) was less than the low merit time to settle (3.2 periods - combined sample; 3.6 periods - audit partners) (F=4.85, p=0.04 - combined sample; F=4.48, p=0.07 - audit partners). Finally, the settlement amount was significantly higher in the first negotiation for the high merit case in

⁴⁵ However, the settlement rate was marginally significantly higher in the high merit case than the low merit case for the student sample in the second negotiation.

the student sample and was marginally significantly higher in the first negotiation for the combined sample.

Table 6-5
Results of H3 - H5 - Settlement Process and Level of Merit
Comparison of Settlement Rates, Settlement Times and Settlement Amounts
by Level of Merit of the Case

Panel A: Audit Partner Sample

	High Merit	Low Merit	X ² (F)-statistic*	p-value
Settlement Rate - 1**	33%	42%	0.18	0.67
Settlement Rate - 2**	33%	58%	1.51	0.22
Settlement Time - 1	2.5 periods	3.6 periods	4.48	0.07
Settlement Time - 2	3.0 periods	3.0 periods	0.00	1.00
Settlement Amount - 1	\$2.3 million	\$2.0 million	0.06	0.81
Settlement Amount - 2	\$3.0 million	\$2.4 million	0.26	0.62

Panel B: Student Sample

	High Merit	Low Merit	X ² (F) -statistic*	p-value
Settlement Rate - 1**	25%	25%	0.00	1.00
Settlement Rate - 2**	56%	25%	3.24	0.07
Settlement Time - 1	1.5 periods	2.8 periods	1.60	0.25
Settlement Time - 2	3.9 periods	2.5 periods	1.40	0.26
Settlement Amount - 1	\$5.0 million	\$1.8 million	6.11	0.05
Settlement Amount - 2	\$4.2 million	\$3.1 million	0.79	0.39

Panel C: Combined Sample

	High Merit	Low Merit	X²(F) -statistic*	p-value
Settlement Rate - 1**	28%	32%	0.08	0.78
Settlement Rate - 2**	46%	39%	0.29	0.59
Settlement Time - 1	2 periods	3.2 periods	4.85	0.04
Settlement Time - 2	3.6 periods	2.8 periods	1.89	0.31
Settlement Amount - 1	\$3.6 million	\$1.9 million	3.42	0.08
Settlement Amount - 2	\$3.8 million	\$2.6 million	2.11	0.16

* X² was used for the settlement rate comparisons and F-tests were used for the settlement time and settlement amount comparisons.

** 1 refers to the first negotiation and 2 refers to the second negotiation.

Analysis was also performed on the settlement rate, settlement time, and settlement amount to determine if there were differences between the two negotiations. None of the results were significantly different. Therefore, analysis was also performed on these variables with the two negotiations collapsed into one. The results are that only the settlement amount differed significantly between merit levels for the student sample and the combined sample (see Table 6-6).⁴⁶

⁴⁶Power of test calculations were performed on the combined sample to determine what the probability of rejecting a false null was. The results were as follows. For the settlement amount comparison of high merit and low merit differences, there was a probability of 65% that the null hypothesis would be correctly rejected, using an α of 0.05. The settlement times were exactly the same for the high and low merit cases so a power of test calculation was not possible. Also, the settlement rate did not differ enough for a power of test calculation to be performed.

Table 6-6
Results of H3-H5 - Settlement Process and Level of Merit
Comparison of Settlement Rates, Settlement Times and Settlement Amounts
by Level of Merit with the Two Negotiations Combined

Panel A: Audit Partner Sample

	High Merit	Low Merit	X ² (F)-statistic*	p-value
Settlement Rate	33%	50%	1.38	0.24
Settlement Time	2.8 periods	3.3 periods	0.57	0.46
Settlement Amount	\$2.6 million	\$2.2 million	0.28	0.61

Panel B: Student Sample

	High Merit	Low Merit	X ² (F) -statistic*	p-value
Settlement Rate	41%	25%	1.77	0.18
Settlement Time	3.2 periods	2.6 periods	0.38	0.55
Settlement Amount	\$4.4 million	\$2.4 million	5.23	0.03

Panel C: Combined Sample

	High Merit	Low Merit	X ² (F) -statistic*	p-value
Settlement Rate	38%	36%	0.04	0.84
Settlement Time	3.0 periods	3.0 periods	0.00	1.00
Settlement Amount	\$3.7 million	\$2.3 million	5.73	0.02

* X² was used for the settlement rate comparisons and F-tests were used for the settlement time and settlement amount comparisons.

In sum, although the different merit levels did not influence the settlement rate, those cases that did settle were somewhat influenced by the different levels of merit in the cases. That is, the settlement amount was higher in the high merit case. However, all settlement amounts were much lower than the \$10 million being sued for in damages. Even in the

high merit case, the defendant subjects acting as the auditor being sued ended up with low settlement amounts. Also, the students, especially the student defendants, made a stronger distinction between the two levels of merit than the audit partners.

Similar to the comparison of the ex ante expectations of the settlement amounts and the fair settlement assessments, the actual settlement amounts were very close to what was expected prior to the execution of the experiment in both merit levels for the student sample and in the low merit case for the audit partner and combined samples. The actual settlement amounts were slightly lower than what was expected prior to the execution of the experiment in the high merit case for the audit partner and combined samples.

6.3.3 Manipulation Check

A manipulation check which asked the subjects to rank the level of merit of the case on a scale of 0 - 10⁴⁷ indicates that the subjects were able to distinguish between the two different levels of merit / audit quality in the two cases; however, the average estimates are quite close (see Table 6-7). The high merit case was designed to be of very high merit and the low merit case was designed to have no merit. The auditors' distinctions between the merit levels, however, were not significant (Table 6-7).

⁴⁷ 0 would indicate that the auditor was not negligent and that the litigation case had no merit and 10 would indicate that the auditor was negligent and the litigation case was very high in merit.

Table 6-7
Manipulation Check - Level of Merit of the Case
On a Scale of 1-10

	High Merit	Low Merit	F-statistic	p-value
Audit Partners	5.14	4.41	0.83	0.37
Students	5.69	4.20	4.84	0.03
Combined	5.45	4.28	5.13	0.03

Further analysis of the manipulation check which broke each sample into defendants only and plaintiff advisors only suggests that the results are mainly due to the student defendants' rating of the level of merit. The student defendants in the high merit case ranked the level of merit as 5.54 and the student defendants in the low merit case ranked the level of merit as 3.41 ($F=5.58$, $p=0.03$). This result carried through to the combined sample as well ($F=4.01$, $p=0.05$). All other comparisons were not significantly different.

6.4 Conclusion

This chapter dealt with the impact of the level of merit, which was proxied by the level of audit quality, on the litigation decisions and settlement decisions of the subjects. Economic theory and the courts assume that the settlement process approximates the courts such that the level of merit of the case is reflected in the settlement agreement. However, prior research has suggested that this is not always the case.

The results suggest that level of merit does influence the settlement process, especially for the students, as the settlement amount was higher in the condition where the case had a higher level of merit. However, the effect is not as great as it could be. Also,

some unexpected results were found in the testing of the initial assessments. It appears that the defendant subjects, especially the student defendant subjects, chose to make the distinction between the two levels of merit while the plaintiff advisor subjects did not. The manipulation check on the level of merit gave similar results. Also, the self-serving biases that were apparent in the initial assessments (in Chapter 4) seem to be more intense in the low merit (more uncertain outcome) case than in the high merit (more certain outcome) case.

Finally, it is of interest to note that the results of most of the hypotheses related to the level of merit of the case were stronger for the students as compared to the audit partners. This is difficult to explain; however, it seems that the students, especially those acting as defendants, either were more willing to admit that the auditor in the case had been negligent or were more able to distinguish between the two levels of merit based on the audit procedures.

CHAPTER 7.0

RESULTS

OTHER CONSIDERATIONS

7.0 Introduction

This is a descriptive chapter that discusses some of the other interesting findings from the study. No hypotheses were developed for the findings in this chapter. The issues to be discussed are: 1) the importance of reputation and opportunity costs to the decisions made by the subjects; 2) the breakdown of settlement rates, times, and amounts by firm; 3) the breakdown of settlement rates, times, and amounts by experience; and 4) the differences between the results of the audit partners and the auditing students.

7.1 Importance of Reputation and Opportunity Costs

Discussions with auditors and lawyers who represent auditors have suggested that many factors go into the decisions with respect to an audit litigation case. One of the most important factors suggested was the perceived reputation and opportunity costs from either settling or going to court. Opportunity costs encompass, among other things, lost business costs, lost clients (both prospective and current), and lost auditor time used to prepare for the case.

This section looks at how important the perceived reputation and opportunity costs were to the subjects in this experiment and whether and how these perceived costs influenced the decisions and behaviours of the subjects. The subjects were asked three

questions about these perceived costs: 1) Did they consider the cost during the negotiation? (yes/no); 2) How important was this cost to their decision? (0-10); and 3) What was their best estimate of the dollar amount of this cost?

The first analysis on the perceived reputation and opportunity costs involved a regression analysis to determine how and if these perceived costs influenced the settlement process. It was expected that the importance of these perceived costs may differ. Figure 7-1 was used to develop a regression model to explore whether and how these costs were influential.

The dependent variable in the regression model (see below) was the initial offer made by either the defendant or the plaintiff advisor. The independent variables were the level of merit of the case (1 - high merit, 0 - low merit); the public announcement condition (1 - public announcement, 0 - non-public announcement); the importance of reputation costs of settling; the importance of reputation costs of fighting; the importance of opportunity costs of settling; and the importance of opportunity costs of fighting. The regression was run for both defendant first offers and plaintiff advisor first offers in each negotiation. The importance of the reputation and opportunity costs were estimated in two ways: 1) whether they were important or not (important - 1, not important - 0); and 2) how important (on a scale of 0 - 10). The resulting equations are:

The defendants' first offers are expected to be influenced in the following way:

$$DO = \text{Merit} \pm \text{Public Announcement} + \text{RCF} + \text{OCF} - \text{RCS} - \text{OCS}$$

$$\text{OR } DO = \beta(M) \pm \chi(\text{PUB}) + \delta(\text{RCF}) + \phi(\text{OCF}) - \gamma(\text{RCS}) - \eta(\text{OCS})$$

and the plaintiff advisors' first offers are expected to be influenced as follows:

$$PO = \text{Merit} +/- \text{Public Announcement} - \text{RCF} - \text{OCF} + \text{RCS} + \text{OCS}$$

OR
$$PO = \beta(M) +/- \chi(\text{PUB}) - \delta(\text{RCF}) - \phi(\text{OCF}) + \gamma(\text{RCS}) + \eta(\text{OCS})$$

DO = defendant's first offer

PO = plaintiff advisor's first offer

Merit or M = level of merit of the case (1 - high merit, 0- low merit); it is expected to have a positive effect on the offer as the offer is expected to be higher in the high merit case

Public Announcement or (PUB) = the public announcement condition (1- public, 0-non-public); the effect of the public announcement is not predictable as it is not known whether the public announcement will influence subjects to settle or fight

RCF = the perceived reputation costs of fighting the case in court; it is expected to have a positive effect on the defendants' offers since the perceived reputation costs of fighting the case in court would influence the defendants to offer more to increase the chances of settling; however, the opposite effect is expected for the plaintiff advisors

OCF = the perceived opportunity costs of fighting the case in court; it is expected to have a positive effect on the defendants' offers since the perceived opportunity costs of fighting the case in court would influence the defendants to offer more to increase the chances of settling; however, the opposite effect is expected for the plaintiff advisors

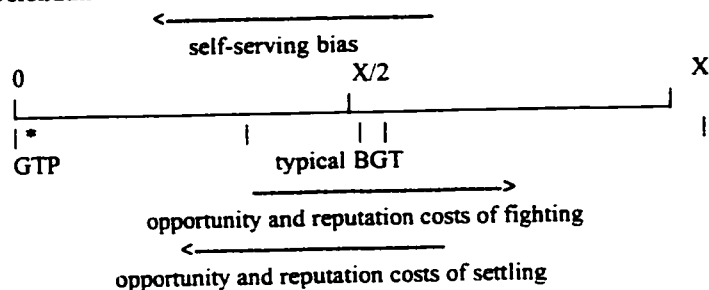
RCS = the perceived reputation costs of settling the case; it is expected to have a negative effect on the defendants' offers since the perceived reputation costs of settling the case out of court would influence the defendants to not want to settle the case out of court; however, the opposite effect is expected for the plaintiff advisors

OCS = the perceived opportunity costs of settling the case; it is expected to have a negative effect on the defendants' offers since the perceived opportunity costs of settling the case out of court would influence the defendants to not want to settle the case out of court; however, the opposite effect is expected for the plaintiff advisors

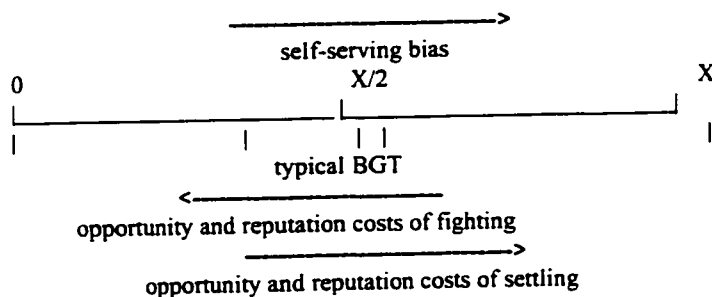
The results from the regression analysis were very disappointing as many of the models did not have enough data to be tested, and for those that did, none of the coefficients were significant.

Figure 7-1

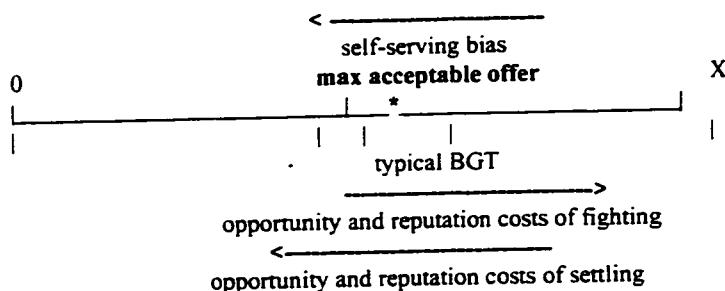
Offers Defendant



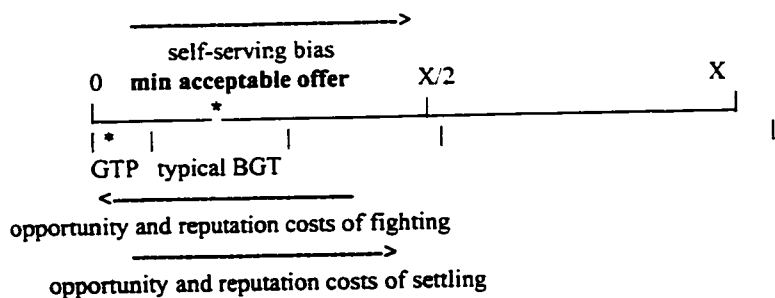
Offers Plaintiff Advisors



Acceptances Defendant



Acceptances Plaintiff Advisors



Index to Figure 1

GTP - game theoretic prediction

typical BGT - this is the typical game theory result when multiperiod ultimatum games are tested

X - amount to be split between the 2 negotiators

The next analysis compared the responses to the following 3 questions for each perceived cost (reputation costs of settling out of court, reputation costs of fighting the case in court, opportunity costs of settling out of court, and opportunity costs of fighting the case in court) with the responses to the same questions for the other 3 perceived costs: 1) did they consider the cost?, 2) how important was the cost?, and 3) what they predicted the dollar value of each perceived cost to be? The results, as summarized in Table 7-1, are quite interesting. For the auditors, it appears that the opportunity costs of fighting the case in court were the most important input into the participants' decisions; the opportunity costs of settling and the reputation costs of fighting appear to be about the same and next in importance; and the reputation costs of settling appear to be the least important.

The students' perceptions of the importance of these costs are slightly different. They seemed to consider the reputation costs of fighting as being the most important input into their decisions and the other three being quite similar, but of lesser importance. However, when the results are combined, the opportunity costs of fighting appear to be the most important input followed by the reputation costs of fighting and then the two costs dealing with settling (reputation and opportunity). In sum, it seems that the costs of fighting a case in court are perceived to be greater than the costs of settling a case out of court.

Table 7-1
Comparison of the Consideration, Importance and Dollar Value of Each of the
Perceived Costs with the Other Three Perceived Costs
Perceived Costs: Reputation Costs of Settling, Reputation Costs of Fighting,
Opportunity Costs of Settling and Opportunity Costs of Fighting

Audit Partner Sample

	Reputation Costs of Settling	Reputation Costs of Fighting	Opportunity Costs of Settling	Opportunity Costs of Fighting
Reputation Costs of Settling		- 0.13 -1.20 *** -1.41 **	-0.21 ** -1.48 * -0.20 *	-0.33 *** -2.18 *** -1.46 ***
Reputation Costs of Fighting	-0.21 ** -1.14 ** -1.36 ***		-0.09 -0.37 0.58	-0.18 ** -1.40 ** -0.06
Opportunity Costs of Settling	-0.28 *** -1.15 -0.23	-0.07 0.08 0.93		-0.11 * -0.83 -0.90 ***
Opportunity Costs of Fighting	-0.44 *** -2.61 *** -1.35 **	-0.21 *** -1.24 ** 0.42	-0.14 ** -1.25 *** -0.70 *	

Student Sample

	Reputation Costs of Settling	Reputation Costs of Fighting	Opportunity Costs of Settling	Opportunity Costs of Fighting
Reputation Costs of Settling		- 0.11 * -0.69 * -4.93 **	0.02 0.37* -0.40	-0.10 0.12 -0.70
Reputation Costs of Fighting	0.03 -1.66 *** -4.43 **		0.14 0.54 5.53 *	0.02 0.42 5.99 **
Opportunity Costs of Settling	0.18 ** -0.44 0.06	0.14 * 1.35 ** 6.42 *		-0.13 ** -0.80 * -1.10
Opportunity Costs of Fighting	0.08 -1.20 ** -0.30	0.05 0.77 7.05 **	-0.10 -0.90 *** -0.57	

Combined Sample

	Reputation Costs of Settling	Reputation Costs of Fighting	Opportunity Costs of Settling	Opportunity Costs of Fighting
Reputation Costs of Settling		- 0.12 ** -0.93 *** -3.59 ***	-0.08 -0.65 -0.31	-0.19 *** -1.12 ** -0.98 ***
Reputation Costs of Fighting	-0.07 -1.46 *** -3.44 ***		0.05 0.05 3.33 *	-0.07 -0.55 3.48 **
Opportunity Costs of Settling	-0.01 -0.74 -0.05	-0.06 0.73 * 4.25 **		-0.12 *** -0.82 ** -1.00 *
Opportunity Costs of Fighting	-0.13 * -1.81 *** -0.68	-0.06 -0.22 4.49 **	-0.11 *** -1.07 *** -0.63 **	

For the top half of the table, the values are the mean differences in the responses after the first negotiation between the variable on the side of the table minus the variable on the top of the table. For the bottom half of the table, the values are the mean differences in the responses after the second negotiation between the variable on the top of the table minus the variable on the side of the table.

The top number in each cell is the mean difference between the responses to whether the subjects considered these costs when making their decisions (yes/no response). The middle number is the mean difference between the responses to how important these costs were to the subjects' decisions (1 -10 response). And the bottom number is the mean difference between the responses to the estimated dollar value of these costs (unlimited response).

* Significant at or below the 0.10 level.

** Significant at or below the 0.05 level.

*** Significant at or below the 0.01 level.

7.2 Firm Differences

Audit partners from ten of the largest firms in Canada participated in this experiment. The following table describes the settlement rate, settlement time and settlement amount for each firm in each negotiation. Since the number of participants per firm was quite low, only a descriptive analysis can be done and no conclusions can be drawn. The values reported are the averages for each firm.

Table 7-2
Comparison of Settlement Rates,
Settlement Times, and Settlement Amounts
by Firm (Audit Partners Only)

Negotiation 1

Firm	Settlement Rate	Settlement Time	Settlement Amount
Firm A (n=4 partners)	25%	3.0 periods	\$0.5 million
Firm B (n=5 partners)	0%	n/a	n/a
Firm C (n=6 partners)	67%	3.5 periods	\$1.8 million
Firm D (n=3 partners)	33%	1.0 periods	\$1.0 million
Firm E (n=7 partners)	43%	3.7 periods	\$2.1 million
Firm F (n=4 partners)	25%	3.0 periods	\$1.0 million
Firm G (n=7 partners)	57%	3.5 periods	\$2.5 million
Firm H (n=8 partners)	38%	2.3 periods	\$2.2 million
Firm I (n=2 partners)	50%	3.0 periods	\$5.0 million
Firm J (n=2 partners)	0%	n/a	n/a
Total (n=48 partners)	38%	3.1 periods	\$2.1 million

Negotiation 2

Firm	Settlement Rate	Settlement Time	Settlement Amount
Firm A (n=4 partners)	50%	2.0 periods	\$3.0 million
Firm B (n=5 partners)	40%	4.0 periods	\$5.0 million
Firm C (n=6 partners)	33%	2.5 periods	\$1.0 million
Firm D (n=3 partners)	33%	1.0 periods	\$1.0 million
Firm E (n=7 partners)	29%	3.0 periods	\$3.0 million
Firm F (n=4 partners)	75%	3.0 periods	\$1.3 million
Firm G (n=7 partners)	57%	4.0 periods	\$1.5 million
Firm H (n=8 partners)	38%	1.7 periods	\$2.3 million
Firm I (n=2 partners)	50%	4.0 periods	\$5.0 million
Firm J (n=2 partners)	100%	4.0 periods	\$5.0 million
Total (n= 48 partners)	46%	3.0 periods	\$2.6 million

7.3 Experience Effects

Some of the participants also had experience in dealing with these types of decisions. Thus, a descriptive analysis was performed on the data to determine if experience made a difference in the settlement rate, time or amount. The results are summarized in Table 7-3. Again, no conclusions can be drawn as the results from the first negotiation conflict with the results with the second negotiation.

Table 7-3
Comparison of Settlement Rates,
Settlement Times, and Settlement Amounts
by Experience (Audit Partners Only)

Negotiation 1

Experience	Settlement Rate	Settlement Time	Settlement Amount
Yes (n=12 partners)	50%	3.3 periods	\$2.4 million
No (n=31 partners)	35%	3.0 periods	\$1.7 million
No response (n=5 partners)	20%	3.0 periods	\$5.0 million
Total (n=48 partners)	38%	3.1 periods	\$2.1 million

Negotiation 2

Experience	Settlement Rate	Settlement Time	Settlement Amount
Yes (n=12 partners)	17%	2.5 periods	\$1.0 million
No (n=31 partners)	61%	3.0 periods	\$2.6 million
No response (n=5 partners)	20%	4.0 periods	\$5.0 million
Total (n=48 partners)	46%	3.0 periods	\$2.6 million

7.4 Differences between Audit Partners and Students

Differences between the results of the audit partners and auditing students participating in this dissertation study were not expected. The study included both audit partners and auditing students to increase the power of the statistical tests. Ideally, only audit partners would have been used; however, it is difficult to gain access to a large number of audit partners. As a compromise, students with approximately six months of audit experience were included as subjects in the study.

Given that both audit partners and auditing students were to complete the experiment and that gathering the audit partners in one place would be very difficult, the experimental procedures for the two groups were slightly different. The author paid only the students to participate in the experiment. The audit partners were not paid; however, the author did not expect this difference to influence the results. The students were paid \$10 to motivate them to participate in the experiment. It was not possible to pay the audit partners a similar motivational amount. Instead, they were asked to volunteer to participate during their work day. Since they participated in the experiment during their work day, they were expected to behave in a professional manner such that a motivational payment was not necessary. This is commonplace in accounting studies where participants are auditors; for example, Bonner, Libby and Nelson (1996); Asare and McDaniel (1996); and Kennedy (1995).

The other differences between the experimental procedures for the audit partners and the auditing students were the location of the subjects while participating in the study and the method of communication between the negotiation pairs. Since it was not possible

to bring the audit partners together in one location, as was possible with the students, alternative procedures were developed. The audit partners completed the experiment in their offices via the telephone. The audit partners relayed their offers, arguments, and accept / reject decisions through the author. The students, in contrast, completed the experiment in two classrooms at Wilfrid Laurier University. The students communicated via a sheet of paper, referred to as the negotiation sheet, which was passed back and forth between the negotiation partners via the author or research assistants. These slight differences were not expected to influence the behaviour or outcomes of the participants.

However, since the different subject samples have different levels of audit experience, analysis was performed to determine if there were differences in behaviour and outcomes. Overall, the results did not significantly differ between the audit partners and students; however, as will be discussed below, it appears that the students chose to be more definitive in some of their decisions as compared to the audit partners. It is very loosely speculated that the students played the game or attempted to negotiate a settlement by acting more as economic agents than the audit partners did. The audit partners, on the other hand, seemed to bring more of their past experience and personal feelings and beliefs into their decisions.

Previous economic studies have shown similar results: students, especially more junior students, behave more as economics would predict without bringing real world experiences into their decisions and actions when participating in experiments, whereas the professional subjects are not able to ignore their experiences and the real world factors when making decisions and taking actions. For example, Dyer, Kagel and Levin (1989)

found that experts behaved less as economic agents than students in their study on auction bidding for construction contracts. The students were much more risk averse than the experienced contract bidders were. This study also suggested that professionals probably develop rules of thumb which aid them in decision making in the field but unfortunately, are not overly useful in the lab. A similar study, Yezer, Goldfarb and Poppen (1996), found that economists behave more as economic agents in laboratory experiments than they do in real world situations. Also, Murnighan and Saxon (1994) found that kindergarten students behaved more like economic game theory would predict than any other subject group in the ultimatum game as they accepted minimal offers of 1% of the amount to be divided 70% of the time. This was compared to third and sixth graders who would accept 1% of the amount to be divided about 40% of the time. These results are much different than the typical ultimatum game results which find that university students usually reject offers of less than 20% of the total amount to be split.

The most notable differences between the audit partners and auditing students decisions and actions in this thesis are as follows. The auditing students, especially the student defendants, chose to make a greater distinction between the high merit and low merit cases and were willing to acknowledge the auditor's negligence. The audit partners, on the other hand, seemed to be reluctant to acknowledge that the audit firm in the case had been negligent. This difference was found in the assessment of a fair settlement, the judge's award, the manipulation check and the settlement amount. The students' assessments (both plaintiff advisor and defendant) of a fair settlement amount and judge ruling and agreed to settlement amounts were higher than those of the audit partners. Also, the students' assessments and manipulation check rankings in the high merit case

were higher than those of students in the low merit case; this difference was not found in the audit partner assessments.

The assessments regarding how the judge would rule (in favour of the plaintiff or in favour of the defendant) also differed systematically for the audit partners and students. The audit partners believed that the judge was more likely to rule in favour of the plaintiff compared with the students. It is speculated that the auditors' past experience and the common belief of the audit profession that auditors typically do not do well in court influenced these assessments.

The settlement rate for the students was lower than for the audit partners; however, the data suggests that the student settlement rates could have increased to a rate similar to the audit partners if the student pairs had been given more time to negotiate.

Finally, the students appeared to be more satisfied with the settlements they reached than the audit partners were. This can partially be explained by the fact that the settlement amounts for the students were slightly higher than the audit partners.

In conclusion, there are some slight differences between the results of the audit partners and the students. These differences might be interpreted as indicating that the students played the game more as economics predicts whereas the audit partners were more influenced by behavioural factors. These results that students with less real world experience behave more as economic agents than professionals do are also supported in Dyer, Kagel and Levin, (1989); Yezer, Goldfarb and Poppen (1996), and Murnighan and Saxon (1994).

7.5 Conclusion

This chapter illustrates that the participants perceived there to be reputation costs and opportunity costs of both settling a case out of court and fighting a case in court. However, it appears that the perceived costs of fighting a case in court were more important. Also, this chapter breaks down the settlement rates, settlement times and settlement amounts by firm and by experience. No conclusions are suggested on these analyses because the results are somewhat conflicting and the number of subjects per cell in some instances is quite small. Finally, the chapter discusses some of the differences between the audit partner sample and student sample results. The differences suggest that the students behaved more closely to the expected behaviours of economic agents whereas behavioural factors were more likely to influence the audit partners.

CHAPTER 8.0
LIMITATIONS, IMPLICATIONS,
AND FUTURE RESEARCH

8.0 Introduction

This chapter concludes the thesis by discussing the general conclusions of the study, the limitations of the thesis, the implications of the findings of the study for both researchers and practitioners and some future research opportunities related to the thesis.

8.1 General Conclusions

A number of general conclusions can be drawn from the findings of this study. This summary of the findings will break down the results from each manipulation by the stage of the experiment. For example, the results regarding the hypotheses dealing with the initial assessments will be discussed first. This will be followed by the results from the testing of the hypotheses on the settlement process. Finally, the results of the hypotheses on the final assessments will be discussed.

8.1.1 Initial Assessments

The initial assessments made by the subjects on what a fair settlement would be, how the judge would rule and what the award would be were somewhat influenced by self-serving biases. That is, the plaintiff advisors' assessments of what a fair settlement would

be were higher than those of the defendants. Also, more plaintiff advisors than defendants thought that the judge would rule in favour of the plaintiff.

The level of merit manipulation also influenced the initial assessments of the defendant subjects. The defendants, particularly the student defendants, appear to have chosen to make the distinction between the two levels of merit whereas the plaintiff advisors did not. Also, the self-serving biases are more prevalent in the low merit case where the outcome is less certain than in the high merit case where the outcome is quite certain.

Finally, the initial assessments were not influenced by the public announcement manipulation.

8.1.2 Settlement Process

Both the merit level manipulation and the public announcement manipulation influenced the settlement process. For the public announcement manipulation, reputational concerns appear to have come into play as the subjects in the public announcement condition had a harder time reaching a settlement, however, if a settlement was reached, it was done more quickly and for a higher amount, on average.

The results from the level of merit manipulation show that the settlement amount agreed to was higher in the high merit case as compared to the low merit case. This again suggests that subjects are able to distinguish somewhat between merit levels.

8.1.3 Final Assessments

Plaintiff advisors were willing to accept less than the agreed upon settlement amount and defendants were willing to pay out more than the agreed upon settlement amount, as was hypothesized. However, the final assessments of what a fair settlement was did not differ significantly from the initial assessments.

8.2 Limitations of the Thesis

As with any study, there are limitations to take into account when interpreting the results. Since this is an experimental study, most of the limitations, as shown below, have to do with the external validity of the experiment and the results. The limitations are as follows.

Since the legal case is not a real legal dispute, it may not represent the true issues and facts that occur in an audit legal dispute. Also, the results may be case-specific and not generalizable to other types of legal disputes. However, the case was designed to be representative of common disputes and was based on the cases in the Palmrose (1991) study on auditor litigation.

The participants in this study were audit partners and students. Although some of the audit partners have had experience in litigation negotiations, most have not. Also, audit firms have centralized functions to deal with the lawsuits they face, so in most instances the audit partner who performed the audit has little input into the litigation decisions and settlement negotiations. In fact, most of the decisions are made by very high level and specialized teams that deal with these types of issues on a regular basis.

However, all audit partners are aware of the risks and processes involved with a litigation case. Audit partners were the best proxies available for those making the actual decisions in the firm.

Another potential limitation may be that subjects may bring preconceived notions of how they should behave in a legal negotiation setting. However, these preconceived notions probably occur in real legal settings as well.

Also, the public announcement manipulation may not effectively represent the bad publicity associated with the settlement of a case. However, it does get at some aspects of reputation, such as that of being an effective negotiator. It is expected that if there is a reputation effect from this manipulation, it would be even stronger in a real litigation case.

External validity problems may occur since the litigants are making the decisions on their own rather than consulting with a lawyer. However, conversations with lawyers suggest that the lawyers do not make the decisions. The client makes the decisions.

Another related limitation is that there is not an insurer involved in the negotiation. In these types of cases, usually a representative of the insurance company is involved in the negotiations and he or she may push for settlement.

Having the subjects negotiate through the researcher may also be a limitation. In practice, though, much of the negotiation of settlements is done through lawyers, not face-to-face.

Another potential limitation might be that the legal fees were not contingent on the outcome. In Canada, the loser often must pay the winner's legal fees, whereas in the U.S., litigants are responsible for their own legal fees.

Also, in the U.S., most of these types of cases are tried before a jury, whereas a judge is the arbiter in this study. In Canada, these types of cases are usually tried before a judge. Since this study involved Canadian auditors, the use of a judge increases the validity.

Finally, there are many other dimensions, not included in this paper, that impact auditors' decisions when involved in a litigation case. For example, risk attitudes, prior litigation experience, prospective litigation over other audits, wealth level of the auditor, past relationship with the client and current client portfolio. If all of these issues were brought into the experiment the results would become very complex and difficult to isolate. These issues should be studied in future research.

8.3 Implications for Researchers

The results of this thesis, and the fact that this is a relatively new area of research, suggest that there are many implications for other researchers. First, behavioural game theory seems to lend itself to auditing research, and therefore, should be considered as a research method in other types of auditing research such as client negotiations and regulation changes. Also, it is expected that behavioural game theory would be a viable method of research in other accounting areas as well (tax, financial accounting, management accounting).

Secondly, the results of the study regarding the reputational concerns and the importance of the perceived reputation and opportunity costs indicate that more research is required in this area. For example, given that we know that reputation and reputational

concerns are important to an auditor's decisions, more study is necessary to determine *how* important reputation and reputational concerns actually are to an auditor. Also, the subjects' responses regarding the perceived opportunity costs also warrant future investigation. It is of interest to determine how influential auditors' beliefs regarding these perceived costs are when decisions are being made. It is also necessary to determine if these perceptions vary for the users and regulators as compared to auditors.

Third, given that a number of auditors believe that many of the cases brought against them are without merit, the results here suggest that improvements can be made between the distinction of cases with and without merit. Researchers, therefore, have an opportunity to develop methods for determining the level of merit of the case as well as for helping auditors, and other defendants, to make effective decisions when dealing with a case either with or without merit. An example might be to have the litigant come up with arguments that the other side might use in the negotiation or court case. This could help the litigant to assess the strengths and weaknesses of the case.

Fourth, there are many opportunities for extensions of the study in this thesis. Some of these future research opportunities are as follows:

1. to implement different costs of delay for the parties to determine if this has an impact on the settlement rate.
2. to implement different costs if settlement is not reached to determine if this influences the negotiated settlement amount.
3. to allow the subjects to complete a transaction to develop a relationship prior to the negotiation to determine if a prior relationship has an effect on the bargaining process.

This would more closely get at the ongoing relationship between auditors and shareholders.

4. to allow different amounts of time to negotiate (vary the number of periods and time considerably) to determine if agreements are more prevalent in shorter or longer bargaining periods. This could be useful for policy setting as it would give some guidance regarding the amount of time parties should be allowed to make the decision to either go to court or settle.
5. to give the defendant more money to use in the settlement, but keep the amount of the damages the same. This will represent the 'deep pockets' phenomenon the auditor faces. It would be interesting to determine if this has an impact on the outcome.
6. to give subjects some history regarding similar case settlements. This will better represent the actual decision process auditors make when faced with a litigation case as auditors use past cases and outcomes when making their decisions to settle.
7. to have the subjects negotiate the settlement face-to-face to determine if this would improve or hinder settlement negotiations. This would get at another important part of the settlement negotiation process as much, but not all, negotiation is done through the lawyers.
8. to have the subjects negotiate the settlement in groups. This would reflect the fact that auditors are often combined into partnerships and plaintiffs are often combined into groups as in class action suits. Also, the lawyers representing each side are usually a group of lawyers, not just one person.

9. to introduce information asymmetry into the negotiation. The defendant could be more knowledgeable about the actual quality of the audit procedures than the plaintiff. This would represent the early stages of the settlement process in real audit cases.
10. to analytically model this game and solve it. The results could then be compared to the experimental results and future research could be identified.

8.4 Implications for Practitioners

This thesis also has implications for audit practitioners. The profession is concerned with litigation and the decisions involved within a litigation since many firms have been, are or will be involved in a litigation. The findings suggest the following opportunities for improvement in the negotiation of litigation settlements.

First, it appears that reputational concerns are influential when an auditor is involved in a litigation. Therefore, auditors should be aware of this when making their decisions about whether to settle or not. This awareness may help auditors to make better decisions and also suggest to them that they should try to keep their decisions out of the press. However, they should not completely discount their reputational concerns as it does seem that these concerns are warranted and important to their success.

Second, the prevalence of self-serving biases in the subjects in this study also has implications for practitioners. An awareness of the self-serving bias may enable litigants to overcome the bias and possibly make better decisions. However, it should be pointed out that in an actual litigation case lawyers are involved and these lawyers, being more objective than the parties they represent, should be less affected by the self-serving bias.

Third, improvements can be made when auditors are distinguishing between different merit levels of the cases. Although, they seem to be able to make the distinction between high and low merit cases, the rankings were not as extreme as they should be. By pointing this out to the audit partners, it might influence them to take more time and put more effort into assessing the level of merit of the case brought against them. Therefore, if they can improve their ability to distinguish between cases with different levels of merit, auditors should be able to make better decisions when involved in a litigation case.

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APPENDIX 1
List of Papers in
Behavioural Game Theory

Topic	Author(s)	Title	Journal	Vol. No.	Month	Year	Pages
Ultimatum Games	Guth, W., R. Schmittberger and B. Schwartz	An Experimental Analysis of Ultimatum Bargaining	Journal of Economic Behavior and Organization	3		1982	367-388
Ultimatum Games	Birnmore, Shaked, and Sutton	Testing NonCooperative Bargaining Theory	The American Economic Review	75	5 December	1985	1178-1180
Ultimatum Games	Neelin, J., H. Sommerschein and M. Spiegel	A Further Test of Noncooperative Bargaining Theory	The American Economic Review	78	4 September	1988	824-839
Ultimatum Games	Ochis, J. and A. E. Roth	An Experimental Study of Sequential Bargaining	The American Economic Review	79	3 June	1989	354-385
Ultimatum Games	Guth, W., P. Ockenfels, and M. Wendel	Efficiency by Trust in Fairness? Multiperiod Ultimatum Bargaining Experiments with an Increasing Cake	International Journal of Game Theory	22		1993	51-73
Entitlements, rights, etc.	Hoffman, E., M. L. Spitzer	Entitlements, Rights, and Fairness: An Experimental Examination of Subjects' Concepts of Distribution Justice	The Journal of Legal Studies	14	June	1985	259-297
Entitlements, rights, etc.	Burrows, P. and G. Loomes	The Impact of Fairness on Bargaining Behavior	Empirical Economics	19	2	1994	201-221

Topic	Author(s)	Title	Journal	Vol.	No.	Month	Year	Pages
Entitlements, rights, etc.	Hoffman, E., K. McCabe, K. Shachat, and V. Smith	Preferences, Property Rights, and Anonymity in Bargaining Games	Games and Economic Behavior	7			1994	346-380
Reciprocity	Berg, J. and J. Dickhaut and K. McCabe	Trust, Reciprocity, and Social History	Games and Economic Behavior	10		February	1995	122-142
Accounting / Transfer Pricing / Fairness	Chalos, P. & S. Haka	Transfer Pricing Under Bilateral Bargaining	The Accounting Review	65		3 July	1990	624-641
Accounting / Transfer Pricing / Fairness	Ghosh, D.	Intra-Firm Pricing: Experimental Evaluation of Alternative Mechanisms	Journal of Management Accounting Research	8		Fall	1994	78-92
Accounting / Transfer Pricing / Fairness	Luft, J.L. and R. Libby	Profit Comparisons, Market Prices and Managers' Judgments About Negotiated Transfer Prices	The Accounting Review	72		2 April	1997	217-228
Accounting / Fairness	Church B.K. and P. Zhang	Negotiations, Deadlines, and Auditing: Experimental Evidence	Manuscript			February	1996	
Fairness	Loewenstein, G., S. Issacharoff, C. Camerer and L. Babcock	Self-serving Assessments of Fairness and Pretrial Bargaining	Journal of Legal Studies			January	1993	135-159
Fairness	Camerer C. and G. Loewenstein	Information, fairness, and efficiency in bargaining	Psychological Perspectives on Justice: Theory and Applications (Mellers and Baron, eds.)				1993	
	Babcock, L., G. Loewenstein and Xianghong Wang	The Relationship Between Uncertainty, the Contract Zone, and Efficiency in a Bargaining Experiment	Journal of Economic Behavior and Organization	27			1995	475-485

Topic	Author(s)	Title	Journal	Journal	Vol.	No.	Month	Year	Pages
Fairness	Prasnikar, V. and A. E. Roth	Considerations of Fairness and Strategy: Experimental Data from Sequential Games	The Quarterly Journal of Economics	Journal of Economics			August	1992	865-888
Fairness	Weg, E. and R. Zwick	Toward the Settlement of the Fairness Issues in Ultimatum Games	Journal of Economic Behavior and Organization	Journal of Economic Behavior and Organization	24			1984	19-34
Fairness	Forsythe, R., J. L. Horowitz, N. E. Savin, and M. Sefton	Fairness in Simple Bargaining Experiments	Games and Economic Behavior	Games and Economic Behavior	6			1984	347-369
Markets	Kahneman, D., J. L. Knetsch, and R. Thaler	Fairness and the Assumptions of Economics	Journal of Business	Journal of Business	59	4	October	1986a	S285-S330
Markets	Kahneman, D., J. L. Knetsch, and R. Thaler	Fairness as a Constraint on Profit Seeking: Entitlements in the Market	The American Economic Review	The American Economic Review	76	4		1986b	728-741
Markets	Kachelmeier, S. J., S. T. Limberg and M. S. Schabewald	Fairness in markets: A Laboratory Investigation	Journal of Economic Psychology	Journal of Economic Psychology	12			1991	447-464
Markets	Roth, A. E., V. Prasnikar, M. Okuno-Fujiwara and S. Zamir	Bargaining and Market Behavior in Jerusalem, Ljubljana, Pittsburgh and Tokyo: An Experimental Study	The American Economic Review	The American Economic Review	81	5	December	1991	1068-1095
Reputations	King, R. R.	Reputation Formation for Reliable Reporting: An Experimental Investigation	The Accounting Review	The Accounting Review	71	3	July	1996	375-396
Reputations	Camerer, C. and K. Weigelt	Experimental Tests of a Sequential Equilibrium Reputation Model	Econometrica	Econometrica	56	1	January	1988	1-36
Biases	Camerer, C., G. Loewenstein and M. Weber	The Curse of Knowledge in Economic Settings: An Experimental Analysis	Journal of Political Economy	Journal of Political Economy	97	5		1989	1232-1255
Biases	Camerer, C. F.	Do Biases in Probability Judgment Matter in Markets? Experimental Evidence	The American Economic Review	The American Economic Review	77	5	December	1987	980-997

Topic	Author(s)	Title	Journal	Vol.	No.	Month	Year	Pages
Biases	Babcock, L. G. Loewenstein, S. Issacharoff, and C. Camerer	Biased Judgments of Fairness in Bargaining	The American Economic Review			December	1985	1337-1343
Biases	Camerer, C. F., E. J. Johnson, T. Raymon, and S. Sen	Cognition and Framing in Sequential Bargaining for Gains and Losses	Frontiers of Game Theory (edited by K. Binmore, A. Kirman and P. Tani, MIT Press)				1983	27-47

APPENDIX 2

Behavioural Game Theory

Table of Manipulations

	Single	Minimum	Multi Population	Dictator	Investment
Role	Guth, Schmitzberger & Schwabe (1982) Hoffman, McCabe, Shachat & Smith (1994)	Birmore, Shaked & Sutton (1985) Neelke, Sonnenschein, & Spiegel (1988) Ochs & Roth (1989) Weg & Zwick (1994)	Roth, Prasnikar, Okuno-Fujimura & Zamir (1991)	Hoffman, McCabe, Shachat & Smith (1994)	Camerer & Weigelt (1988)
Reliability	Guth, Schmitzberger & Schwabe (1982) Hoffman, McCabe, Shachat & Smith (1994) Forsythe, Horowitz, Savin & Selton (1994) Kahneman, Knetsch & Thaler (1986b) Guth, Schmitzberger & Schwabe (1982) Hoffman, McCabe, Shachat & Smith (1994)	Birmore, Shaked & Sutton (1985) Neelke, Sonnenschein, & Spiegel (1988) Binmore, Shaked & Sutton (1985) Neelke, Sonnenschein, & Spiegel (1988) Ochs & Roth (1989) Guth, Ockenfels & Wendel (1993) Weg & Zwick (1994) Neelke, Sonnenschein, & Spiegel (1988) Ochs & Roth (1989) Guth, Ockenfels & Wendel (1993) Camerer, Johnson, Rymon & Sen (1993)	Neelke, Sonnenschein & Spiegel (1988)	Hoffman, McCabe, Shachat & Smith (1994) Forsythe, Horowitz, Savin & Selton (1994) Hoffman, McCabe, Shachat & Smith (1994)	Berg, Dickhaut & McCabe (1995)
Discount Rate					
Payoff Value	Guth, Schmitzberger & Schwabe (1982) Forsythe, Horowitz, Savin & Selton (1994)			Forsythe, Horowitz, Savin & Selton (1994)	
Information	Kahneman, Knetsch & Thaler (1986a) Kahneman, Knetsch & Thaler (1986b) Camerer & Loevenstein (1993)	Camerer, Johnson, Rymon & Sen (1993)			Berg, Dickhaut & McCabe (1995)
Learning	Guth, Schmitzberger & Schwabe (1982)	Birmore, Shaked & Sutton (1985)	Neelke, Sonnenschein, & Spiegel (1988) Ochs & Roth (1989) Guth, Ockenfels & Wendel (1993) McKelvey & Palkey (1992) Camlpede Roth, Prasnikar, Okuno-Fujimura & Zamir (1991) Prasnikar & Roth (1992) Weg & Zwick (1994) Camerer, Johnson, Rymon & Sen (1993)		Camerer & Weigelt (1988)
Communication / Observability				Hoffman, McCabe, Shachat & Smith (1994)	Berg, Dickhaut & McCabe (1995)
Fairness vs Fear of Consequences / Punishment	Hoffman, McCabe, Shachat & Smith (1994) Kahneman, Knetsch & Thaler (1986a) Kahneman, Knetsch & Thaler (1986b) Forsythe, Horowitz, Savin & Selton (1994) Camerer & Loevenstein (1993)	Weg & Zwick (1994)	Roth, Prasnikar, Okuno-Fujimura & Zamir (1991) Prasnikar & Roth (1992) Weg & Zwick (1994)	Hoffman, McCabe, Shachat & Smith (1994) Forsythe, Horowitz, Savin & Selton (1994)	
Reputation / Beliefs		Guth, Ockenfels & Wendel (1993)			Camerer & Weigelt (1988)
Reciprocity / Trust		Guth, Ockenfels & Wendel (1993)			Berg, Dickhaut & McCabe (1995)
Biases		Camerer, Johnson, Rymon & Sen (1993)			

	Journal	Reference
Role	Kachelmeier, Limberg, & Schadeveld (1991) Roth Prasnikar, Okuno-Fujyura & Zamir (1991) King (1996)	Hollman & Spitzer (1985) Burrows & Loomes (1994) Loewenstein, Isaccharoff, Camerer & Babcock (1993) Babcock, Loewenstein & Wang (1995) Camerer & Loewenstein (1993) Babcock, Loewenstein, Isaccharoff & Camerer (1995) Church & Zhang (1996) Lufi & Libby (1997) Ghosh (1994) & Haks (1990)
Reliability		Burrows & Loomes (1994) Hollman and Spitzer (1985)
Complexity		
Discount Rate		Babcock, Loewenstein & Wang (1995) Babcock, Loewenstein, Isaccharoff & Camerer (1995)
Payoff Value		Hollman and Spitzer (1985) Church & Zhang (1996) & Haks (1990) Loewenstein, Isaccharoff, Camerer & Babcock (1993)
Information	Kahneman, Knetsch & Thaler (1986a) Kahneman, Knetsch & Thaler (1986b) Kachelmeier, Limberg, & Schadeveld (1991) Camerer, Loewenstein & Weber (1989) King (1996)	Babcock, Loewenstein & Wang (1995) Camerer & Loewenstein (1993) Babcock, Loewenstein, Isaccharoff & Camerer (1995) Church & Zhang (1996) Lufi & Libby (1997) (1994) Ghosh
Learning	Roth, Prasnikar, Okuno-Fujyura & Zamir (1991) Prasnikar & Roth (1992) Camerer (1987)	Burrows & Loomes (1994) Church & Zhang (1996)
Communication / Observability	Camerer (1987) (1996) King	Hollman & Spitzer (1985) Burrows & Loomes (1994) & Haks (1990) Ghosh (1994) Loewenstein, Isaccharoff, Camerer & Babcock (1993) Loewenstein, Isaccharoff & Camerer (1995)
Fairness vs Fear of Consequences / Punishment	Roth, Prasnikar, Okuno-Fujyura & Zamir (1991) Kahneman, Knetsch & Thaler (1986a) Kahneman, Knetsch & Thaler (1986b) Kachelmeier, Limberg, & Schadeveld (1991) Prasnikar & Roth (1992)	Hollman & Spitzer (1985) Burrows & Loomes (1994) & Libby (1997) Isaccharoff, Camerer & Babcock (1993) Camerer & Loewenstein (1993) Babcock, Loewenstein, Isaccharoff & Camerer (1995) Church & Zhang (1996) Lufi
Reputation / Betels	King (1996)	Church & Zhang (1996)
Reciprocity / Trust		
Biases	Camerer (1987) Camerer, Loewenstein & Weber (1989)	Loewenstein, Isaccharoff, Camerer & Babcock (1993) Camerer & Loewenstein (1993) Babcock, Loewenstein, Isaccharoff & Camerer (1995)

APPENDIX 3

Experimental Procedures: Students

- A) Student Defendant with High Merit Case
- B) Student Plaintiff Advisor with Low Merit Case
- C) Negotiation Sheet
- D) Public Announcement Sheet

(Public Announcement Instructions are Bolded)

A)

Part 1**Instructions:**

Thank you for participating in this study. You will be given a flat fee of \$10 plus a chance to win more money by participating.

One important issue currently facing auditors is the litigation crisis. Please imagine yourself as the **auditors, Jones & Company, the defendant**, in the following legal case.

Please remember your role while reading the case and read the case materials and facts carefully as you will be asked to make decisions based on these facts later.

The case will be presented to you as follows:

The complaint, answer and damages will be given first. Next, you will read the opening statements for both the plaintiff and defendant. Following this, you will read testimony from two witnesses for the plaintiff and two witnesses for the defendant. Lastly, the plaintiff's and defendant's closing statements will be given.

After you have read the case materials, you will be asked to do the following:

- Answer some questions
- Be randomly paired with someone in the other room acting as the plaintiff's advisor and attempt to negotiate a settlement
- Answer some questions regarding the negotiation
- Be randomly paired with another person in the other room acting as the plaintiff's advisor
- **Report your outcome of the first negotiation (amount and time to settle) to the new plaintiff advisor**
- Attempt to negotiate a second settlement
- Answer some questions regarding the second negotiation
- Answer some general questions about yourself and your participation in the study

Please remember that you will be asked to report your first negotiated outcome (amount and time to settle) to the new plaintiff in the second negotiation.

Please begin reading the case.

Bierhoff, Ltd. v. Jones & Company
Summary, Case #96203

Complaint: The plaintiff, Bierhoff, Ltd., alleges that the defendant, Jones & Company, was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and that Bierhoff, Ltd. suffered damages of \$10,000,000 as a consequence of relying on these audited 1996 financial statements.

Answer: The defendant, Jones & Company, responds that it complied with auditing standards and that therefore it was not negligent.

Damages: The plaintiff is suing the defendant for \$10,000,000 in damages.

Judge: Plaintiff lawyer, please give your opening statement.

Plaintiff Opening Statement: This case is about auditor negligence. You are about to find out what can happen when auditors do not do their jobs properly and serious fraud causes errors in the financial statements. My client, Bierhoff, Ltd., a venture capital company, received and relied on the financial statements of Big Time Gravel in their decision to invest in Big Time Gravel. They later found out that the financial statements were fraudulent. Jones & Company was aware that Bierhoff, Ltd. would be relying on the Big Time Gravel financial statements as Bierhoff, Ltd. had sent a letter outlining their intentions to Jones & Company prior to the audit. Jones & Company's negligence cost Bierhoff, Ltd. \$10,000,000.

Auditors investigate the financial records of their client company to determine whether the financial statements are a valid summary of the economic events and transactions that affected the company during the year. Financial statements are summaries of financial information that are given to investors and creditors to help them make informed decisions. The value of inventory is one important number that is reported in the financial statements. The result of auditors' work is a report that states whether or not the financial statements of a company are accurate, or, put another way, that the financial statements are not materially misstated. Material or materiality, per CICA HB. 1000.17, "is the term used to describe the significance of financial statement information to decision makers. An item of information, or an aggregate of items is material if it is probable that its omission or misstatement would influence or change a decision." It is often measured in dollars.

Although auditors are hired and paid by the companies whose financial statements they examine, an auditor's primary duty is to the investors to whom it matters whether the financial

statements are fairly stated. Investors, per CICA HB. 1000.09, include present and potential debt and equity investors and their advisors.

Jones & Company reported, per the audit opinion, that the 1996 financial statements of Big Time Gravel "presented fairly, in all material respects, the financial statement position of the company as at December 31, 1996 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles." In other words, Jones & Company gave Big Time Gravel a "clean" report. It is my job to prove to you, on behalf of Bierhoff, Ltd., that Jones & Company was negligent in its performance of the audit of the 1996 financial statements of Big Time Gravel. I will establish that Jones & Company did not do sufficient work on which to base its opinion, and that, as a result, its opinion was wrong. Because of Jones & Company's negligence, materially misstated financial statements were given to Bierhoff, Ltd. Bierhoff, Ltd. then relied on these misstated financial statements when it invested \$10,000,000 in Big Time Gravel. Big Time Gravel's financial statements listed an inventory balance that was \$5,000,000 too high. Jones & Company failed to find this huge inaccuracy and the fraud behind it because they did not perform an audit of sufficient quality; that is, they did not exercise the same degree of care that other auditors in their position would have used. The \$5,000,000 overstatement of inventory hid Big Time Gravel's financial problems from Bierhoff, Ltd. When Big Time Gravel's financial problems came to light, the company declared bankruptcy and my client lost their investment. Bierhoff, Ltd. believes that the auditor who negligently failed to discover the overstatement should reimburse it for its \$10,000,000 loss.

I will prove my case by calling two witnesses. The first witness is Mr. Kesler, former general manager of Big Time Gravel. He will tell you how inventory is stored and counted, and he will also give you some background information about the operations of the business. He was unaware of the fraudulent activities being carried out by the senior management of Big Time Gravel. The second witness is Professor Evans, a respected professor specializing in auditing at a major university. Her expert testimony will point out several areas in which the performance of Jones & Company was substandard and will describe how such substandard procedures led to the misstatement of financial statements, which led to my client's losses. I will argue that Jones & Company should have known that the 1996 financial statements of Big Time Gravel were misstated and should have performed additional work to discover the precise nature of the misstatement.

I am confident that you will find for the plaintiff as Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and my client, Bierhoff, Ltd., did suffer a loss of \$10,000,000 as a result of this negligence.

Judge: **Lawyer for the defendant, please give your opening statement.**

Defense Opening Statement: It is our position that Jones & Company complied with generally accepted auditing standards in its audit of Big Time Gravel's financial statements, and that Jones & Company was, therefore, not negligent. Auditors reduce the probability that people receive misstated financial statements. Auditors could try to find every misstatement, but, to do so they would have to examine every transaction in which a company took part. This would mean that financial statements would not be available in a timely manner since every transaction would have to be looked at. It would also make the cost of an audit so high that no one would be able to afford an audit and; therefore, investors and creditors would not have reliable information on which to base their decisions. It also may not be possible to audit every transaction because there might be unrecorded transactions. The audit of completeness of transactions is not possible. Instead, auditors examine a subset of transactions by using their professional judgment and sampling techniques. This is what auditing standards require.

The plaintiff has alleged that Jones & Company was negligent in its audit of Big Time Gravel's 1996 financial statements. Negligence can be established only when an auditor fails to exercise the usual judgment, care, skill, and diligence employed by other Chartered Accountants (CAs) in the community. Auditing standards determine the type and amount of work that CAs do. It is the defense's position that if an auditor complies with auditing standards, he has not been negligent.

The plaintiff makes a point of mentioning the loss of his client, Bierhoff, Ltd. That loss is not relevant in determining whether Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel. Only the actions and decisions made by Jones & Company, as compared with those that would have been made by other competent CAs in similar circumstances, are relevant. I will argue that Jones & Company did what any other auditor in its position would have done, and that it in no way violated auditing standards.

The plaintiff must prove its allegations by a preponderance of the evidence. This means that it must show that the charges are more probably true than not true. The plaintiff cannot do so. I will present two witnesses. First, I will call Mr. Robertson, the partner from Jones & Company in charge of the Big Time Gravel audit. He will describe the procedures performed during the audit. The second witness will be Ms. Brecht, a respected partner with another large accounting firm and expert witness. She will establish that Jones & Company made appropriate use of professional judgment in making the decisions that it did, and that it in no way violated professional standards. In fact, auditing standards explicitly recognize that auditors may not be able to discover fraud such as that which occurred in this case. Jones & Company is a competent, esteemed accounting firm, and I am confident that you will find in its favour.

Judge: Plaintiff lawyer, please call your first witness.

Plaintiff Lawyer: I call Robert Kesler.
Mr. Kesler, please tell the court your position and length of time employed at Big Time Gravel.

Mr. Robert Kesler, Witness for the Plaintiff: I was the general manager of Big Time Gravel from 1991 through March of 1996.

Plaintiff Lawyer: Were you aware of the fraudulent activities and the overstatement of inventory at the 1996 year end?

Robert Kesler: No, I was not aware of the fraud and overstatement of inventory. I was not involved with the estimation of the quantity of inventory.

Plaintiff Lawyer: Thank you. Now, please give us a brief summary of Big Time Gravel's business.

Robert Kesler: Big Time Gravel is a large producer of aggregate, or gravel, and cement in a large, growing city. It buys land, mines the resources, restores the land, then sells it to developers. The products are sold to contractors, city and provincial road departments and other concrete producers.

Plaintiff Lawyer: How much of Big Time Gravel's assets is comprised of inventory and how is this inventory stored?

Robert Kesler: A large portion, about 53%, of the company's total assets is inventory. These amounts are primarily represented by large piles of aggregate and concrete additives, such as colours and strengtheners, which are located at various mining sites and at the company's sales lots.

Plaintiff Lawyer: How does Big Time Gravel keep track of inventory?

Robert Kesler: Because of the nature of our business, we cannot keep accurate records of how much inventory we have on hand. We have our lot managers estimate our inventory on a monthly basis.

Plaintiff Lawyer: Thank you, Mr. Kesler.

Cross-examination:

Defendant Lawyer: Are you comfortable with the company procedures for estimating and valuing inventory?

Robert Kesler: Yes, I am. Our people are experienced in the estimation and valuation of the inventory. The same people have done the estimation for the five years I have been at Big Time Gravel and I understand that they had been doing it for several years before I arrived.

Defendant Lawyer: That's all, your honour.

Judge: Next witness, plaintiff lawyer.

Plaintiff Lawyer: I now call Professor Irene Evans.
Ms. Evans, in your opinion what is the issue at hand in this case?

Professor Irene Evans, Expert Witness for the Plaintiff: The issue at hand is that Big Time Gravel overstated its inventory by \$5,000,000 and Jones & Company failed to discover the misstatement.

Plaintiff Lawyer: How was Big Time Gravel able to overstate their inventory balance by \$5,000,000?

Irene Evans: The procedures used to inflate inventory values included double counting of items, especially at the sites where auditors did not observe inventory procedures, and large estimation errors of the quantities due to the purposeful use of an inappropriate estimation procedure.

Plaintiff Lawyer: Did Jones & Company perform the appropriate amount of audit work?

Irene Evans: According to the auditors' working papers, they did observe Big Time Gravel's annual inventory procedures at some locations, and they did review calculations made by the lot managers. Auditing standards require auditors to observe inventory procedures, in part so that auditors can verify that the items that the client claims to own really do exist. In my opinion, it was not adequate for Jones & Company to observe procedures at only five of the firm's eleven lots, as significant errors or other misstatements could have occurred, and did

occur, at the other sites. Further, Jones & Company told the client two weeks in advance which sites had been selected. This advance notice provided the client with an opportunity to move inventory between sites. Finally, Jones & Company relied on the company's own estimates of the quantity of inventory. Because complicated estimation procedures are required, Jones & Company should have called in a specialist. Auditing standards require the use of specialists when the auditor is not trained to do a particular kind of work. In this case, it would have been appropriate to call in an engineer to obtain an accurate, unbiased estimate of the quantity of inventory. The audit of inventory is especially important for this company, because inventory represents such a large percentage of the company's assets.

Plaintiff Lawyer: Thank you, Ms. Evans.

Cross-examination:

Defendant Lawyer: Is it normal for an auditor to examine only a subset of all inventory sites?

Irene Evans: Yes, it is normal for an auditor to examine inventory at only a subset of all inventory sites, and, as a practical matter, the client often knows in advance which sites will be examined.

Defendant Lawyer: Do auditing standards require the use of a specialist for this type of inventory?

Irene Evans: No, auditing standards do not explicitly require the auditor to use a specialist for cases in which inventory is stored in piles above the ground, but they do require an auditor to use judgment in determining whether he is competent to assess the quantity and condition of assets. If he is not competent, he should consult with someone who is competent.

Defendant Lawyer: Do auditing standards require auditors to discover fraud?

Irene Evans: No, auditing standards do not require auditors to discover all fraud. Auditing standards acknowledge that it is more difficult for an auditor to discover fraud than errors. Auditing standards require auditors to be alert to the possibility of fraud, though.

Defendant Lawyer: Thank you, Ms Evans. I am finished, your honour.

Judge: Defendant lawyer, call your first witness.

Defendant Lawyer: I call, Mr. James Robertson, the partner in charge of the 1996 Big Time Gravel audit.

Mr. Robertson, how long have you been in charge of the Big Time Gravel audit?

James Robertson: I have been the partner in charge of Big Time Gravel for the past 10 years.

Defendant Lawyer: Has inventory historically been a contentious audit issue for Big Time Gravel?

James Robertson: Yes, determining the amount of inventory on hand is always a big audit issue.

Defendant Lawyer: What did the auditors do to audit the December 31, 1996 inventory balance?

James Robertson: At the end of 1996, we sent auditors out to about half of the sites. They watched the lot managers pace off the sizes of the piles. We reviewed the managers' calculations afterwards. These procedures are the same as the procedures performed over the past 10 years. We have never had a problem with Big Time Gravel.

Defendant Lawyer: Does Jones & Company traditionally spend a lot of time on the estimation and valuation of the inventory balance?

James Robertson: Yes, the inventory estimation and valuation is given a major portion of the audit time. We are always very concerned with the estimation of the inventory.

Defendant Lawyer: Thank you, Mr. Robertson.

Cross Examination:

Plaintiff Lawyer: Mr. Robertson, were you not concerned when you found out that the five sites you selected to observe the count at year end only represented 50% of the inventory when Big Time Gravel had estimated that they would represent 80%?

James Robertson: We were concerned initially, however, Big Time Gravel was able to dispel our concerns by explaining that they had had a large order to fill in early 1997 which required them to stockpile inventory prior to the year end. They had not been aware of this order when they initially estimated that the five sites would contain 80% of the inventory on hand. Last minute orders like this have occurred in the past as well.

Plaintiff Lawyer: Did you consider hiring a specialist to help you with the estimation of the quantity of inventory on hand at the end of 1996?

James Robertson: We have never had a need to hire a specialist in the past. We have always had a good relationship with the management of Big Time Gravel and have, therefore, been comfortable with observing and recalculating the lot managers' estimates. We believe that we performed appropriate audit procedures.

Plaintiff Lawyer: Thank you, Mr. Robertson. I'm finished, your honour.

Judge: Next witness, defendant lawyer.

Defendant Lawyer: I call, Ms. Joanne Brecht, your honour.
Ms. Brecht, what do auditing standards require auditors to do when auditing inventory?

Ms. Joanne Brecht, Expert Witness for the Defense: Auditing standards require auditors to observe physical counts of inventories when this is feasible, but neither standards nor current practice require an auditor to observe procedures at all inventory sites. Auditing employs the use of professional judgment and sampling techniques.

Defendant Lawyer: Did Jones & Company employ the use of professional judgment and sampling techniques?

Joanne Brecht: Jones & Company made good use of these tools. They selected the sites to be observed carefully, and with good justification. Big Time Gravel had previously estimated that the five locations chosen would hold 80% of the inventory value. Further, as Professor Evans noted, it is not unusual for an audit client to know which inventory sites have been selected for observation. This may be necessitated by the auditor's need to know when to

show up at a particular site, and by the client's need to have one crew take inventory at multiple locations.

Defendant Lawyer: Was Jones & Company explicitly required to use a specialist?

Joanne Brecht: No, they were not. Auditing standards do not explicitly require the use of a specialist in this case. Auditing standards require that the auditors use professional judgment. In this case, it was Jones & Company's judgment that it was competent to assess the accuracy of its client's inventory estimates. Auditors normally work from their client's estimates of inventory quantities.

Defendant Lawyer: Is an auditor expected to discover all fraudulent behavior?

Joanne Brecht: No, auditors are not expected to discover all fraudulent behavior; however, they are expected to be alert to the possibility of fraud. Auditing standards explicitly state, per CICA HB. 5136.10, that "an auditor conducting an audit in accordance with generally accepted auditing standards may not detect fraud even if the effect of its consequences on the financial statements is material." This is due to the fact that if the client actively attempts to deceive the auditor, the auditor may not have access to the evidence that it needs to discover the fraud. This is especially true when high-level management and outside parties are involved in the fraud, as was the case in the Big Time Gravel audit.

Defendant Lawyer: Thank you, Ms. Brecht. Your witness, plaintiff lawyer.

Cross-examination:

Plaintiff Lawyer: Ms Brecht, is it normal for an auditor to allow a client two weeks lead time to schedule inventory observations?

Joanne Brecht: Allowing the client two weeks lead time for scheduling inventory observations may be slightly unusual.

Plaintiff Lawyer: Was it appropriate for Jones & Company to only observe 50% of the inventory?

Joanne Brecht: Big Time Gravel had estimated prior to the count that the five sites selected would have contained 80% of the inventory on hand at year end. Unfortunately, it

turned out that only 50% of the total audited value of inventories was located at the five selected sites.

Plaintiff Lawyer: Is it common practice for an auditor to not hire a specialist to estimate the value of this type of inventory?

Joanne Brecht: The type of inventory in question is somewhat unusual in that it cannot be counted or weighed, and the auditor cannot readily assess its condition or value. Because of this, it is probably more usual than not for auditors to bring in specialists in cases such as this.

Plaintiff Lawyer: Thank you, Ms. Brecht. I am finished, your honour.

Judge: **May we have your closing statement, plaintiff lawyer.**

Plaintiff Closing Statement: The testimony you have heard today established that Jones and Company was negligent in its audit of the 1996 financial statements of Big Time Gravel. A well-respected auditing professor, Professor Evans, has told you that the procedures that Jones & Company used in evaluating the inventory accounts were substandard, and that those substandard procedures caused my client's loss. The defense's own expert witness, Ms. Brecht, even admitted that other auditors might have performed additional procedures before forming an audit opinion. The negligence of Jones & Company resulted in a \$10,000,000 loss for Bierhoff, Ltd.

The most important errors of Jones and Company were first, that it only observed inventory procedures for 50% of the final value of inventory, second, that it did not recognize when its auditors were not competent to assess the accuracy of the quantity and condition of the inventory, third, that it accepted its client's estimates without question, and fourth, that it gave Big Time Gravel two weeks advance notice of which sites had been selected for auditing. Society expects more than that from auditors. We expect, and auditing standards require, auditors to know when they are not competent to perform a specific task and to call in specialists. We expect, and auditing standards require, auditors to maintain an attitude of professional skepticism about client representations. We expect auditors to find \$5,000,000 irregularities and frauds such as the ones in Big Time Gravel's financial statements. Why would we hire auditors if they were not able to find large irregularities in financial statements? Jones & Company did not live up to society's expectations, and it did not meet minimum auditing standards. Therefore, I urge you to find for the plaintiff in this case.

Thank you, your honour.

Judge: Defendant lawyer, may we hear your closing statement?

Defense Closing Statement: The plaintiff has told you that Jones & Company made some mistakes in its audit of the 1996 financial statements of Big Time Gravel. It is your job to evaluate whether the actions taken were actually mistakes. Is it a mistake to allow an audit client to coordinate inventory procedures with the auditor's schedule? Is it a mistake to follow commonly-used judgmental procedures in determining which inventory sites to observe? Is it a mistake to use one's analytical skills to verify the calculations of people who have much experience in estimating gravel quantities and no known reasons to be dishonest? None of these is a mistake; moreover, auditing standards require nothing more than these actions. The plaintiff's expert witness admitted this. Jones & Company did not discover the fraud that Big Time Gravel perpetrated, however, Jones & Company did perform an audit that complies with auditing standards. The plaintiff has failed to demonstrate otherwise. Accordingly, I urge you to find in favour of the defendant, Jones & Company.

Please answer the following questions regarding the case. You may refer back to the case materials, if you wish. Please take care and consideration in making your assessments.

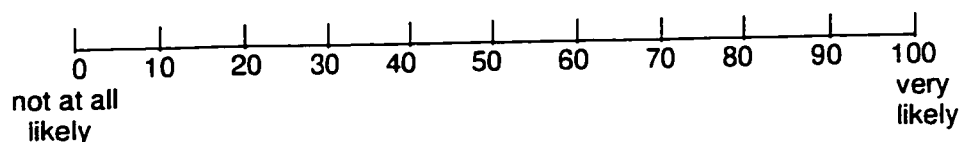
1. What is your assessment of the dollar value of a fair settlement (if any) on the case?

2. A judge has been given the exact same copy of this case as you have received. He or she has not received any additional information. He or she has been involved in a number of audit legal cases.

Do you think the judge will rule in favour of the plaintiff or defendant?

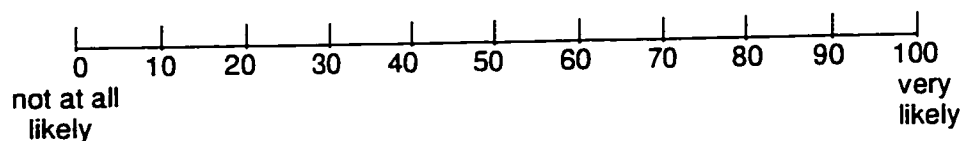
Plaintiff _____ Defendant _____

Please rate what you believe the likelihood of this outcome is:



If you believe the judge will rule in favour of the plaintiff, what is your best guess of the dollar amount of the judge's award in this case?

Please rate what you believe the likelihood of this outcome is:



Please turn the page and begin reading the instructions for the negotiation.

Part 2

Negotiation Session:

You have received a flat fee of \$10 to participate in this experiment. Now I am giving you the chance to win some more money by participating in two negotiations with two different participants of the study acting as either the current auditor and advisor to the plaintiff in the case, Bierhoff, Ltd or the current auditor and advisor to another plaintiff, Sutton Enterprises. Both plaintiffs, Bierhoff, Ltd. and Sutton Enterprises, have given their advisors full authority to make all decisions regarding the negotiation. Bierhoff, Ltd. is a venture capitalist who claims to have lost its investment in Big Time Gravel and Sutton Enterprises is a private investment company who claims to have lost its loan to Big Time Gravel. The plaintiff advisor in both negotiations will be a randomly assigned accounting student in another classroom. Both plaintiff advisors have also been given \$10 to participate in the study.

In both cases, the plaintiff, Bierhoff, Ltd. or Sutton Enterprises, is suing you for \$10,000,000 in damages. By participating in both negotiations, you will be entered twice in a lottery for up to \$500. After the experiment is complete, one negotiation pair will be randomly drawn. This pair will be awarded the \$500 to split as follows: The \$500 will be split according to the agreed upon settlement amount and the time taken to reach a settlement. For example, \$1 of the \$500 will represent \$20,000 of the \$10,000,000. Therefore, if the pair selected agreed to a settlement of \$5,000,000, each individual in the pair would receive \$250. However, each party will be assessed legal fees and other costs of \$250,000 for each period used in the negotiation that did not result in a settlement (see below). If the pair selected did not reach a settlement, the \$500 will be split according to the judge's ruling on the case less any legal fees and other costs. The judge's ruling will be available in an executive summary of the results once the results of the study have been analyzed.

Therefore, the settlement agreed to (if any) determines how the \$500 will be split between the selected pair.

In both negotiations, you will be given an unlimited number of periods to negotiate a settlement, however, you will be limited to approximately 15 minutes for each negotiation. (The proctor will announce when the time limit is up.) Each period will involve either you or the plaintiff advisor making a settlement offer and the opposing litigant either accepting or rejecting the offer. If the offer is accepted by the opposing litigant, the negotiation is over. If the offer is rejected, the litigant that rejects the offer will begin the next period by making a settlement counteroffer. You will make the first offer in both negotiations, therefore, you will make offers in the odd periods. The plaintiff advisor will make offers in the even periods.

If you have not settled at the end of a period, you will be charged \$250,000 for legal fees and other costs. This amount will be deducted from your settlement. The plaintiff advisor will also be charged \$250,000. For example, if you settle in the fifth period, you and the plaintiff advisor will each be charged \$1,000,000 for legal fees and other costs; this would leave a maximum amount of \$8,000,000 for the settlement.

After the first negotiation, you will be asked to report the outcome of that negotiation to the plaintiff advisor for Sutton Enterprises in the second negotiation. You will report the settlement amount (if any) and the number of periods required to reach that settlement.

The plaintiff advisor has read the exact same case as you. He or she does not have any additional information.

If you have any questions, please ask the proctor now.

The negotiation will now begin. Please wait for the proctor to tell you when to turn over the page and make your initial offer.

Negotiation 1**Period 1**

Please make your initial offer.

What is your offer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 1 in the period 1 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Period 2

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the plaintiff advisor's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 2 row on the sheet labelled Negotiation 1. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 2 row on the sheet labelled Negotiation 1.

Period 3

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 1 in the period 3 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Period 4

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the plaintiff advisor's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 4 row on the sheet labelled Negotiation 1. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 4 row on the sheet labelled Negotiation 1.

Period 5

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 1 in the period 5 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Period 6

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the plaintiff advisor's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 6 row on the sheet labelled Negotiation 1. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 6 row on the sheet labelled Negotiation 1.

Period 7

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 1 in the period 7 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Part 3

Negotiation 1 Results:

Instructions: Please answer the following questions regarding the outcome of your first set of negotiations.

1. What is the settlement amount you and the plaintiff advisor agreed to (if any)? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

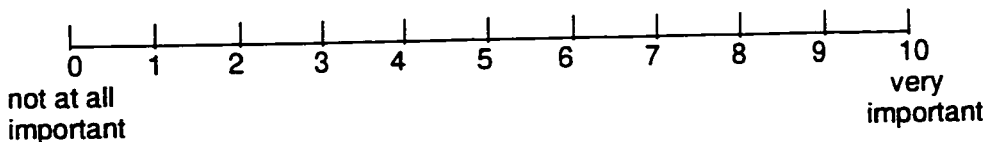
5. What are the factors that influenced your decision?

6. What is the highest settlement offer you would have accepted from the Bierhoff, Ltd. plaintiff advisor? _____

7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any reputation costs of settling when making your decisions during the negotiation?

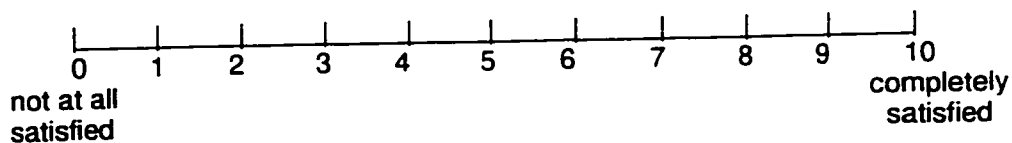
_____ Yes _____ No

If you did consider any reputation costs of settling, how important were these costs to your decisions in the negotiation?

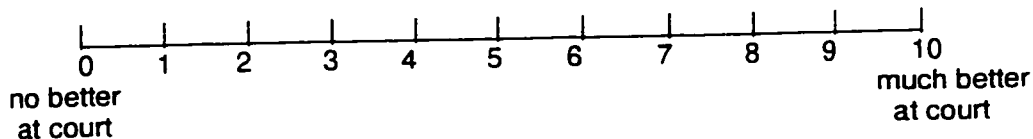


What is your best prediction of the dollar amount of any reputation costs of settling? _____

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

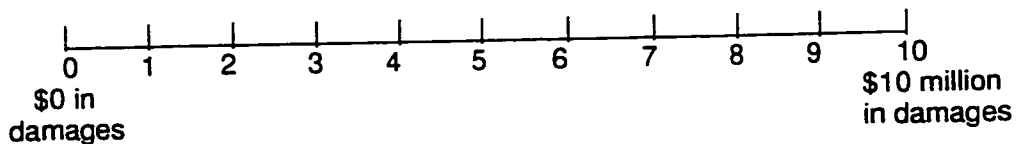


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will have to pay in damages?



Please turn the page and read Part 4.

Part 4

The second negotiation will be run in the exact same manner as Negotiation 1. Please use the sheet labelled Negotiation 2 to record the offers and acceptances/rejections. **Please make sure that you have recorded the outcome of your first negotiation on the sheet labelled Public Announcement so that the proctor can report the outcome of your first negotiation to the Sutton Enterprises plaintiff advisor in the second negotiation.**

The plaintiff in the second negotiation is Sutton Enterprises, a private investment company. This company also claims to have lost \$10,000,000 by relying on the Big Time Gravel 1996 audited financial statements, and therefore, is also suing Jones & Company for \$10,000,000 in damages.

Sutton Enterprises loaned Big Time Gravel \$10,000,000 for expansion in early 1997 after analysing the Big Time Gravel 1996 audited financial statements. Jones & Company was aware of the intended reliance of Sutton Enterprises on the 1996 audited financial statements as Sutton Enterprises had written Jones & Company with its intention in October 1996.

Please assume while negotiating this settlement that the case facts are the same as those in the case of Bierhoff, Ltd. v. Jones & Company.

Please wait for the proctor to signal the beginning of the second negotiation.

Part 5
Negotiation 2

Period 1

Please make your initial offer.

What is your offer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 2 in the period 1 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Period 2

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the plaintiff advisor's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 2 row on the sheet labelled Negotiation 2. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 2 row on the sheet labelled Negotiation 2.

Period 3

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 2 in the period 3 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Period 4

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the plaintiff advisor's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 4 row on the sheet labelled Negotiation 2. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 4 row on the sheet labelled Negotiation 2.

Period 5

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 2 in the period 5 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Period 6

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the plaintiff advisor's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 6 row on the sheet labelled Negotiation 2. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 6 row on the sheet labelled Negotiation 2.

Period 7

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer on the sheet labelled Negotiation 2 in the period 7 row.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the plaintiff advisor.

After the proctor has taken your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer.

Please wait for the plaintiff advisor's response.

Part 6

Negotiation 2 Results

Instructions: Please answer the following questions regarding the outcome of your second set of negotiations.

1. What is the settlement amount you and the plaintiff advisor agreed to (if any) ? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

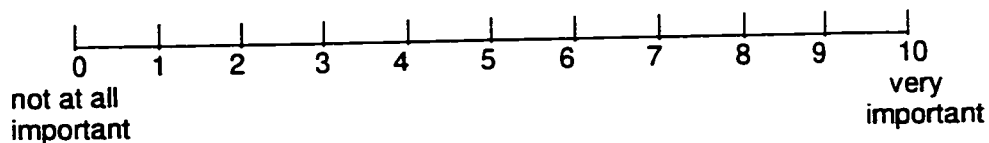
5. What are the factors that influenced your decision?

6. What is the highest settlement offer you would have accepted from the Sutton Enterprises plaintiff advisor? _____

7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any reputation costs of settling when making your decisions during the negotiation?

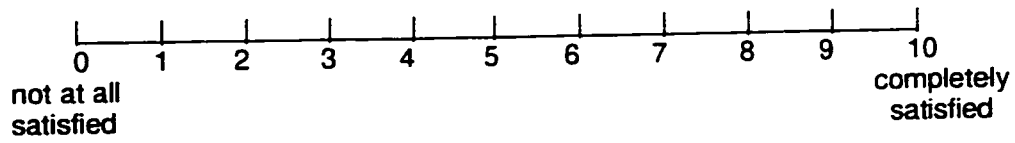
_____ Yes _____ No

If you did consider any reputation costs of settling, how important were these costs to your decisions in the negotiation?

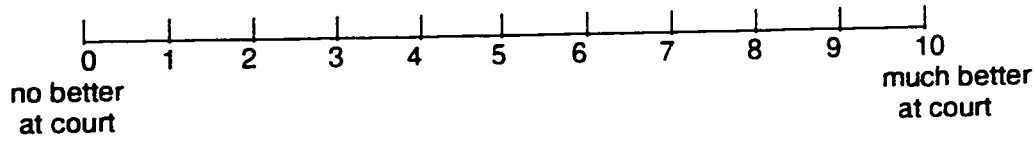


What is your best prediction of the dollar amount of any reputation costs of settling? _____

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

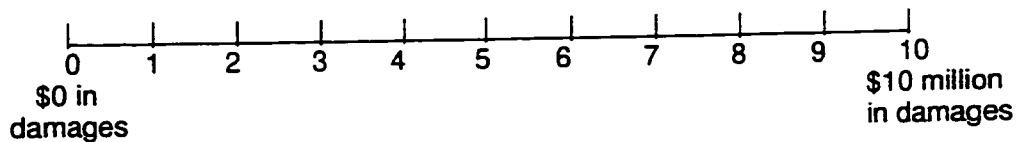


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will have to pay in damages?



Please answer the questions in Part 7.

Part 7

Additional Questions:

Instructions: Please answer the following questions about yourself and about your participation in the study.

1. What is your gender? _____ Male _____ Female
2. What is your age? _____
3. How long have you worked as an auditor? _____
4. What is your position at the audit firm? _____
5. Which firm employs you? _____
6. Have you had any experience in an audit litigation case? _____ Yes _____ No

How many? _____

7. If you were involved in any audit litigation case(s), what was(were) the outcome(s)?

Did you settle _____ or go to court _____?

If you settled, when did you settle?

and why did you settle?

If you went to court, did you win?

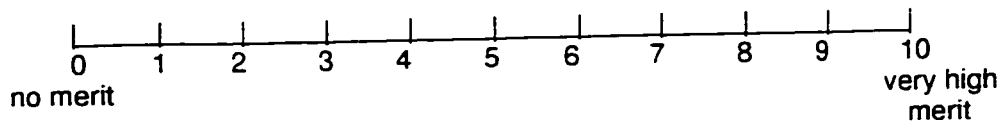
and why did you go to court?

8. In your own opinion, what is the impact of settling on an audit firm's success and reputation?

9. Which of these best describes your role during the experiment?

- the defendant, Jones & Company
- the plaintiffs, Bierhoff, Ltd. and Sutton Enterprises.
- the current auditor and advisor to the plaintiffs, Bierhoff, Ltd. and Sutton Enterprises

10. Auditors often argue that many of the litigation cases brought against them are without merit; the plaintiff is only suing the auditors because of their ability to pay. Please rate the level of merit of this case. (A high merit case is a case where the auditor should definitely be sued and a low merit case is a case where the auditor should not be sued.)



11. Have you been taught anything about Canadian auditor negligence cases that have been ruled on in the past year? If so, what did you learn?

Any other comments?

You are done. Thank you for participating in this experiment. Please raise your hand so that the proctor can pay you and pick up your materials.

B)

Part 1**Instructions:**

Thank you for participating in this study. You will be given a flat fee of \$10 plus a chance to win more money by participating.

One important issue currently facing auditors is the litigation crisis. Please imagine yourself as the current auditor, expert witness and **plaintiff advisor** for the plaintiff, **Bierhoff, Ltd.**, in the following legal case. Bierhoff, Ltd. has hired you to advise them in their litigation decisions regarding this case. You have been given full authority to make all of the decisions.

Please remember your role while reading the case and read the case materials and facts carefully as you will be asked to make decisions based on these facts later.

The case will be presented to you as follows:

The complaint, answer and damages will be given first. Next, you will read the opening statements for both the plaintiff and defendant. Following this, you will read testimony from two witnesses for the plaintiff and two witnesses for the defendant. Lastly, the plaintiff's and defendant's closing statements will be given.

After you have read the case materials, you will be asked to do the following:

- Read the case individually and answer some questions
- Be randomly paired with someone in the other room acting as the defendant and attempt to negotiate a settlement
- Answer some questions regarding the negotiation
- Assume the role of another plaintiff advisor
- Be randomly paired with another participant in the other room acting as the defendant
- **Receive the first negotiated outcome (amount and time to settle) of the new defendant**
- Attempt to negotiate a settlement with the new defendant
- Answer some questions regarding the second negotiation
- Answer some general questions about yourself and your participation in the study

Please begin reading the case.

Bierhoff, Ltd. v. Jones & Company
Summary, Case #96208

Complaint: The plaintiff, Bierhoff, Ltd., alleges that the defendant, Jones & Company, was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and that Bierhoff, Ltd. suffered damages of \$10,000,000 as a consequence of relying on these audited 1996 financial statements.

Answer: The defendant, Jones & Company, responds that it complied with auditing standards and that therefore it was not negligent.

Damages: The plaintiff is suing the defendant for \$10,000,000 in damages.

Judge: Plaintiff lawyer, please give your opening statement.

Plaintiff Opening Statement: This case is about auditor negligence. You are about to find out what can happen when auditors do not do their jobs properly and serious fraud causes errors in the financial statements. My client, Bierhoff, Ltd., a venture capital company, received and relied on the financial statements of Big Time Gravel in their decision to invest in Big Time Gravel. They later found out that the financial statements were fraudulent. Jones & Company was aware that Bierhoff, Ltd. would be relying on the Big Time Gravel financial statements as Bierhoff, Ltd. had sent a letter outlining their intentions to Jones & Company prior to the audit. Jones & Company's negligence cost Bierhoff, Ltd. \$10,000,000.

Auditors investigate the financial records of their client company to determine whether the financial statements are a valid summary of the economic events and transactions that affected the company during the year. Financial statements are summaries of financial information that are given to investors and creditors to help them make informed decisions. The value of inventory is one important number that is reported in the financial statements. The result of auditors' work is a report that states whether or not the financial statements of a company are accurate, or, put another way, that the financial statements are not materially misstated. Material or materiality, per CICA HB. 1000.17, "is the term used to describe the significance of financial statement information to decision makers. An item of information, or an aggregate of items is material if it is probable that its omission or misstatement would influence or change a decision." It is often measured in dollars.

Although auditors are hired and paid by the companies whose financial statements they examine, an auditor's primary duty is to the investors to whom it matters whether the financial

statements are fairly stated. Investors, per CICA HB. 1000.09, include present and potential debt and equity investors and their advisors.

Jones & Company reported, per the audit opinion, that the 1996 financial statements of Big Time Gravel "presented fairly, in all material respects, the financial statement position of the company as at December 31, 1996 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles." In other words, Jones & Company gave Big Time Gravel a "clean" report. It is my job to prove to you, on behalf of Bierhoff, Ltd., that Jones & Company was negligent in its performance of the audit of the 1996 financial statements of Big Time Gravel. I will establish that Jones & Company did not do sufficient work on which to base its opinion, and that, as a result, its opinion was wrong. Because of Jones & Company's negligence, materially misstated financial statements were given to Bierhoff, Ltd. Bierhoff, Ltd. then relied on these misstated financial statements when it invested \$10,000,000 in Big Time Gravel. Big Time Gravel's financial statements listed an inventory balance that was \$5,000,000 too high. Jones & Company failed to find this huge inaccuracy and the fraud behind it because they did not perform an audit of sufficient quality; that is, they did not exercise the same degree of care that other auditors in their position would have used. The \$5,000,000 overstatement of inventory hid Big Time Gravel's financial problems from Bierhoff, Ltd. When Big Time Gravel's financial problems came to light, the company declared bankruptcy and my client lost their investment. Bierhoff, Ltd. believes that the auditor who negligently failed to discover the overstatement should reimburse it for its \$10,000,000 loss.

I will prove my case by calling two witnesses. The first witness is Mr. Kesler, former general manager of Big Time Gravel. He will tell you how inventory is stored and counted, and he will also give you some background information about the operations of the business. The second witness is Professor Evans, a respected professor specializing in auditing at a major university. Her expert testimony will point out several areas in which the performance of Jones & Company was substandard and will describe how such substandard procedures led to the misstatement of financial statements, which led to my client's losses. I will argue that Jones & Company should have known that the 1996 financial statements of Big Time Gravel were misstated and should have performed additional work to discover the precise nature of the misstatement.

I am confident that you will find for the plaintiff as Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and my client, Bierhoff, Ltd., did suffer a loss of \$10,000,000 as a result of this negligence.

Judge:

Lawyer for the defendant, please give your opening statement.

Defense Opening Statement: It is our position that Jones & Company complied with generally accepted auditing standards in its audit of Big Time Gravel's financial statements, and that Jones & Company was, therefore, not negligent. Auditors reduce the probability that people receive misstated financial statements. Auditors could try to find every misstatement, but, to do so they would have to examine every transaction in which a company took part. This would mean that financial statements would not be available in a timely manner since every transaction would have to be looked at. It would also make the cost of an audit so high that no one would be able to afford an audit, and therefore, investors and creditors would not have reliable information on which to base their decisions. It also may not be possible to audit every transaction because there might be unrecorded transactions. The audit of completeness of transactions is not possible. Instead, auditors examine a subset of transactions by using their professional judgment and sampling techniques. This is what auditing standards require.

The plaintiff has alleged that Jones & Company was negligent in its audit of Big Time Gravel's 1996 financial statements. Negligence can be established only when an auditor fails to exercise the usual judgment, care, skill, and diligence employed by other Chartered Accountants (CAs) in the community. Auditing standards determine the type and amount of work that CAs do. It is the defense's position that if an auditor complies with auditing standards, he has not been negligent.

The plaintiff makes a point of mentioning the loss of his client, Bierhoff, Ltd. That loss is not relevant in determining whether Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel. Only the actions and decisions made by Jones & Company, as compared with those that would have been made by other competent CAs in similar circumstances, are relevant. I will argue that Jones & Company did at least as much as any other auditor in its position would have done, and that it in no way violated auditing standards.

The plaintiff must prove its allegations by a preponderance of the evidence. This means that it must show that the charges are more probably true than not true. The plaintiff cannot do so. I will present two witnesses. First, I will call Mr Robertson, the partner from Jones & Company in charge of the Big Time Gravel audit. He will describe the procedures performed during the audit. The second witness will be Ms. Brecht, a respected partner with another large accounting firm and expert witness. She will establish that Jones & Company made appropriate use of professional judgment in making the decisions that it did, and that it in no way violated professional standards. In fact, Jones & Company did more work than other auditors in its position might have done. Further, auditing standards explicitly recognize that auditors may not be able to discover fraud such as that which occurred in this case. Jones & Company is a competent, esteemed accounting firm, and I am confident that you will find in its favour.

Judge: Plaintiff lawyer, please call your first witness.

Plaintiff lawyer: I call Robert Kesler.

Mr. Kesler, please tell the court your position and length of time employed at Big Time Gravel.

Mr. Robert Kesler, Witness for the Plaintiff: I was the general manager of Big Time Gravel from 1991 through March of 1996.

Plaintiff Lawyer: Were you aware of the fraudulent activities and the overstatement of inventory at the 1996 year end?

Robert Kesler: No, I was not aware of the fraud and overstatement of inventory. I was not involved with the estimation of the quantity of inventory.

Plaintiff Lawyer: Thank you. Now, please give us a brief summary of Big Time Gravel's business.

Robert Kesler: Big Time Gravel is a large producer of aggregate, or gravel, and cement in a large, growing city. It buys land, mines the resources, restores the land, then sells it to developers. The products are sold to contractors, city and provincial road departments and other concrete producers.

Plaintiff Lawyer: How much of Big Time Gravel's assets is comprised of inventory and how is this inventory stored?

Robert Kesler: A large portion, about 53%, of the company's total assets is inventory. These amounts are primarily represented by large piles of aggregate and concrete additives, such as colours and strengtheners, which are located at various mining sites and at the company's sales lots.

Plaintiff Lawyer: How does Big Time Gravel keep track of inventory?

Robert Kesler: Because of the nature of our business, we cannot keep accurate records of how much inventory we have on hand. We have our lot managers estimate our inventory on a monthly basis.

Plaintiff Lawyer: Thank you, Mr. Kesler.

Cross-examination:

Defendant Lawyer: Are you comfortable with the company procedures for estimating and valuing inventory?

Robert Kesler: Yes, I am. Our people are experienced in the estimation and valuation of the inventory. The same people have done the estimation for the five years I have been at Big Time Gravel and I understand that they had been doing it for several years before I arrived.

Defendant Lawyer: That's all, your honour.

Judge: Next witness, plaintiff lawyer.

Plaintiff Lawyer: I now call Professor Irene Evans.
Ms. Evans, in your opinion what is the issue at hand in this case?

Professor Irene Evans, Expert Witness for the Plaintiff: The issue at hand is that Big Time Gravel overstated its inventory by \$5,000,000 and Jones & Company failed to discover the misstatement.

Plaintiff Lawyer: How was Big Time Gravel able to overstate their inventory balance by \$5,000,000?

Irene Evans: The procedures used to inflate inventory values included double counting of items, especially at the sites where auditors did not observe inventory procedures, and large estimation errors of the quantities due to the purposeful use of an inappropriate estimation procedure.

Plaintiff Lawyer: Did Jones & Company perform the appropriate amount of audit work?

Irene Evans: According to the auditors' working papers, they did observe Big Time Gravel's annual inventory procedures at some locations, and they did review calculations made by the lot managers. Auditing standards require auditors to observe inventory procedures, in part so that auditors can verify that the items that the client claims to own really do exist. In my opinion, it was not adequate for Jones & Company to observe procedures at only five of the

firm's eleven lots, as significant errors or other misstatements could have occurred, and did occur, at the other sites. Further, Jones & Company told the client three days in advance which sites had been selected. This advance notice provided the client with an opportunity to move inventory between sites. The audit of inventory is especially important for this company, because inventory represents such a large percentage of the company's assets.

Plaintiff Lawyer: Thank you, Ms. Evans.

Cross-examination:

Defendant Lawyer: Is it normal for an auditor to examine only a subset of all inventory sites?

Irene Evans: Yes, it is normal for an auditor to examine inventory at only a subset of all inventory sites, and, as a practical matter, the client often knows in advance which sites will be examined.

Defendant Lawyer: Do auditing standards require auditors to discover fraud?

Irene Evans: No, auditing standards do not require auditors to discover all fraud. Auditing standards acknowledge that it is more difficult for an auditor to discover fraud than errors. Auditing standards require auditors to be alert to the possibility of fraud, though.

Defendant Lawyer: Thank you, Ms Evans. I am finished, your honour.

Judge: Defendant lawyer, call your first witness.

Defendant Lawyer: I call, Mr. James Robertson, the partner in charge of the 1996 Big Time Gravel audit.

Mr. Robertson, how long have you been in charge of the Big Time Gravel audit?

James Robertson: I have been the partner in charge of Big Time Gravel for the past 10 years.

Defendant Lawyer: Has inventory historically been a contentious audit issue for Big Time Gravel?

James Robertson: Yes, determining the amount of inventory on hand is always a big audit issue.

Defendant Lawyer: What did the auditors do to audit the December 31, 1996 inventory balance?

James Robertson: At the end of 1996, we sent auditors out to about half of the sites. They watched the lot managers pace off the sizes of the piles. We reviewed the managers' calculations afterwards. These procedures are the same as the procedures performed over the past 10 years. We have never had a problem with Big Time Gravel.

Defendant Lawyer: Does Jones & Company traditionally spend a lot of time on the estimation and valuation of the inventory balance?

James Robertson: Yes, the inventory estimation and valuation is given a major portion of the audit time. We are always very concerned with the estimation of the inventory.

Defendant Lawyer: Thank you, Mr. Robertson.

Cross Examination:

Plaintiff Lawyer: Mr. Robertson, were you not concerned when you found out that the five sites you selected to observe the count at year end only represented 50% of the inventory when Big Time Gravel had estimated that they would represent 80%?

James Robertson: We were concerned initially, however, Big Time Gravel was able to dispel our concerns by explaining that they had had a large order to fill in early 1997 which required them to stockpile inventory prior to the year end. They had not been aware of this order when they initially estimated that the five sites would contain 80% of the inventory on hand. Last minute orders like this have occurred in the past as well.

Plaintiff Lawyer: Thank you, Mr. Robertson. I'm finished, your honour.

Judge: Next witness, defendant lawyer.

Defendant Lawyer: I call, Ms. Joanne Brecht, your honour.
Ms. Brecht, what do auditing standards require auditors to do when auditing inventory?

Ms. Joanne Brecht, Expert Witness for the Defense: Auditing standards require auditors to observe physical counts of inventories when this is feasible, but neither standards nor current practice require an auditor to observe procedures at all inventory sites. Auditing employs the use of professional judgment and sampling techniques.

Defendant Lawyer: Did Jones & Company employ the use of professional judgment and sampling techniques?

Joanne Brecht: Jones & Company made good use of these tools. They selected the sites to be observed carefully, and with good justification. Big Time Gravel had previously estimated that the five locations chosen would hold 80% of the inventory value. Further, as Professor Evans noted, it is not unusual for an audit client to know which inventory sites have been selected for observation. This may be necessitated by the auditor's need to know when to show up at a particular site, and by the client's need to have one crew take inventory at multiple locations.

Defendant Lawyer: Did Jones & Company's audit procedures meet the requirements of auditing standards?

Joanne Brecht: Yes, they did. In fact, what Professor Evans did not note is that Jones & Company went beyond the minimum requirements of auditing standards in that it recognized the complications involved in accurately estimating the aggregate inventory and called in an engineering firm for help. The engineering firm, Little & Associates, used technical estimation procedures involving aerial photography and measurement of the slope of the gravel piles in estimating inventory. Jones & Company verified that the engineering firm had no connections to Big Time Gravel and was properly licensed to do such work. Because no links were found and the company was found to be competent, Jones & Company accepted the estimates of the engineering firm, which were not materially different from those of Big Time Gravel. Auditing standards do not specifically require use of a specialist in this case, and other auditors might not have been so diligent. Jones & Company went beyond the call of duty by hiring a specialist. It turned out that Big Time Gravel had bribed the specialist, so its work was not completely reliable, but Jones & Company did all it could to verify the independence and qualifications of Little & Associates before engaging the firm.

Defendant Lawyer: Is an auditor expected to discover all fraudulent behavior?

Joanne Brecht: No, auditors are not expected to discover all fraudulent behavior; however, they are expected to be alert to the possibility of fraud. Auditing standards explicitly state, per CICA HB. 5136.10, that "an auditor conducting an audit in accordance with generally accepted auditing standards may not detect fraud even if the effect of its consequences on the financial statements is material." This is due to the fact that if the client actively attempts to deceive the auditor, the auditor may not have access to the evidence that it needs to discover the fraud. This is especially true when high-level management and outside parties are involved in the fraud, as was the case in the Big Time Gravel audit.

Defendant Lawyer: Thank you, Ms. Brecht. Your witness, plaintiff lawyer.

Cross-examination:

Plaintiff Lawyer: Ms Brecht, is it normal for an auditor to allow a client lead time to schedule inventory observations?

Joanne Brecht: Allowing the client lead time for scheduling inventory observations may be slightly unusual.

Plaintiff Lawyer: Was it appropriate for Jones & Company to only observe 50% of the inventory?

Joanne Brecht: Big Time Gravel had estimated prior to the count that the five sites selected would have contained 80% of the inventory on hand at year end. Unfortunately, it turned out that only 50% of the total audited value of inventories was located at the five selected sites.

Plaintiff Lawyer: Is it common practice for an auditor to not hire a specialist to estimate the value of this type of inventory?

Joanne Brecht: The type of inventory in question is somewhat unusual in that it cannot be counted or weighed, and the auditor cannot readily assess its condition or value. Because of this, it is probably more usual than not for auditors to bring in specialists in cases such as this.

Plaintiff Lawyer: Thank you, Ms. Brecht. I am finished, your honour.

Judge: May we have your closing statement, plaintiff lawyer.

Plaintiff Closing Statement: The testimony you have heard today established that Jones and Company was negligent in its audit of the 1996 financial statements of Big Time Gravel. A well-respected auditing professor, Professor Evans, has told you that the procedures that Jones & Company used in evaluating the inventory accounts were substandard and that those substandard procedures caused my client's loss. Jones & Company claims to have gone beyond the call of duty by having an engineering firm estimate the inventory in piles, but auditing standards require auditors to rely on the work of specialists when they are not competent to make the needed assessments. In this regard, Jones & Company merely did what was required of it. In other areas, it failed to do so. The negligence of Jones & Company resulted in a \$10,000,000 loss for Bierhoff, Ltd.

The most important errors of Jones and Company were first, that it only observed inventory procedures for 50% of the final value of inventory, and second, that it gave Big Time Gravel three days advance notice of which sites had been selected for auditing. Society expects more than that from auditors. We expect, and auditing standards require, auditors to maintain an attitude of professional skepticism about client representations. We expect auditors to find \$5,000,000 irregularities and frauds such as the ones in Big Time Gravel's financial statements. Why would we hire auditors if they were not able to find large irregularities in financial statements? Jones & Company did not live up to society's expectations, and it did not meet minimum auditing standards. Therefore, I urge you to find for the plaintiff in this case.

Thank you, your honour.

Judge: Defendant lawyer, may we hear your closing statement?

Defense Closing Statement: The plaintiff has told you that Jones & Company made some mistakes in its audit of the 1996 financial statements of Big Time Gravel. It is your job to evaluate whether the actions taken were actually mistakes. Is it a mistake to allow an audit client to coordinate inventory procedures with an auditor's schedule? Is it a mistake to follow commonly-used judgmental procedures in determining which inventory sites to observe? Is it a mistake to call in a specialist for help in estimating gravel quantities? None of these is a mistake; moreover, auditing standards require nothing more than these actions. The plaintiff's expert witness admitted this. Jones & Company did not discover the fraud that Big Time Gravel perpetrated, however, Jones & Company did perform an audit that complies with, and even

surpasses, auditing standards. The plaintiff has failed to demonstrate otherwise. Accordingly, I urge you to find in favour of the defendant, Jones & Company.

Please answer the following questions regarding the case. You may refer back to the case materials, if you wish. Please take care and consideration in making your assessments.

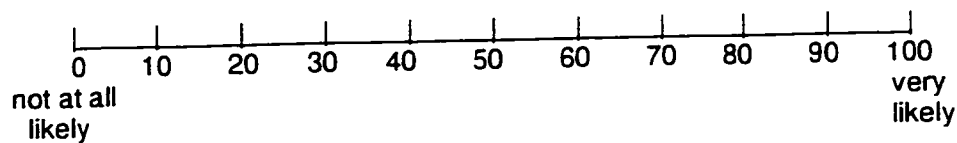
1. What is your assessment of the dollar value of a fair settlement (if any) on the case?

2. A judge has been given the exact same copy of this case as you have received. He or she has not received any additional information. He or she has been involved in a number of audit legal cases.

Do you think the judge will rule in favour of the plaintiff or defendant?

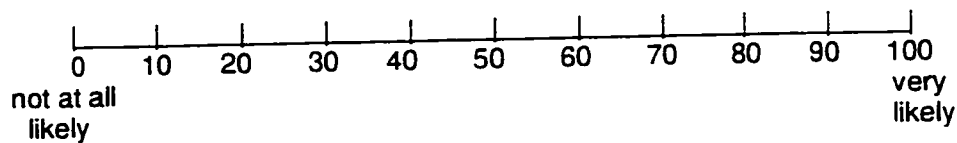
Plaintiff _____ Defendant _____

Please rate what you believe the likelihood of this outcome is:



If you believe the judge will rule in favour of the plaintiff, what is your best guess of the dollar amount of the judge's award in this case?

Please rate what you believe the likelihood of this outcome is:



Please turn the page and begin reading the instructions for the negotiation.

Part 2

Negotiation Session:

You have received a flat fee of \$10 to participate in this experiment. Now I am giving you the chance to win some more money by participating in two negotiations with two different participants of the study acting as the defendant in the case, Jones & Company. The defendant in both negotiations will be a randomly assigned accounting student in another classroom. Both defendants have also been given \$10 to participate in the study

In both cases, you are suing the defendant, Jones & Company, for \$10,000,000 in damages. In the first negotiation you will be the current auditor and plaintiff advisor for Bierhoff, Ltd., a venture capitalist. In the second negotiation you will be the current auditor and plaintiff advisor for Sutton Enterprises, a private investment company. By participating in both negotiations, you will be entered twice in a lottery for up to \$500. After the experiment is complete, one negotiation pair will be randomly drawn. This pair will be awarded the \$500 to split as follows: The \$500 will be split according to the agreed upon settlement amount and the time taken to reach a settlement. For example, \$1 of the \$500 will represent \$20,000 of the \$10,000,000. Therefore, if the pair selected agreed to a settlement of \$5,000,000, each individual in the pair would receive \$250. However, each party will be assessed legal fees and other costs of \$250,000 for each period used in the negotiation that did not result in a settlement (see below). If the pair selected did not reach a settlement, the \$500 will be split according to the judge's ruling on the case less any legal fees and other costs. The judge's ruling will be available in an executive summary of the results once the results of the study have been analyzed.

Therefore, the settlement agreed to (if any) determines how the \$500 will be split between the selected pair.

In both negotiations, you will be given an unlimited number of periods to negotiate a settlement, however, you will be limited to approximately 15 minutes for each negotiation. (The proctor will announce when the time period is up.) Each period will involve either you or the defendant making a settlement offer and the opposing litigant either accepting or rejecting the offer. If the offer is accepted by the opposing litigant, the negotiation is over. If the offer is rejected, the litigant that rejects the offer will begin the next period by making a settlement counteroffer. The defendant will make the first offer; therefore, you will make offers in the even periods. The defendant will make offers in the odd periods.

As stated earlier, if you have not settled at the end of a period, you will be charged \$250,000 for legal fees and other costs. This amount will be deducted from your settlement. The defendant will also be charged \$250,000. For example, if you settle in the fifth period, you and the defendant will each be charged \$1,000,000 for legal fees and other costs; this would leave a maximum amount of \$8,000,000, or for the settlement. The proctor will announce the end of each bargaining period.

Before you begin the second negotiation, you will receive the first negotiation outcome of the new defendant. This Public Announcement will inform you of the settlement amount (if any) and the number of periods used in the new defendant's first negotiation.

The defendant has read the exact same case as you. He or she does not have any additional information. Remember that you are the current auditor and plaintiff advisor for Bierhoff, Ltd. in this negotiation.

If you have any questions, please ask the proctor now.

The negotiation will now begin. Please wait for the proctor to bring the defendant's initial offer to you.

Period 1

What is the defendant's initial offer? _____

Do you accept this offer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 1 row on the sheet labelled Negotiation 1. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, mark an X in the reject box in the period 1 row on the sheet labelled Negotiation 1.

Period 2

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer in the period 2 row on the sheet labelled Negotiation 1.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the defendant.

After the proctor has taken your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer.

Please wait for the defendant's response.

Period 3

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the defendant's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 3 row on the sheet labelled Negotiation 1. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 3 row on the sheet labelled Negotiation 1.

Period 4

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer in the period 4 row on the sheet labelled Negotiation 1.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the defendant.

After the proctor has taken your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer.

Please wait for the defendant's response.

Period 5

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the defendant's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 5 row on the sheet labelled Negotiation 1. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 5 row on the sheet labelled Negotiation 1.

Period 6

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer in the period 6 row on the sheet labelled Negotiation 1.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the defendant.

After the proctor has taken your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer.

Please wait for the defendant's response.

Part 3

Negotiation 1 Results:

Instructions: Please answer the following questions regarding the outcome of your first set of negotiations.

1. What is the settlement amount you and the defendant agreed to (if any) ? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

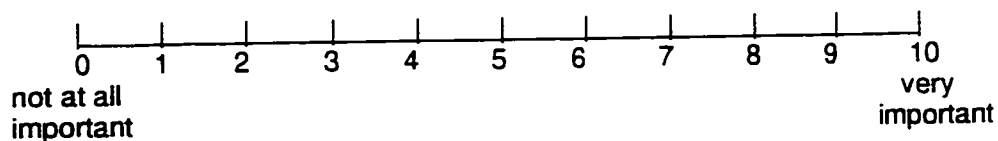
5. What are the factors that influenced your decision?

6. What is the lowest settlement offer you would have accepted from the defendant?

7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any possible reputation costs of settling for the auditor when making your decisions during the negotiation?

_____ Yes _____ No

If you did consider the reputation costs of settling for the auditor, how important were these costs to your decisions in the negotiation?

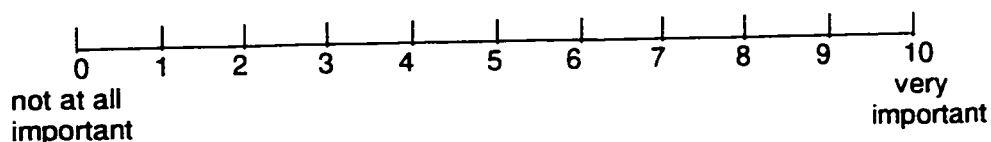


What is your best prediction of the dollar amount of any reputation costs of settling for the auditor? _____

8. Some auditors believe that fighting an audit negligence case in court and losing hurts the auditor's reputation of providing high quality audits? Did you consider any possible reputation costs of losing at court for the auditor when making your decisions during the negotiations?

_____ Yes _____ No

If you did consider any reputation costs of losing at court for the auditor, how important were these costs to your decisions in the negotiation?

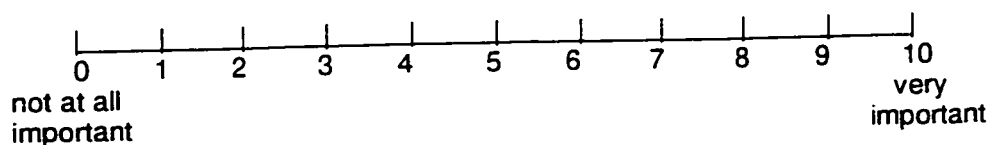


What is your best prediction of the dollar amount of any reputation costs of losing at court for the auditor? _____

9. There are several types of opportunity and business costs incurred by a litigant when it settles a case out of court. Did you consider the opportunity and business costs of settling when making your decisions during the negotiations?

_____ Yes _____ No

If you did consider opportunity and business costs of settling, how important were these costs to your decisions in the negotiation?

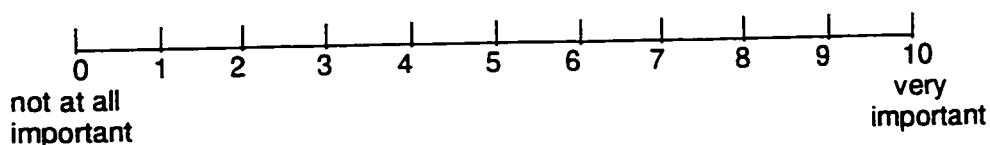


What is your best prediction of the dollar amount of any opportunity and business costs of settling? _____

10. There are several types of opportunity and business costs incurred by a litigant when it fights a case in court. Did you consider the opportunity and business costs of fighting the case in court when making your decisions in the negotiations?

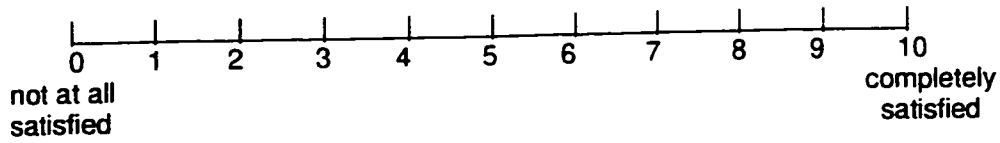
_____ Yes _____ No

If you did consider the opportunity and business costs of fighting the case in court, how important were these costs to your decisions in the negotiation?

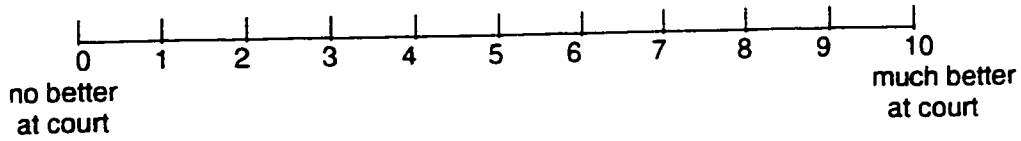


What is your best prediction of the dollar amount of any opportunity and business costs of fighting the case in court? _____

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

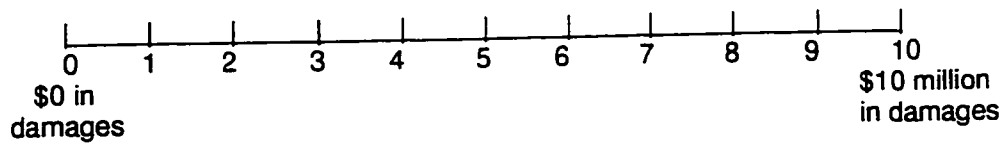


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will receive in damages?



Please turn the page and read Part 4.

Part 4

The second negotiation will be run in the exact same manner as Negotiation 1. Please use the sheet labelled Negotiation 2 to record the offers and acceptances/rejections. **Please wait for the Public Announcement report from your second defendant. This report will inform you of your second defendant's outcome in his or her first negotiation. It will tell you if he or she settled and the number of negotiation periods used.**

In the second negotiation, please imagine yourself as Sutton Enterprises, a private investment company. This company also claims to have lost \$10,000,000 by relying on the Big Time Gravel 1996 audited financial statements, and therefore, is also suing Jones & Company for \$10,000,000 in damages.

Sutton Enterprises loaned Big Time Gravel \$10,000,000 for expansion in early 1997 after analysing the Big Time Gravel 1996 audited financial statements. Jones & Company was aware of the intended reliance of Sutton Enterprises on the 1996 audited financial statements as Sutton Enterprises had written Jones & Company with its intention in October 1996.

Please assume while negotiating this settlement that the case facts are the same as those in the case of Bierhoff, Ltd. v. Jones & Company.

Please wait for the proctor to signal the beginning of the second negotiation.

Part 5**Negotiation 2****Period 1**

What is the defendant's initial offer? _____

Do you accept this offer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 1 row on the sheet labelled Negotiation 2. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, mark an X in the reject box in the period 1 row on the sheet labelled Negotiation 2.

Period 2

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer in the period 2 row on the sheet labelled Negotiation 2.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the defendant.

After the proctor has taken your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer.

Please wait for the defendant's response.

Period 3

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the defendant's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 3 row on the sheet labelled Negotiation 2. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 3 row on the sheet labelled Negotiation 2.

Period 4

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer in the period 4 row on the sheet labelled Negotiation 2.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the defendant.

After the proctor has taken your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer.

Please wait for the defendant's response.

Period 5

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over. Please place X's in the offer and accept/reject boxes for the remainder of the experiment.

If no, what is the defendant's counteroffer? _____

Do you accept this counteroffer? _____ Yes _____ No

If you accept, the negotiation is over. Please mark your acceptance in the period 5 row on the sheet labelled Negotiation 2. Please mark X's in the offer and accept/reject boxes for the remainder of the experiment.

If you reject the offer, please mark an X in the reject box in the period 5 row on the sheet labelled Negotiation 2.

Period 6

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please write the amount of your offer (if any) and the reason or argument for the offer in the period 6 row on the sheet labelled Negotiation 2.

When you are finished please signal to the proctor so that he or she can collect your offer and take it to the defendant.

After the proctor has taken your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer.

Please wait for the defendant's response.

Part 6

Negotiation 2 Results

Instructions: Please answer the following questions regarding the outcome of your second set of negotiations.

1. What is the settlement amount you and the defendant agreed to (if any) ? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

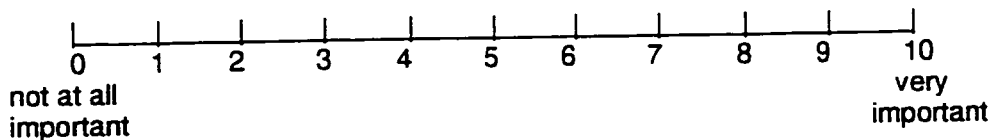
5. What are the factors that influenced your decision?

6. What is the lowest settlement offer you would have accepted from the defendant?

7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any possible reputation costs of settling for the auditor when making your decisions during the negotiation?

_____ Yes _____ No

If you did consider the reputation costs of settling for the auditor, how important were these costs to your decisions in the negotiation?

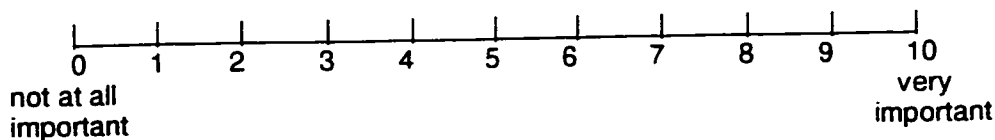


What is your best prediction of the dollar amount of any reputation costs of settling for the auditor? _____

8. Some auditors believe that fighting an audit negligence case in court and losing hurts the auditors reputation of providing high quality audits? Did you consider any possible reputation costs of losing at court for the auditor when making your decisions during the negotiations?

_____ Yes _____ No

If you did consider any reputation costs of losing at court for the auditor, how important were these costs to your decisions in the negotiation?

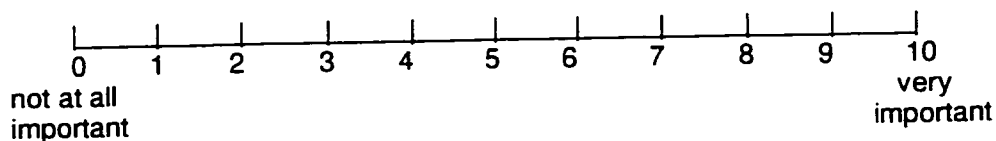


What is your best prediction of the dollar amount of any reputation costs of losing at court for the auditor? _____

9. There are several types of opportunity and business costs incurred by a litigant when it settles a case out of court. Did you consider the opportunity and business costs of settling when making your decisions during the negotiations?

_____ Yes _____ No

If you did consider opportunity and business costs of settling, how important were these costs to your decisions in the negotiation?

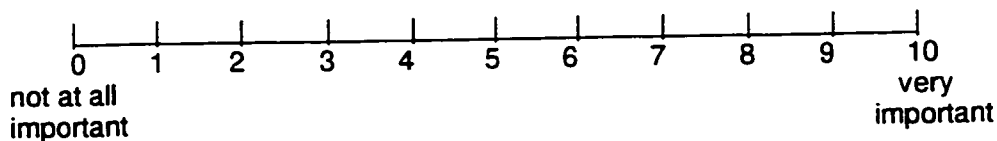


What is your best prediction of the dollar amount of any opportunity and business costs of settling? _____

10. There are several types of opportunity and business costs incurred by a litigant when it fights a case in court. Did you consider the opportunity and business costs of fighting the case in court when making your decisions in the negotiations?

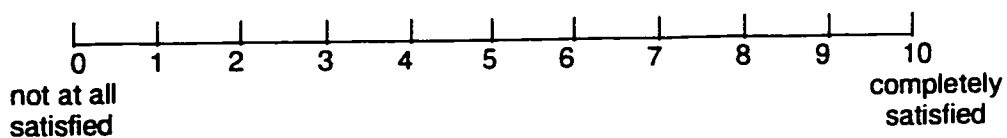
_____ Yes _____ No

If you did consider the opportunity and business costs of fighting the case in court, how important were these costs to your decisions in the negotiation?

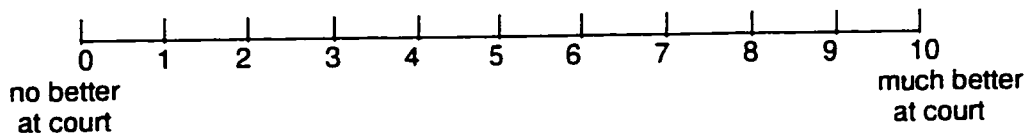


What is your best prediction of the dollar amount of any opportunity and business costs of fighting the case in court? _____

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

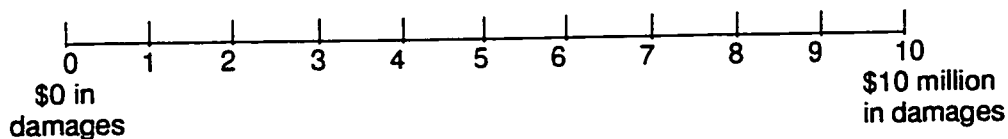


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will receive in damages?



Please answer the questions in Part 7.

Part 7

Additional Questions:

Instructions: Please answer the following questions about yourself and about your participation in the study.

1. What is your gender? _____ Male _____ Female
2. What is your age? _____
3. How long have you worked as an auditor? _____
4. What is your position at the audit firm? _____
5. Which firm employs you? _____
6. Have you had any experience in an audit litigation case? _____ Yes _____ No
How many? _____

7. If you were involved in any audit litigation case(s), what was(were) the outcome(s)?

Did you settle _____ or go to court _____?

If you settled, when did you settle?

and why did you settle?

If you went to court, did you win?

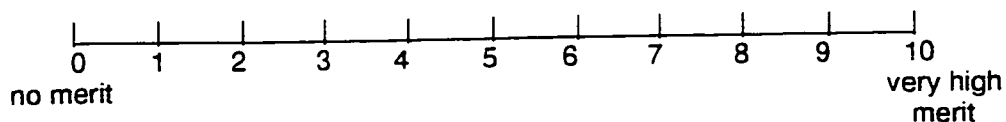
and why did you go to court?

8. In your own opinion, what is the impact of settling on an audit firm's success and reputation?

9. Which of these best describes your role during the experiment?

- the defendant, Jones & Company
- the plaintiffs, Bierhoff, Ltd. and Sutton Enterprises.
- the current auditor and advisor to the plaintiffs, Bierhoff, Ltd. and Sutton Enterprises

10. Auditors often argue that many of the litigation cases brought against them are without merit; the plaintiff is only suing the auditors because of their ability to pay. Please rate the level of merit of this case. (A high merit case is a case where the auditor should definitely be sued and a low merit case is a case where the auditor should not be sued.)



11. Have you been taught anything about Canadian auditor negligence cases that have been ruled on in the past year? If so, what did you learn?

Any other comments?

You are done. Thank you for participating in this experiment. Please raise your hand so that the proctor can pay you and pick up your materials.

C)

Negotiation 1

Period	Offer/ Counteroffer	Argument/Reason	Accept	Reject
1				
2				
3				
4				
5				
6				
7				
8				

D)

Public Announcement

_____ I did not settle in the first negotiation

_____ I settled in the first negotiation

Please answer the following questions, if you settled:

What was your settlement amount? _____

When did you settle? _____

APPENDIX 4

Experimental Procedures: Audit Partners

- A) Audit Partner Defendant with High Merit Case
 - B) Audit Partner Plaintiff Advisor with Low Merit Case
- (Public Announcement Instructions are Bolded)

A)

Part 1**Instructions:**

Thank you for participating in this study. For your participation, you will be given a chance to win a charitable donation made in your name to the charity of your choice.

Part of this study will be administered via the telephone. A time will be set up convenient for you and another audit partner from another firm to do the telephone negotiation. You will be expected to have read the case materials prior to the telephone negotiation. You also will be asked to answer some questions after the telephone negotiation.

Your scheduled time is: _____

One important issue currently facing auditors is the litigation crisis. Please imagine yourself as the **auditors, Jones & Company, the defendant**, in the following legal case.

Please remember your role while reading the case and read the case materials and facts carefully as you will be asked to make decisions based on these facts later. Please read the case prior to your first telephone negotiation.

The case will be presented to you as follows:

The complaint, answer and damages will be given first. Next, you will read the opening statements for both the plaintiff and defendant. Following this, you will read testimony from two witnesses for the plaintiff and two witnesses for the defendant. Lastly, the plaintiff's and defendant's closing statements will be given.

After you have read the case materials, you will be asked to do the following:

- Answer some questions
- Be randomly paired with another partner in another firm acting as the plaintiff's advisor and attempt to negotiate a settlement via the telephone at your specified time
- Answer some questions regarding the negotiation
- Be randomly paired with another partner in another firm acting as the plaintiff's advisor
- **Report your outcome of the first negotiation (amount and time to settle) to the new plaintiff advisor**
- Attempt to negotiate a second settlement via the telephone at your specified time
- Answer some questions regarding the second negotiation
- Answer some general questions about yourself and your participation in the study
- Mail your materials back to the researcher

Please remember that you will be asked to report your first negotiated outcome (amount and time to settle) to the new plaintiff in the second negotiation.

Please begin reading the case.

Bierhoff, Ltd. v. Jones & Company
Summary, Case #96203

Complaint: The plaintiff, Bierhoff, Ltd., alleges that the defendant, Jones & Company, was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and that Bierhoff, Ltd. suffered damages of \$10,000,000 as a consequence of relying on these audited 1996 financial statements.

Answer: The defendant, Jones & Company, responds that it complied with auditing standards and that therefore it was not negligent.

Damages: The plaintiff is suing the defendant for \$10,000,000 in damages.

Judge: Plaintiff lawyer, please give your opening statement.

Plaintiff Opening Statement: This case is about auditor negligence. You are about to find out what can happen when auditors do not do their jobs properly and serious fraud causes errors in the financial statements. My client, Bierhoff, Ltd., a venture capital company, received and relied on the financial statements of Big Time Gravel in their decision to invest in Big Time Gravel. They later found out that the financial statements were fraudulent. Jones & Company was aware that Bierhoff, Ltd. would be relying on the Big Time Gravel financial statements as Bierhoff, Ltd. had sent a letter outlining their intentions to Jones & Company prior to the audit. Jones & Company's negligence cost Bierhoff, Ltd. \$10,000,000.

Auditors investigate the financial records of their client company to determine whether the financial statements are a valid summary of the economic events and transactions that affected the company during the year. Financial statements are summaries of financial information that are given to investors and creditors to help them make informed decisions. The value of inventory is one important number that is reported in the financial statements. The result of auditors' work is a report that states whether or not the financial statements of a company are accurate, or, put another way, that the financial statements are not materially misstated. Material or materiality, per CICA HB. 1000.17, "is the term used to describe the significance of financial statement information to decision makers. An item of information, or an aggregate of items is material if it is probable that its omission or misstatement would influence or change a decision." It is often measured in dollars.

Although auditors are hired and paid by the companies whose financial statements they examine, an auditor's primary duty is to the investors to whom it matters whether the financial

statements are fairly stated. Investors, per CICA HB. 1000.09, include present and potential debt and equity investors and their advisors.

Jones & Company reported, per the audit opinion, that the 1996 financial statements of Big Time Gravel "presented fairly, in all material respects, the financial statement position of the company as at December 31, 1996 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles." In other words, Jones & Company gave Big Time Gravel a "clean" report. It is my job to prove to you, on behalf of Bierhoff, Ltd., that Jones & Company was negligent in its performance of the audit of the 1996 financial statements of Big Time Gravel. I will establish that Jones & Company did not do sufficient work on which to base its opinion, and that, as a result, its opinion was wrong. Because of Jones & Company's negligence, materially misstated financial statements were given to Bierhoff, Ltd. Bierhoff, Ltd. then relied on these misstated financial statements when it invested \$10,000,000 in Big Time Gravel. Big Time Gravel's financial statements listed an inventory balance that was \$5,000,000 too high. Jones & Company failed to find this huge inaccuracy and the fraud behind it because they did not perform an audit of sufficient quality; that is, they did not exercise the same degree of care that other auditors in their position would have used. The \$5,000,000 overstatement of inventory hid Big Time Gravel's financial problems from Bierhoff, Ltd. When Big Time Gravel's financial problems came to light, the company declared bankruptcy and my client lost their investment. Bierhoff, Ltd. believes that the auditor who negligently failed to discover the overstatement should reimburse it for its \$10,000,000 loss.

I will prove my case by calling two witnesses. The first witness is Mr. Kesler, former general manager of Big Time Gravel. He will tell you how inventory is stored and counted, and he will also give you some background information about the operations of the business. He was unaware of the fraudulent activities being carried out by the senior management of Big Time Gravel. The second witness is Professor Evans, a respected professor specializing in auditing at a major university. Her expert testimony will point out several areas in which the performance of Jones & Company was substandard and will describe how such substandard procedures led to the misstatement of financial statements, which led to my client's losses. I will argue that Jones & Company should have known that the 1996 financial statements of Big Time Gravel were misstated and should have performed additional work to discover the precise nature of the misstatement.

I am confident that you will find for the plaintiff as Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and my client, Bierhoff, Ltd., did suffer a loss of \$10,000,000 as a result of this negligence.

Judge: **Lawyer for the defendant, please give your opening statement.**

Defense Opening Statement: It is our position that Jones & Company complied with generally accepted auditing standards in its audit of Big Time Gravel's financial statements, and that Jones & Company was, therefore, not negligent. Auditors reduce the probability that people receive misstated financial statements. Auditors could try to find every misstatement, but, to do so they would have to examine every transaction in which a company took part. This would mean that financial statements would not be available in a timely manner since every transaction would have to be looked at. It would also make the cost of an audit so high that no one would be able to afford an audit and; therefore, investors and creditors would not have reliable information on which to base their decisions. It also may not be possible to audit every transaction because there might be unrecorded transactions. The audit of completeness of transactions is not possible. Instead, auditors examine a subset of transactions by using their professional judgment and sampling techniques. This is what auditing standards require.

The plaintiff has alleged that Jones & Company was negligent in its audit of Big Time Gravel's 1996 financial statements. Negligence can be established only when an auditor fails to exercise the usual judgment, care, skill, and diligence employed by other Chartered Accountants (CAs) in the community. Auditing standards determine the type and amount of work that CAs do. It is the defense's position that if an auditor complies with auditing standards, he has not been negligent.

The plaintiff makes a point of mentioning the loss of his client, Bierhoff, Ltd. That loss is not relevant in determining whether Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel. Only the actions and decisions made by Jones & Company, as compared with those that would have been made by other competent CAs in similar circumstances, are relevant. I will argue that Jones & Company did what any other auditor in its position would have done, and that it in no way violated auditing standards.

The plaintiff must prove its allegations by a preponderance of the evidence. This means that it must show that the charges are more probably true than not true. The plaintiff cannot do so. I will present two witnesses. First, I will call Mr. Robertson, the partner from Jones & Company in charge of the Big Time Gravel audit. He will describe the procedures performed during the audit. The second witness will be Ms. Brecht, a respected partner with another large accounting firm and expert witness. She will establish that Jones & Company made appropriate use of professional judgment in making the decisions that it did, and that it in no way violated professional standards. In fact, auditing standards explicitly recognize that auditors may not be able to discover fraud such as that which occurred in this case. Jones & Company is a competent, esteemed accounting firm, and I am confident that you will find in its favour.

Judge: Plaintiff lawyer, please call your first witness.

Plaintiff Lawyer: I call Robert Kesler.

Mr. Kesler, please tell the court your position and length of time employed at Big Time Gravel.

Mr. Robert Kesler, Witness for the Plaintiff: I was the general manager of Big Time Gravel from 1991 through March of 1996.

Plaintiff Lawyer: Were you aware of the fraudulent activities and the overstatement of inventory at the 1996 year end?

Robert Kesler: No, I was not aware of the fraud and overstatement of inventory. I was not involved with the estimation of the quantity of inventory.

Plaintiff Lawyer: Thank you. Now, please give us a brief summary of Big Time Gravel's business.

Robert Kesler: Big Time Gravel is a large producer of aggregate, or gravel, and cement in a large, growing city. It buys land, mines the resources, restores the land, then sells it to developers. The products are sold to contractors, city and provincial road departments and other concrete producers.

Plaintiff Lawyer: How much of Big Time Gravel's assets is comprised of inventory and how is this inventory stored?

Robert Kesler: A large portion, about 53%, of the company's total assets is inventory. These amounts are primarily represented by large piles of aggregate and concrete additives, such as colours and strengtheners, which are located at various mining sites and at the company's sales lots.

Plaintiff Lawyer: How does Big Time Gravel keep track of inventory?

Robert Kesler: Because of the nature of our business, we cannot keep accurate records of how much inventory we have on hand. We have our lot managers estimate our inventory on a monthly basis.

Plaintiff Lawyer: Thank you, Mr. Kesler.

Cross-examination:

Defendant Lawyer: Are you comfortable with the company procedures for estimating and valuing inventory?

Robert Kesler: Yes, I am. Our people are experienced in the estimation and valuation of the inventory. The same people have done the estimation for the five years I have been at Big Time Gravel and I understand that they had been doing it for several years before I arrived.

Defendant Lawyer: That's all, your honour.

Judge: Next witness, plaintiff lawyer.

Plaintiff Lawyer: I now call Professor Irene Evans.
Ms. Evans, in your opinion what is the issue at hand in this case?

Professor Irene Evans, Expert Witness for the Plaintiff: The issue at hand is that Big Time Gravel overstated its inventory by \$5,000,000 and Jones & Company failed to discover the misstatement.

Plaintiff Lawyer: How was Big Time Gravel able to overstate their inventory balance by \$5,000,000?

Irene Evans: The procedures used to inflate inventory values included double counting of items, especially at the sites where auditors did not observe inventory procedures, and large estimation errors of the quantities due to the purposeful use of an inappropriate estimation procedure.

Plaintiff Lawyer: Did Jones & Company perform the appropriate amount of audit work?

Irene Evans: According to the auditors' working papers, they did observe Big Time Gravel's annual inventory procedures at some locations, and they did review calculations made by the lot managers. Auditing standards require auditors to observe inventory procedures, in part so that auditors can verify that the items that the client claims to own really do exist. In my opinion, it was not adequate for Jones & Company to observe procedures at only five of the firm's eleven lots, as significant errors or other misstatements could have occurred, and did

occur, at the other sites. Further, Jones & Company told the client two weeks in advance which sites had been selected. This advance notice provided the client with an opportunity to move inventory between sites. Finally, Jones & Company relied on the company's own estimates of the quantity of inventory. Because complicated estimation procedures are required, Jones & Company should have called in a specialist. Auditing standards require the use of specialists when the auditor is not trained to do a particular kind of work. In this case, it would have been appropriate to call in an engineer to obtain an accurate, unbiased estimate of the quantity of inventory. The audit of inventory is especially important for this company, because inventory represents such a large percentage of the company's assets.

Plaintiff Lawyer: Thank you, Ms. Evans.

Cross-examination:

Defendant Lawyer: Is it normal for an auditor to examine only a subset of all inventory sites?

Irene Evans: Yes, it is normal for an auditor to examine inventory at only a subset of all inventory sites, and, as a practical matter, the client often knows in advance which sites will be examined.

Defendant Lawyer: Do auditing standards require the use of a specialist for this type of inventory?

Irene Evans: No, auditing standards do not explicitly require the auditor to use a specialist for cases in which inventory is stored in piles above the ground, but they do require an auditor to use judgment in determining whether he is competent to assess the quantity and condition of assets. If he is not competent, he should consult with someone who is competent.

Defendant Lawyer: Do auditing standards require auditors to discover fraud?

Irene Evans: No, auditing standards do not require auditors to discover all fraud. Auditing standards acknowledge that it is more difficult for an auditor to discover fraud than errors. Auditing standards require auditors to be alert to the possibility of fraud, though.

Defendant Lawyer: Thank you, Ms Evans. I am finished, your honour.

Judge: Defendant lawyer, call your first witness.

Defendant Lawyer: I call, Mr. James Robertson, the partner in charge of the 1996 Big Time Gravel audit.

Mr. Robertson, how long have you been in charge of the Big Time Gravel audit?

James Robertson: I have been the partner in charge of Big Time Gravel for the past 10 years.

Defendant Lawyer: Has inventory historically been a contentious audit issue for Big Time Gravel?

James Robertson: Yes, determining the amount of inventory on hand is always a big audit issue.

Defendant Lawyer: What did the auditors do to audit the December 31, 1996 inventory balance?

James Robertson: At the end of 1996, we sent auditors out to about half of the sites. They watched the lot managers pace off the sizes of the piles. We reviewed the managers' calculations afterwards. These procedures are the same as the procedures performed over the past 10 years. We have never had a problem with Big Time Gravel.

Defendant Lawyer: Does Jones & Company traditionally spend a lot of time on the estimation and valuation of the inventory balance?

James Robertson: Yes, the inventory estimation and valuation is given a major portion of the audit time. We are always very concerned with the estimation of the inventory.

Defendant Lawyer: Thank you, Mr. Robertson.

Cross Examination:

Plaintiff Lawyer: Mr. Robertson, were you not concerned when you found out that the five sites you selected to observe the count at year end only represented 50% of the inventory when Big Time Gravel had estimated that they would represent 80%?

James Robertson: We were concerned initially, however, Big Time Gravel was able to dispel our concerns by explaining that they had had a large order to fill in early 1997 which required them to stockpile inventory prior to the year end. They had not been aware of this order when they initially estimated that the five sites would contain 80% of the inventory on hand. Last minute orders like this have occurred in the past as well.

Plaintiff Lawyer: Did you consider hiring a specialist to help you with the estimation of the quantity of inventory on hand at the end of 1996?

James Robertson: We have never had a need to hire a specialist in the past. We have always had a good relationship with the management of Big Time Gravel and have, therefore, been comfortable with observing and recalculating the lot managers' estimates. We believe that we performed appropriate audit procedures.

Plaintiff Lawyer: Thank you, Mr. Robertson. I'm finished, your honour.

Judge: Next witness, defendant lawyer.

Defendant Lawyer: I call, Ms. Joanne Brecht, your honour.
Ms. Brecht, what do auditing standards require auditors to do when auditing inventory?

Ms. Joanne Brecht, Expert Witness for the Defense: Auditing standards require auditors to observe physical counts of inventories when this is feasible, but neither standards nor current practice require an auditor to observe procedures at all inventory sites. Auditing employs the use of professional judgment and sampling techniques.

Defendant Lawyer: Did Jones & Company employ the use of professional judgment and sampling techniques?

Joanne Brecht: Jones & Company made good use of these tools. They selected the sites to be observed carefully, and with good justification. Big Time Gravel had previously estimated that the five locations chosen would hold 80% of the inventory value. Further, as Professor Evans noted, it is not unusual for an audit client to know which inventory sites have been selected for observation. This may be necessitated by the auditor's need to know when to

show up at a particular site, and by the client's need to have one crew take inventory at multiple locations.

Defendant Lawyer: Was Jones & Company explicitly required to use a specialist?

Joanne Brecht: No, they were not. Auditing standards do not explicitly require the use of a specialist in this case. Auditing standards require that the auditors use professional judgment. In this case, it was Jones & Company's judgment that it was competent to assess the accuracy of its client's inventory estimates. Auditors normally work from their client's estimates of inventory quantities.

Defendant Lawyer: Is an auditor expected to discover all fraudulent behavior?

Joanne Brecht: No, auditors are not expected to discover all fraudulent behavior; however, they are expected to be alert to the possibility of fraud. Auditing standards explicitly state, per CICA HB. 5136.10, that "an auditor conducting an audit in accordance with generally accepted auditing standards may not detect fraud even if the effect of its consequences on the financial statements is material." This is due to the fact that if the client actively attempts to deceive the auditor, the auditor may not have access to the evidence that it needs to discover the fraud. This is especially true when high-level management and outside parties are involved in the fraud, as was the case in the Big Time Gravel audit.

Defendant Lawyer: Thank you, Ms. Brecht. Your witness, plaintiff lawyer.

Cross-examination:

Plaintiff Lawyer: Ms Brecht, is it normal for an auditor to allow a client two weeks lead time to schedule inventory observations?

Joanne Brecht: Allowing the client two weeks lead time for scheduling inventory observations may be slightly unusual.

Plaintiff Lawyer: Was it appropriate for Jones & Company to only observe 50% of the inventory?

Joanne Brecht: Big Time Gravel had estimated prior to the count that the five sites selected would have contained 80% of the inventory on hand at year end. Unfortunately, it

turned out that only 50% of the total audited value of inventories was located at the five selected sites.

Plaintiff Lawyer: Is it common practice for an auditor to not hire a specialist to estimate the value of this type of inventory?

Joanne Brecht: The type of inventory in question is somewhat unusual in that it cannot be counted or weighed, and the auditor cannot readily assess its condition or value. Because of this, it is probably more usual than not for auditors to bring in specialists in cases such as this.

Plaintiff Lawyer: Thank you, Ms. Brecht. I am finished, your honour.

Judge: **May we have your closing statement, plaintiff lawyer.**

Plaintiff Closing Statement: The testimony you have heard today established that Jones and Company was negligent in its audit of the 1996 financial statements of Big Time Gravel. A well-respected auditing professor, Professor Evans, has told you that the procedures that Jones & Company used in evaluating the inventory accounts were substandard, and that those substandard procedures caused my client's loss. The defense's own expert witness, Ms. Brecht, even admitted that other auditors might have performed additional procedures before forming an audit opinion. The negligence of Jones & Company resulted in a \$10,000,000 loss for Bierhoff, Ltd.

The most important errors of Jones and Company were first, that it only observed inventory procedures for 50% of the final value of inventory, second, that it did not recognize when its auditors were not competent to assess the accuracy of the quantity and condition of the inventory, third, that it accepted its client's estimates without question, and fourth, that it gave Big Time Gravel two weeks advance notice of which sites had been selected for auditing. Society expects more than that from auditors. We expect, and auditing standards require, auditors to know when they are not competent to perform a specific task and to call in specialists. We expect, and auditing standards require, auditors to maintain an attitude of professional skepticism about client representations. We expect auditors to find \$5,000,000 irregularities and frauds such as the ones in Big Time Gravel's financial statements. Why would we hire auditors if they were not able to find large irregularities in financial statements? Jones & Company did not live up to society's expectations, and it did not meet minimum auditing standards. Therefore, I urge you to find for the plaintiff in this case.

Thank you, your honour.

Judge: **Defendant lawyer, may we hear your closing statement?**

Defense Closing Statement: The plaintiff has told you that Jones & Company made some mistakes in its audit of the 1996 financial statements of Big Time Gravel. It is your job to evaluate whether the actions taken were actually mistakes. Is it a mistake to allow an audit client to coordinate inventory procedures with the auditor's schedule? Is it a mistake to follow commonly-used judgmental procedures in determining which inventory sites to observe? Is it a mistake to use one's analytical skills to verify the calculations of people who have much experience in estimating gravel quantities and no known reasons to be dishonest? None of these is a mistake; moreover, auditing standards require nothing more than these actions. The plaintiff's expert witness admitted this. Jones & Company did not discover the fraud that Big Time Gravel perpetrated, however, Jones & Company did perform an audit that complies with auditing standards. The plaintiff has failed to demonstrate otherwise. Accordingly, I urge you to find in favour of the defendant, Jones & Company.

**PLEASE ANSWER THESE QUESTIONS PRIOR TO THE FIRST TELEPHONE
NEGOTIATION**

Please answer the following questions regarding the case. You may refer back to the case materials, if you wish. Please take care and consideration in making your assessments.

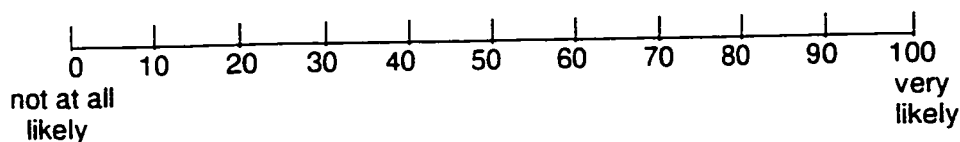
1. What is your assessment of the dollar value of a fair settlement (if any) on the case?

2. A judge has been given the exact same copy of this case as you have received. He or she has not received any additional information. He or she has been involved in a number of audit legal cases.

Do you think the judge will rule in favour of the plaintiff or defendant?

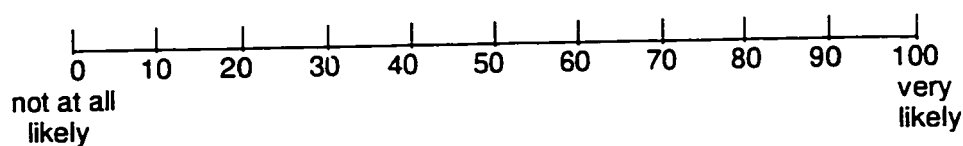
Plaintiff _____ Defendant _____

Please rate what you believe the likelihood of this outcome is:



If you believe the judge will rule in favour of the plaintiff, what is your best guess of the dollar amount of the judge's award in this case?

Please rate what you believe the likelihood of this outcome is:



*Please turn the page and begin reading the instructions for the negotiation.
The instructions should be read prior to the first telephone negotiation.*

Part 2

READ PART 2 PRIOR TO THE FIRST TELEPHONE NEGOTIATION

Negotiation Session:

Your participation in the negotiation part of the study will give you the chance to win a charitable donation made in your name to the charity of your choice. You are being asked to participate in two negotiations with two different participants of the study acting as either the current auditor and advisor to the plaintiff in the case, Bierhoff, Ltd or the current auditor and advisor to another plaintiff, Sutton Enterprises. Both plaintiffs, Bierhoff, Ltd. and Sutton Enterprises, have given their advisors full authority to make all decisions regarding the negotiation. Bierhoff, Ltd. is a venture capitalist who claims to have lost its investment in Big Time Gravel and Sutton Enterprises is a private investment company who claims to have lost its loan to Big Time Gravel. The plaintiff advisor in both negotiations will be a randomly assigned audit partner from another firm. The negotiations will be performed via the telephone at a time convenient for you.

In both cases, the plaintiff, Bierhoff, Ltd. or Sutton Enterprises, is suing you for \$10,000,000 in damages. By participating in both negotiations, you will be entered twice in the lottery. After the experiment is complete, one negotiation pair will be randomly drawn. This pair will be awarded the \$500 charitable donation to split according to the agreed upon settlement amount and the time taken to reach a settlement. For example, \$1 of the \$500 will represent \$20,000 of the \$10,000,000. Therefore, if the pair selected agreed to a settlement of \$5,000,000, each individual in the pair would have a charitable donation made in their name of \$250. However, each party will be assessed legal fees and other costs of \$250,000 for each period used in the negotiation that did not result in a settlement (see below). If the pair selected did not reach a settlement, the \$500 charitable donation will be split according to the judge's ruling on the case less any legal fees and other costs. The judge's ruling will be available in an executive summary of the results once the results of the study have been analyzed.

Therefore, the settlement agreed to (if any) determines how the \$500 charitable donation will be split between the selected pair.

In both negotiations, you will be given an unlimited number of periods to negotiate a settlement, however, you will be limited to approximately 15 minutes for each negotiation. (The researcher will announce when the time limit is up.) Each period will involve either you or the plaintiff advisor making a settlement offer and the opposing litigant either accepting or rejecting the offer. If the offer is accepted by the opposing litigant, the negotiation is over. If the offer is rejected, the litigant that rejects the offer will begin the next period by making a settlement counteroffer. You will make the first offer in both negotiations, therefore, you will make offers in the odd periods. The plaintiff advisor will make offers in the even periods. All offers will be communicated via the telephone and the researchers acting as the lawyers for the defendant and the plaintiff. You will not speak to or know the identity of your negotiation partner.

If you have not settled at the end of a period, you will be charged \$250,000 for legal fees and other costs. This amount will be deducted from your settlement. The plaintiff advisor will also be charged \$250,000. For example, if you settle in the fifth period, you and the plaintiff advisor will each be charged \$1,000,000 for legal fees and other costs; this would leave a maximum amount of \$8,000,000 for the settlement.

After the first negotiation, you will be asked to report the outcome of that negotiation to the plaintiff advisor for Sutton Enterprises in the second negotiation. You will report the settlement amount (if any) and the number of periods required to reach that settlement.

The plaintiff advisor has read the exact same case as you. He or she does not have any additional information. If you have any questions, please ask the researcher before the first telephone negotiation begins.

Do Not Turn the Page

*Please wait for instructions from the researcher at the
time of the first telephone negotiation*

Negotiation 1**Period 1**

Please make your initial offer.

What is your offer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After the lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response.

Period 2

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the plaintiff advisor's counter offer? _____

What is the plaintiff advisor's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 3.

Period 3

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response.

Period 4

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the plaintiff advisor's counter offer? _____

What is the plaintiff advisor's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 5.

Period 5

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response.

Period 6

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the plaintiff advisor's counter offer? _____

What is the plaintiff advisor's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 7.

Period 7

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response.

Part 3

PLEASE COMPLETE AFTER THE FIRST TELEPHONE NEGOTIATION AND PRIOR TO THE SECOND TELEPHONE NEGOTIATION

Negotiation 1 Results:

Instructions: Please answer the following questions regarding the outcome of your first set of negotiations.

1. What is the settlement amount you and the plaintiff advisor agreed to (if any) ? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

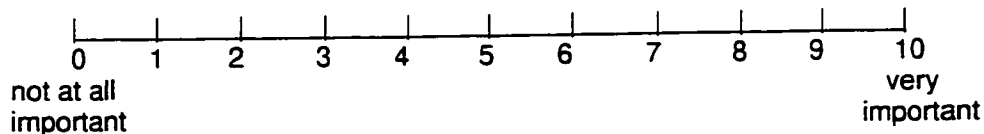
5. What are the factors that influenced your decision?

6. What is the highest settlement offer you would have accepted from the Bierhoff, Ltd. plaintiff advisor? _____

7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any reputation costs of settling when making your decisions during the negotiation?

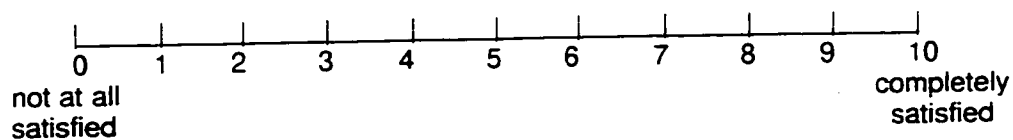
_____ Yes _____ No

If you did consider any reputation costs of settling, how important were these costs to your decisions in the negotiation?

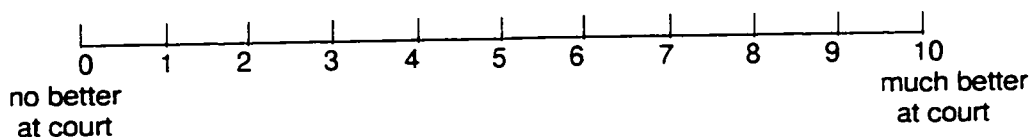


What is your best prediction of the dollar amount of any reputation costs of settling? _____

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

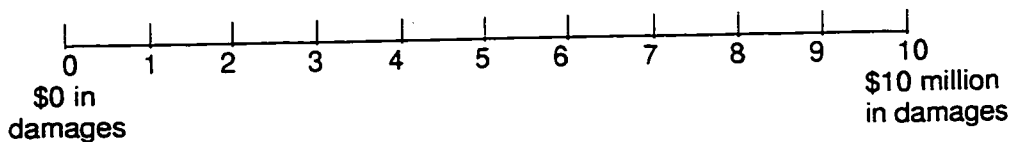


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will have to pay in damages?



Please turn the page and read Part 4.

Part 4
PLEASE READ THIS PRIOR TO THE SECOND TELEPHONE NEGOTIATION

The second negotiation will be run in the exact same manner as Negotiation 1. Please set up a convenient time for you to perform the second negotiation.

Your scheduled time for the second negotiation is _____

Please make sure that you have reported the outcome of your first negotiation to your lawyer so that he or she can report the outcome of your first negotiation to the Sutton Enterprises plaintiff advisor in the second negotiation.

The plaintiff in the second negotiation is Sutton Enterprises, a private investment company. This company also claims to have lost \$10,000,000 by relying on the Big Time Gravel 1996 audited financial statements, and therefore, is also suing Jones & Company for \$10,000,000 in damages.

Sutton Enterprises loaned Big Time Gravel \$10,000,000 for expansion in early 1997 after analysing the Big Time Gravel 1996 audited financial statements. Jones & Company was aware of the intended reliance of Sutton Enterprises on the 1996 audited financial statements as Sutton Enterprises had written Jones & Company with its intention in October 1996.

Please assume while negotiating this settlement that the case facts are the same as those in the case of Bierhoff, Ltd. v. Jones & Company.

Please wait for the researcher to signal the beginning of the second negotiation.

Do Not Turn the Page

***Please wait for instructions from the researcher at the
time of the second telephone negotiation***

Part 5
Negotiation 2

Period 1

Please make your initial offer.

What is your offer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After the lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response.

Period 2

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the plaintiff advisor's counter offer? _____

What is the plaintiff advisor's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 3.

Period 3

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response.

Period 4

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the plaintiff advisor's counter offer? _____

What is the plaintiff advisor's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 5.

Period 5

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response.

Period 6

If you have already settled with the plaintiff advisor, please ignore this page. If you have not settled, please continue.

Did the plaintiff advisor accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the plaintiff advisor's counter offer? _____

What is the plaintiff advisor's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 7.

Period 7

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the plaintiff advisor. The plaintiff advisor will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the plaintiff advisor's decision via the telephone.

Please wait for the plaintiff advisor's response

Part 6
PLEASE COMPLETE THIS AFTER THE SECOND TELEPHONE NEGOTIATION

Negotiation 2 Results

Instructions: Please answer the following questions regarding the outcome of your second set of negotiations.

1. What is the settlement amount you and the plaintiff advisor agreed to (if any) ? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

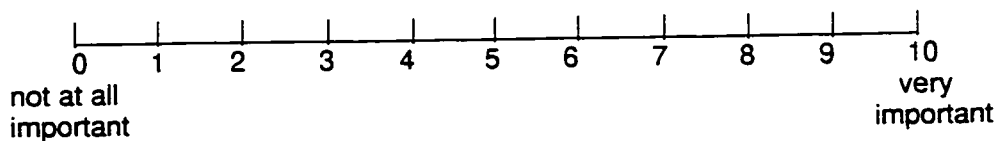
4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

5. What are the factors that influenced your decision?

6. What is the highest settlement offer you would have accepted from the Sutton Enterprises plaintiff advisor? _____

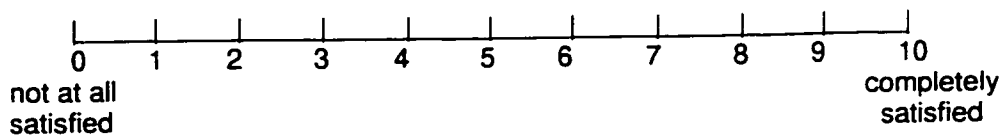
7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any reputation costs of settling when making your decisions during the negotiation? _____ Yes _____ No

If you did consider any reputation costs of settling, how important were these costs to your decisions in the negotiation?

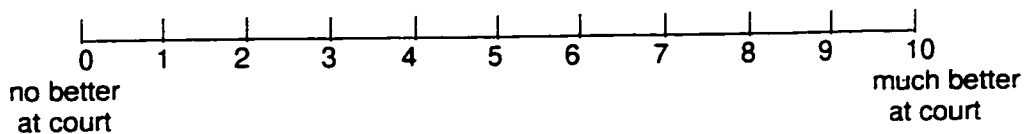


What is your best prediction of the dollar amount of any reputation costs of settling? _____

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

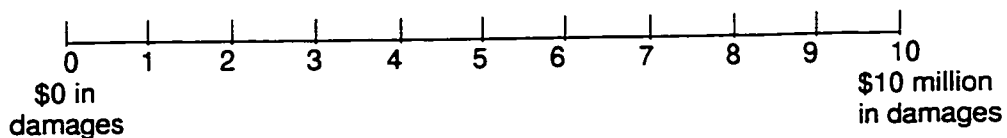


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will have to pay in damages?



Please answer the questions in Part 7.

Part 7

PLEASE COMPLETE THIS AFTER THE SECOND TELEPHONE NEGOTIATION

Additional Questions:

Instructions: Please answer the following questions about yourself and about your participation in the study.

- 1. What is your gender? _____ Male _____ Female
- 2. What is your age? _____
- 3. How long have you worked as an auditor? _____
- 4. What is your position at the audit firm? _____
- 5. What is the name of your employer firm? _____
- 6. Have you ever been involved in an audit litigation case? _____ Yes _____ No

How many? _____

- 7. If you were involved in any audit litigation case(s), what was(were) the outcome(s)?

Did you settle _____ or go to court _____?

If you settled, when did you settle?

and why did you settle?

If you went to court, did you win?

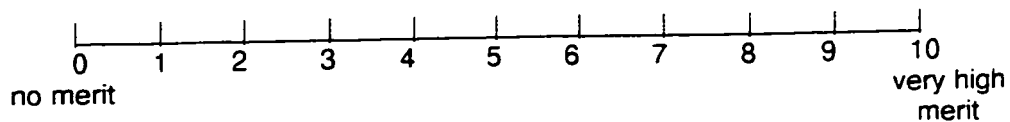
and why did you go to court?

8. In your own opinion, what is the impact of settling on an audit firm's success and reputation?

9. Which of these best describes your role during the experiment?

- the defendant, Jones & Company
- the plaintiffs, Bierhoff, Ltd. and Sutton Enterprises
- the current auditor and advisor to the plaintiffs. Bierhoff, Ltd. and Sutton Enterprises

10. Auditors often argue that many of the litigation cases brought against them are without merit; the plaintiff is only suing the auditors because of their ability to pay. Please rate the level of merit of this case. (A high merit case is a case where the auditor should definitely be sued and a low merit case is a case where the auditor probably should not be sued.)



11. Are you aware of any recent developments in auditors' liability in the courts?

Where did you learn this information?

Firm publication Media Colleague Institute Other

Any other comments?

You are done. Thank you for participating in this experiment. Please mail your materials back to the researcher in the large addressed envelope.

B)

Part 1**Instructions:**

Thank you for participating in this study. For your participation, you will be given a chance to win a charitable donation made in your name to the charity of your choice.

Part of this study will be administered via the telephone. A time will be set up convenient for you and another audit partner from another firm to do the telephone negotiation. You will be expected to have read the case materials prior to the telephone negotiation. You also will be asked to answer some questions after the telephone negotiation.

Your scheduled time is: _____

One important issue currently facing auditors is the litigation crisis. Please imagine yourself as the current auditor, expert witness and **plaintiff advisor** for the plaintiff, **Bierhoff, Ltd.**, in the following legal case. Bierhoff, Ltd. has hired you to advise them in their litigation decisions regarding this case. You have been given full authority to make all of the decisions.

Please remember your role while reading the case and read the case materials and facts carefully as you will be asked to make decisions based on these facts later. Please read the case prior to your first telephone negotiation.

The case will be presented to you as follows:

The complaint, answer and damages will be given first. Next, you will read the opening statements for both the plaintiff and defendant. Following this, you will read testimony from two witnesses for the plaintiff and two witnesses for the defendant. Lastly, the plaintiff's and defendant's closing statements will be given.

After you have read the case materials, you will be asked to do the following:

- Answer some questions
- Be randomly paired with another partner in another audit firm acting as the defendant and attempt to negotiate a settlement via the telephone at your specified time
- Answer some questions regarding the negotiation
- Assume the role of another plaintiff advisor
- Be randomly paired with another partner in another firm acting as the defendant
- **Receive the first negotiated outcome (amount and time to settle) of the new defendant**
- Attempt to negotiate a settlement with the new defendant via the telephone at your specified time
- Answer some questions regarding the second negotiation
- Answer some general questions about yourself and your participation in the study
- Mail your materials back to the researcher

Please begin reading the case.

Bierhoff, Ltd. v. Jones & Company
Summary, Case #96208

Complaint: The plaintiff, Bierhoff, Ltd., alleges that the defendant, Jones & Company, was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and that Bierhoff, Ltd. suffered damages of \$10,000,000 as a consequence of relying on these audited 1996 financial statements.

Answer: The defendant, Jones & Company, responds that it complied with auditing standards and that therefore it was not negligent.

Damages: The plaintiff is suing the defendant for \$10,000,000 in damages.

Judge: **Plaintiff lawyer, please give your opening statement.**

Plaintiff Opening Statement: This case is about auditor negligence. You are about to find out what can happen when auditors do not do their jobs properly and serious fraud causes errors in the financial statements. My client, Bierhoff, Ltd., a venture capital company, received and relied on the financial statements of Big Time Gravel in their decision to invest in Big Time Gravel. They later found out that the financial statements were fraudulent. Jones & Company was aware that Bierhoff, Ltd. would be relying on the Big Time Gravel financial statements as Bierhoff, Ltd. had sent a letter outlining their intentions to Jones & Company prior to the audit. Jones & Company's negligence cost Bierhoff, Ltd. \$10,000,000.

Auditors investigate the financial records of their client company to determine whether the financial statements are a valid summary of the economic events and transactions that affected the company during the year. Financial statements are summaries of financial information that are given to investors and creditors to help them make informed decisions. The value of inventory is one important number that is reported in the financial statements. The result of auditors' work is a report that states whether or not the financial statements of a company are accurate, or, put another way, that the financial statements are not materially misstated. Material or materiality, per CICA HB. 1000.17, "is the term used to describe the significance of financial statement information to decision makers. An item of information, or an aggregate of items is material if it is probable that its omission or misstatement would influence or change a decision." It is often measured in dollars.

Although auditors are hired and paid by the companies whose financial statements they examine, an auditor's primary duty is to the investors to whom it matters whether the financial

statements are fairly stated. Investors, per CICA HB. 1000.09, include present and potential debt and equity investors and their advisors.

Jones & Company reported, per the audit opinion, that the 1996 financial statements of Big Time Gravel "presented fairly, in all material respects, the financial statement position of the company as at December 31, 1996 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles." In other words, Jones & Company gave Big Time Gravel a "clean" report. It is my job to prove to you, on behalf of Bierhoff, Ltd., that Jones & Company was negligent in its performance of the audit of the 1996 financial statements of Big Time Gravel. I will establish that Jones & Company did not do sufficient work on which to base its opinion, and that, as a result, its opinion was wrong. Because of Jones & Company's negligence, materially misstated financial statements were given to Bierhoff, Ltd. Bierhoff, Ltd. then relied on these misstated financial statements when it invested \$10,000,000 in Big Time Gravel. Big Time Gravel's financial statements listed an inventory balance that was \$5,000,000 too high. Jones & Company failed to find this huge inaccuracy and the fraud behind it because they did not perform an audit of sufficient quality; that is, they did not exercise the same degree of care that other auditors in their position would have used. The \$5,000,000 overstatement of inventory hid Big Time Gravel's financial problems from Bierhoff, Ltd. When Big Time Gravel's financial problems came to light, the company declared bankruptcy and my client lost their investment. Bierhoff, Ltd. believes that the auditor who negligently failed to discover the overstatement should reimburse it for its \$10,000,000 loss.

I will prove my case by calling two witnesses. The first witness is Mr. Kesler, former general manager of Big Time Gravel. He will tell you how inventory is stored and counted, and he will also give you some background information about the operations of the business. The second witness is Professor Evans, a respected professor specializing in auditing at a major university. Her expert testimony will point out several areas in which the performance of Jones & Company was substandard and will describe how such substandard procedures led to the misstatement of financial statements, which led to my client's losses. I will argue that Jones & Company should have known that the 1996 financial statements of Big Time Gravel were misstated and should have performed additional work to discover the precise nature of the misstatement.

I am confident that you will find for the plaintiff as Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel and my client, Bierhoff, Ltd., did suffer a loss of \$10,000,000 as a result of this negligence.

Judge: **Lawyer for the defendant, please give your opening statement.**

Defense Opening Statement: It is our position that Jones & Company complied with generally accepted auditing standards in its audit of Big Time Gravel's financial statements, and that Jones & Company was, therefore, not negligent. Auditors reduce the probability that people receive misstated financial statements. Auditors could try to find every misstatement, but, to do so they would have to examine every transaction in which a company took part. This would mean that financial statements would not be available in a timely manner since every transaction would have to be looked at. It would also make the cost of an audit so high that no one would be able to afford an audit, and therefore, investors and creditors would not have reliable information on which to base their decisions. It also may not be possible to audit every transaction because there might be unrecorded transactions. The audit of completeness of transactions is not possible. Instead, auditors examine a subset of transactions by using their professional judgment and sampling techniques. This is what auditing standards require.

The plaintiff has alleged that Jones & Company was negligent in its audit of Big Time Gravel's 1996 financial statements. Negligence can be established only when an auditor fails to exercise the usual judgment, care, skill, and diligence employed by other Chartered Accountants (CAs) in the community. Auditing standards determine the type and amount of work that CAs do. It is the defense's position that if an auditor complies with auditing standards, he has not been negligent.

The plaintiff makes a point of mentioning the loss of his client, Bierhoff, Ltd. That loss is not relevant in determining whether Jones & Company was negligent in performing its audit of the 1996 financial statements of Big Time Gravel. Only the actions and decisions made by Jones & Company, as compared with those that would have been made by other competent CAs in similar circumstances, are relevant. I will argue that Jones & Company did at least as much as any other auditor in its position would have done, and that it in no way violated auditing standards.

The plaintiff must prove its allegations by a preponderance of the evidence. This means that it must show that the charges are more probably true than not true. The plaintiff cannot do so. I will present two witnesses. First, I will call Mr Robertson, the partner from Jones & Company in charge of the Big Time Gravel audit. He will describe the procedures performed during the audit. The second witness will be Ms. Brecht, a respected partner with another large accounting firm and expert witness. She will establish that Jones & Company made appropriate use of professional judgment in making the decisions that it did, and that it in no way violated professional standards. In fact, Jones & Company did more work than other auditors in its position might have done. Further, auditing standards explicitly recognize that auditors may not be able to discover fraud such as that which occurred in this case. Jones & Company is a competent, esteemed accounting firm, and I am confident that you will find in its favour.

Judge: Plaintiff lawyer, please call your first witness.

Plaintiff lawyer: I call Robert Kesler.

Mr. Kesler, please tell the court your position and length of time employed at Big Time Gravel.

Mr. Robert Kesler, Witness for the Plaintiff: I was the general manager of Big Time Gravel from 1991 through March of 1996.

Plaintiff Lawyer: Were you aware of the fraudulent activities and the overstatement of inventory at the 1996 year end?

Robert Kesler: No, I was not aware of the fraud and overstatement of inventory. I was not involved with the estimation of the quantity of inventory.

Plaintiff Lawyer: Thank you. Now, please give us a brief summary of Big Time Gravel's business.

Robert Kesler: Big Time Gravel is a large producer of aggregate, or gravel, and cement in a large, growing city. It buys land, mines the resources, restores the land, then sells it to developers. The products are sold to contractors, city and provincial road departments and other concrete producers.

Plaintiff Lawyer: How much of Big Time Gravel's assets is comprised of inventory and how is this inventory stored?

Robert Kesler: A large portion, about 53%, of the company's total assets is inventory. These amounts are primarily represented by large piles of aggregate and concrete additives, such as colours and strengtheners, which are located at various mining sites and at the company's sales lots.

Plaintiff Lawyer: How does Big Time Gravel keep track of inventory?

Robert Kesler: Because of the nature of our business, we cannot keep accurate records of how much inventory we have on hand. We have our lot managers estimate our inventory on a monthly basis.

Plaintiff Lawyer: Thank you, Mr. Kesler.

Cross-examination:

Defendant Lawyer: Are you comfortable with the company procedures for estimating and valuing inventory?

Robert Kesler: Yes, I am. Our people are experienced in the estimation and valuation of the inventory. The same people have done the estimation for the five years I have been at Big Time Gravel and I understand that they had been doing it for several years before I arrived.

Defendant Lawyer: That's all, your honour.

Judge: Next witness, plaintiff lawyer.

Plaintiff Lawyer: I now call Professor Irene Evans.
Ms. Evans, in your opinion what is the issue at hand in this case?

Professor Irene Evans, Expert Witness for the Plaintiff: The issue at hand is that Big Time Gravel overstated its inventory by \$5,000,000 and Jones & Company failed to discover the misstatement.

Plaintiff Lawyer: How was Big Time Gravel able to overstate their inventory balance by \$5,000,000?

Irene Evans: The procedures used to inflate inventory values included double counting of items, especially at the sites where auditors did not observe inventory procedures, and large estimation errors of the quantities due to the purposeful use of an inappropriate estimation procedure.

Plaintiff Lawyer: Did Jones & Company perform the appropriate amount of audit work?

Irene Evans: According to the auditors' working papers, they did observe Big Time Gravel's annual inventory procedures at some locations, and they did review calculations made by the lot managers. Auditing standards require auditors to observe inventory procedures, in part so that auditors can verify that the items that the client claims to own really do exist. In my opinion, it was not adequate for Jones & Company to observe procedures at only five of the

firm's eleven lots, as significant errors or other misstatements could have occurred, and did occur, at the other sites. Further, Jones & Company told the client three days in advance which sites had been selected. This advance notice provided the client with an opportunity to move inventory between sites. The audit of inventory is especially important for this company, because inventory represents such a large percentage of the company's assets.

Plaintiff Lawyer: Thank you, Ms. Evans.

Cross-examination:

Defendant Lawyer: Is it normal for an auditor to examine only a subset of all inventory sites?

Irene Evans: Yes, it is normal for an auditor to examine inventory at only a subset of all inventory sites, and, as a practical matter, the client often knows in advance which sites will be examined.

Defendant Lawyer: Do auditing standards require auditors to discover fraud?

Irene Evans: No, auditing standards do not require auditors to discover all fraud. Auditing standards acknowledge that it is more difficult for an auditor to discover fraud than errors. Auditing standards require auditors to be alert to the possibility of fraud, though.

Defendant Lawyer: Thank you, Ms Evans. I am finished, your honour.

Judge: Defendant lawyer, call your first witness.

Defendant Lawyer: I call, Mr. James Robertson, the partner in charge of the 1996 Big Time Gravel audit.

Mr. Robertson, how long have you been in charge of the Big Time Gravel audit?

James Robertson: I have been the partner in charge of Big Time Gravel for the past 10 years.

Defendant Lawyer: Has inventory historically been a contentious audit issue for Big Time Gravel?

James Robertson: Yes, determining the amount of inventory on hand is always a big audit issue.

Defendant Lawyer: What did the auditors do to audit the December 31, 1996 inventory balance?

James Robertson: At the end of 1996, we sent auditors out to about half of the sites. They watched the lot managers pace off the sizes of the piles. We reviewed the managers' calculations afterwards. These procedures are the same as the procedures performed over the past 10 years. We have never had a problem with Big Time Gravel.

Defendant Lawyer: Does Jones & Company traditionally spend a lot of time on the estimation and valuation of the inventory balance?

James Robertson: Yes, the inventory estimation and valuation is given a major portion of the audit time. We are always very concerned with the estimation of the inventory.

Defendant Lawyer: Thank you, Mr. Robertson.

Cross Examination:

Plaintiff Lawyer: Mr. Robertson, were you not concerned when you found out that the five sites you selected to observe the count at year end only represented 50% of the inventory when Big Time Gravel had estimated that they would represent 80%?

James Robertson: We were concerned initially, however, Big Time Gravel was able to dispel our concerns by explaining that they had had a large order to fill in early 1997 which required them to stockpile inventory prior to the year end. They had not been aware of this order when they initially estimated that the five sites would contain 80% of the inventory on hand. Last minute orders like this have occurred in the past as well.

Plaintiff Lawyer: Thank you, Mr. Robertson. I'm finished, your honour.

Judge: Next witness, defendant lawyer.

Defendant Lawyer: I call, Ms. Joanne Brecht, your honour.
Ms. Brecht, what do auditing standards require auditors to do when auditing inventory?

Ms. Joanne Brecht, Expert Witness for the Defense: Auditing standards require auditors to observe physical counts of inventories when this is feasible, but neither standards nor current practice require an auditor to observe procedures at all inventory sites. Auditing employs the use of professional judgment and sampling techniques.

Defendant Lawyer: Did Jones & Company employ the use of professional judgment and sampling techniques?

Joanne Brecht: Jones & Company made good use of these tools. They selected the sites to be observed carefully, and with good justification. Big Time Gravel had previously estimated that the five locations chosen would hold 80% of the inventory value. Further, as Professor Evans noted, it is not unusual for an audit client to know which inventory sites have been selected for observation. This may be necessitated by the auditor's need to know when to show up at a particular site, and by the client's need to have one crew take inventory at multiple locations.

Defendant Lawyer: Did Jones & Company's audit procedures meet the requirements of auditing standards?

Joanne Brecht: Yes, they did. In fact, what Professor Evans did not note is that Jones & Company went beyond the minimum requirements of auditing standards in that it recognized the complications involved in accurately estimating the aggregate inventory and called in an engineering firm for help. The engineering firm, Little & Associates, used technical estimation procedures involving aerial photography and measurement of the slope of the gravel piles in estimating inventory. Jones & Company verified that the engineering firm had no connections to Big Time Gravel and was properly licensed to do such work. Because no links were found and the company was found to be competent, Jones & Company accepted the estimates of the engineering firm, which were not materially different from those of Big Time Gravel. Auditing standards do not specifically require use of a specialist in this case, and other auditors might not have been so diligent. Jones & Company went beyond the call of duty by hiring a specialist. It turned out that Big Time Gravel had bribed the specialist, so its work was not completely reliable, but Jones & Company did all it could to verify the independence and qualifications of Little & Associates before engaging the firm.

Defendant Lawyer: Is an auditor expected to discover all fraudulent behavior?

Joanne Brecht: No, auditors are not expected to discover all fraudulent behavior; however, they are expected to be alert to the possibility of fraud. Auditing standards explicitly state, per CICA HB. 5136.10, that "an auditor conducting an audit in accordance with generally accepted auditing standards may not detect fraud even if the effect of its consequences on the financial statements is material." This is due to the fact that if the client actively attempts to deceive the auditor, the auditor may not have access to the evidence that it needs to discover the fraud. This is especially true when high-level management and outside parties are involved in the fraud, as was the case in the Big Time Gravel audit.

Defendant Lawyer: Thank you, Ms. Brecht. Your witness, plaintiff lawyer.

Cross-examination:

Plaintiff Lawyer: Ms Brecht, is it normal for an auditor to allow a client lead time to schedule inventory observations?

Joanne Brecht: Allowing the client lead time for scheduling inventory observations may be slightly unusual.

Plaintiff Lawyer: Was it appropriate for Jones & Company to only observe 50% of the inventory?

Joanne Brecht: Big Time Gravel had estimated prior to the count that the five sites selected would have contained 80% of the inventory on hand at year end. Unfortunately, it turned out that only 50% of the total audited value of inventories was located at the five selected sites.

Plaintiff Lawyer: Is it common practice for an auditor to not hire a specialist to estimate the value of this type of inventory?

Joanne Brecht: The type of inventory in question is somewhat unusual in that it cannot be counted or weighed, and the auditor cannot readily assess its condition or value. Because of this, it is probably more usual than not for auditors to bring in specialists in cases such as this.

Plaintiff Lawyer: Thank you, Ms. Brecht. I am finished, your honour.

Judge: **May we have your closing statement, plaintiff lawyer.**

Plaintiff Closing Statement: The testimony you have heard today established that Jones and Company was negligent in its audit of the 1996 financial statements of Big Time Gravel. A well-respected auditing professor, Professor Evans, has told you that the procedures that Jones & Company used in evaluating the inventory accounts were substandard and that those substandard procedures caused my client's loss. Jones & Company claims to have gone beyond the call of duty by having an engineering firm estimate the inventory in piles, but auditing standards require auditors to rely on the work of specialists when they are not competent to make the needed assessments. In this regard, Jones & Company merely did what was required of it. In other areas, it failed to do so. The negligence of Jones & Company resulted in a \$10,000,000 loss for Bierhoff, Ltd.

The most important errors of Jones and Company were first, that it only observed inventory procedures for 50% of the final value of inventory, and second, that it gave Big Time Gravel three days advance notice of which sites had been selected for auditing. Society expects more than that from auditors. We expect, and auditing standards require, auditors to maintain an attitude of professional skepticism about client representations. We expect auditors to find \$5,000,000 irregularities and frauds such as the ones in Big Time Gravel's financial statements. Why would we hire auditors if they were not able to find large irregularities in financial statements? Jones & Company did not live up to society's expectations, and it did not meet minimum auditing standards. Therefore, I urge you to find for the plaintiff in this case.

Thank you, your honour.

Judge: **Defendant lawyer, may we hear your closing statement?**

Defense Closing Statement: The plaintiff has told you that Jones & Company made some mistakes in its audit of the 1996 financial statements of Big Time Gravel. It is your job to evaluate whether the actions taken were actually mistakes. Is it a mistake to allow an audit client to coordinate inventory procedures with an auditor's schedule? Is it a mistake to follow commonly-used judgmental procedures in determining which inventory sites to observe? Is it a mistake to call in a specialist for help in estimating gravel quantities? None of these is a mistake; moreover, auditing standards require nothing more than these actions. The plaintiff's expert witness admitted this. Jones & Company did not discover the fraud that Big Time Gravel perpetrated, however, Jones & Company did perform an audit that complies with, and even

surpasses, auditing standards. The plaintiff has failed to demonstrate otherwise. Accordingly, I urge you to find in favour of the defendant, Jones & Company.

**PLEASE ANSWER THESE QUESTIONS PRIOR TO THE FIRST TELEPHONE
NEGOTIATION**

Please answer the following questions regarding the case. You may refer back to the case materials, if you wish. Please take care and consideration in making your assessments.

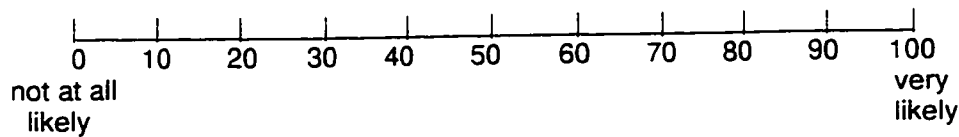
1. What is your assessment of the dollar value of a fair settlement (if any) on the case?

2. A judge has been given the exact same copy of this case as you have received. He or she has not received any additional information. He or she has been involved in a number of audit legal cases.

Do you think the judge will rule in favour of the plaintiff or defendant?

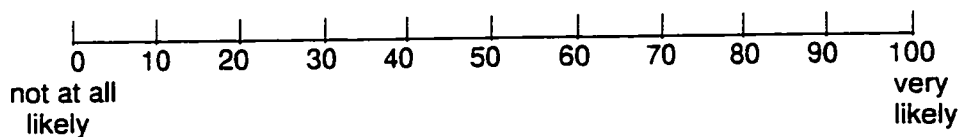
Plaintiff _____ Defendant _____

Please rate what you believe the likelihood of this outcome is:



If you believe the judge will rule in favour of the plaintiff, what is your best guess of the dollar amount of the judge's award in this case?

Please rate what you believe the likelihood of this outcome is:



*Please turn the page and begin reading the instructions for the negotiation.
The instructions should be read prior to the first telephone negotiation.*

Part 2**READ PART 2 PRIOR TO THE FIRST TELEPHONE NEGOTIATION****Negotiation Session:**

Your participation in the negotiation part of the study will give you the chance to win a charitable donation made in your name to the charity of your choice. You are being asked to participate in two negotiations with two different participants of the study acting as the defendant in the case, Jones & Company. The defendant in both negotiations will be a randomly assigned audit partner from another firm. The negotiations will be performed via the telephone at a time convenient for you.

In both cases, you are suing the defendant, Jones & Company, for \$10,000,000 in damages. In the first negotiation you will be the current auditor and plaintiff advisor for Bierhoff, Ltd., a venture capitalist. In the second negotiation you will be the current auditor and plaintiff advisor for Sutton Enterprises, a private investment company. By participating in both negotiations, you will be entered twice in the lottery. After the experiment is complete, one negotiation pair will be randomly drawn. This pair will be awarded the \$500 charitable donation to split according to the agreed upon settlement amount and the time taken to reach a settlement. For example, \$1 of the \$500 will represent \$20,000 of the \$10,000,000. Therefore, if the pair selected agreed to a settlement of \$5,000,000, each individual in the pair would receive \$250. However, each party will be assessed legal fees and other costs of \$250,000 for each period used in the negotiation that did not result in a settlement (see below). If the pair selected did not reach a settlement, the \$500 charitable donation will be split according to the judge's ruling on the case less any legal fees and other costs. The judge's ruling will be available in an executive summary of the results once the results of the study have been analyzed.

Therefore, the settlement agreed to (if any) determines how the \$500 charitable donation will be split between the selected pair.

In both negotiations, you will be given an unlimited number of periods to negotiate a settlement, however, you will be limited to approximately 15 minutes for each negotiation. (The researcher will announce when the time limit is up.) Each period will involve either you or the defendant making a settlement offer and the opposing litigant either accepting or rejecting the offer. If the offer is accepted by the opposing litigant, the negotiation is over. If the offer is rejected, the litigant that rejects the offer will begin the next period by making a settlement counteroffer. The defendant will make the first offer; therefore, you will make offers in the even periods. The defendant will make offers in the odd periods. All offers will be communicated via the telephone and the researchers acting as the lawyers for the defendant and the plaintiff. You will not speak to or know the identity of your negotiation partner.

If you have not settled at the end of a period, you will be charged \$250,000 for legal fees and other costs. This amount will be deducted from your settlement. The defendant will also be charged \$250,000. For example, if you settle in the fifth period, you and the defendant will each be charged \$1,000,000 for legal fees and other costs; this would leave a maximum amount of \$8,000,000 for the settlement.

Before you begin the second negotiation, you will receive the first negotiation outcome of the new defendant. This Public Announcement will inform you of the settlement amount (if any) and the number of periods used in the new defendant's first negotiation.

The defendant has read the exact same case as you. He or she does not have any additional information. Remember that you are the current auditor and plaintiff advisor for Bierhoff, Ltd. in this negotiation. If you have any questions, please ask the researcher before the first telephone negotiation begins.

Do Not Turn the Page

***Please wait for instructions from the researcher at the
time of the first telephone negotiation***

Negotiation 1

Period 1

What is the defendant's initial offer? _____

What is the defendant's argument or reason for this offer?

Do you accept this offer? Yes No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 2.

Period 2

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the defendant's decision via the telephone.

Please wait for the defendant's response.

Period 3

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the defendant's counteroffer? _____

What is the defendant's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 4.

Period 4

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the defendant's decision via the telephone.

Please wait for the defendant's response.

Period 5

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the defendant's counteroffer? _____

What is the defendant's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 6.

Period 6

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the defendant's decision via the telephone.

Please wait for the defendant's response.

Part 3

**PLEASE COMPLETE AFTER THE FIRST TELEPHONE NEGOTIATION AND PRIOR TO
THE SECOND TELEPHONE NEGOTIATION**

Negotiation 1 Results:

Instructions: Please answer the following questions regarding the outcome of your first set of negotiations.

1. What is the settlement amount you and the defendant agreed to (if any)? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

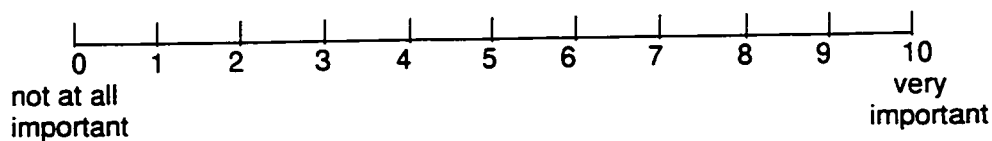
5. What are the factors that influenced your decision?

6. What is the lowest settlement offer you would have accepted from the defendant?

7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any possible reputation costs of settling for the auditor when making your decisions during the negotiation?

_____ Yes _____ No

If you did consider the reputation costs of settling for the auditor, how important were these costs to your decisions in the negotiation?

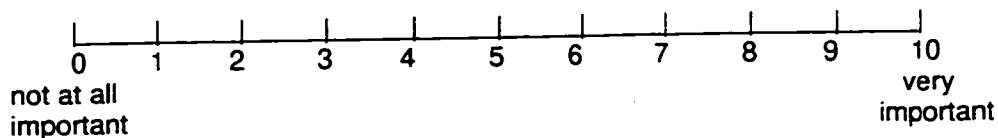


What is your best prediction of the dollar amount of any reputation costs of settling for the auditor? _____

8. Some auditors believe that fighting an audit negligence case in court and losing hurts the auditor's reputation of providing high quality audits? Did you consider any possible reputation costs for losing at court for the auditor when making your decisions during the negotiation?

_____ Yes _____ No

If you did consider any reputation costs of losing at court for the auditor, how important were these costs to your decisions in the negotiation?

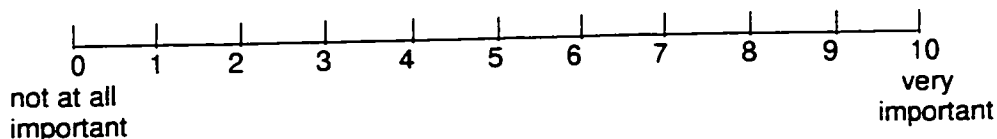


What is your best prediction of the dollar amount of any reputation costs of losing at court for the auditor? _____

9. There are several types of opportunity and business costs incurred by a litigant when it settles a case out of court. Did you consider the opportunity and business costs of settling when making your decisions during the negotiation?

_____ Yes _____ No

If you did consider opportunity and business costs of settling, how important were these costs to your decisions in the negotiation?

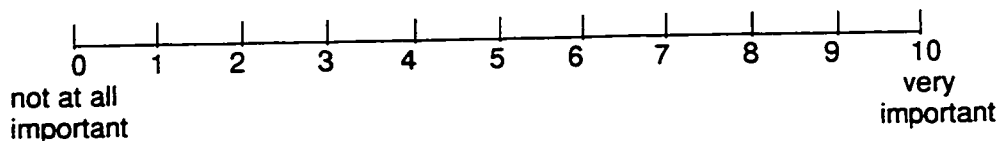


What is your best prediction of the dollar amount of any opportunity and business costs of settling? _____

10. There are several types of opportunity and business costs incurred by a litigant when it fights a case in court. Did you consider the opportunity and business costs of fighting the case in court when making your decisions in the negotiation?

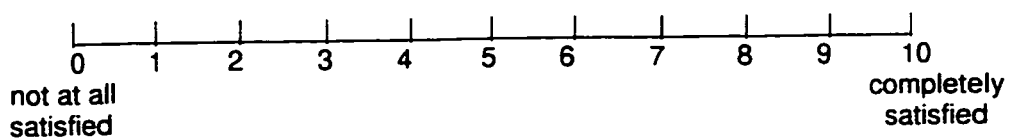
_____ Yes _____ No

If you did consider the opportunity and business costs of fighting the case in court, how important were these costs to your decisions in the negotiation?

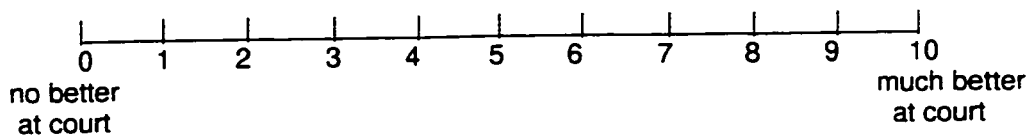


What is your best prediction of the dollar amount of any opportunity and business costs of fighting the case in court? _____

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

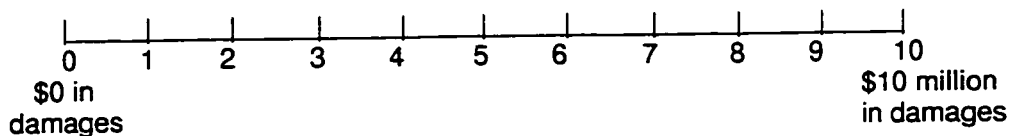


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will receive in damages?



Please turn the page and read Part 4.

Part 4
PLEASE READ PRIOR TO THE SECOND TELEPHONE NEGOTIATION

The second negotiation will be run in the exact same manner as Negotiation 1. Please set up a time convenient for you to perform the second negotiation.

Your scheduled time for the second negotiation is _____

Please wait for the Public Announcement report from your second defendant. This report will inform you of your second defendant's outcome in his or her first negotiation. It will tell you if he or she settled and the number of negotiation periods used.

In the second negotiation, please imagine yourself as the plaintiff advisor for Sutton Enterprises, a private investment company. This company also claims to have lost \$10,000,000 by relying on the Big Time Gravel 1996 audited financial statements, and therefore, is also suing Jones & Company for \$10,000,000 in damages.

Sutton Enterprises loaned Big Time Gravel \$10,000,000 for expansion in early 1997 after analysing the Big Time Gravel 1996 audited financial statements. Jones & Company was aware of the intended reliance of Sutton Enterprises on the 1996 audited financial statements as Sutton Enterprises had written Jones & Company with its intention in October 1996.

Please assume while negotiating this settlement that the case facts are the same as those in the case of Bierhoff, Ltd. v. Jones & Company.

Please wait for the researcher to signal the beginning of the second negotiation.

Do Not Turn the Page

***Please wait for instructions from the researcher at the
time of the second telephone negotiation***

Part 5
Negotiation 2

Period 1

What is the defendant's initial offer? _____

What is the defendant's argument or reason for this offer?

Do you accept this offer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 2.

Period 2

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the defendant's decision via the telephone.

Please wait for the defendant's response.

Period 3

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the defendant's counteroffer? _____

What is the defendant's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 4.

Period 4

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the defendant's decision via the telephone.

Please wait for the defendant's response.

Period 5

If you have already settled with the defendant, please ignore this page. If you have not settled, please continue.

Did the defendant accept your offer? _____ Yes _____ No

If yes, the negotiation is over.

If no, what is the defendant's counteroffer? _____

What is the defendant's argument or reason for this offer?

Do you accept this counteroffer? _____ Yes _____ No

Please communicate your decision to your lawyer via the telephone.

If you accept, the negotiation is over.

If you reject the offer, please move on to period 6.

Period 6

Please make your counteroffer.

What is your counteroffer (if any)? _____

Why did you choose this amount? What is your argument or reason for this amount?

Please communicate the amount of your offer (if any) and the reason or argument for the offer to your lawyer via the telephone.

After your lawyer has heard and transcribed your offer, please wait for the response from the defendant. The defendant will either accept your offer or reject and make a counteroffer. Your lawyer will inform you of the defendant's decision via the telephone.

Please wait for the defendant's response.

Part 6

PLEASE COMPLETE THIS AFTER THE SECOND TELEPHONE NEGOTIATION

Negotiation 2 Results

Instructions: Please answer the following questions regarding the outcome of your second set of negotiations.

1. What is the settlement amount you and the defendant agreed to (if any)? _____

2. Is this a fair settlement amount? _____ Yes _____ No

If not, what would a fair settlement amount be (if any)? _____

3. In what period did you settle (if at all)? _____

4. What were your legal fees and other costs (# of non-settlement negotiation periods x \$250,000)? _____

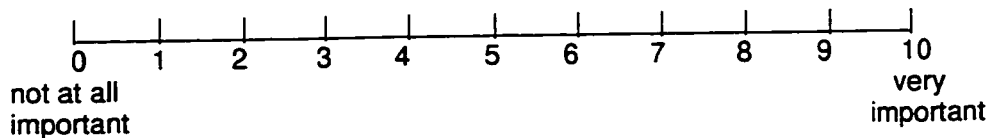
5. What are the factors that influenced your decision?

6. What is the lowest settlement offer you would have accepted from the defendant?

7. Some auditors believe that settling an audit negligence litigation case out of court signals negligence to the public, and therefore, may hurt the auditor's reputation of providing high quality audits. Did you consider any possible reputation costs of settling for the auditor when making your decisions during the negotiation?

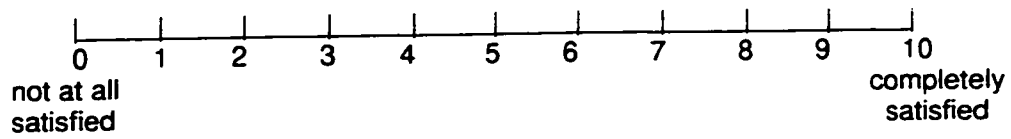
_____ Yes _____ No

If you did consider the reputation costs of settling for the auditor, how important were these costs to your decisions in the negotiation?

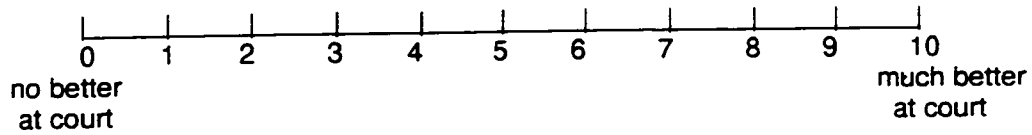


What is your best prediction of the dollar amount of any reputation costs of settling for the auditor?

11. If you settled, how satisfied are you with the settlement you agreed to?



Do you think you could have done better at court?

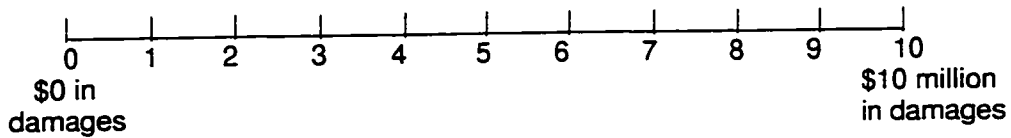


Why? _____

12. If you did not settle, why did you not settle?

How do you think you will do at court?

How much do you think you will receive in damages?



Please answer the questions in Part 7.

Part 7

PLEASE COMPLETE THIS AFTER THE SECOND TELEPHONE NEGOTIATION

Additional Questions:

Instructions: Please answer the following questions about yourself and about your participation in the study.

1. What is your gender? _____ Male _____ Female
2. What is your age? _____
3. How long have you worked as an auditor? _____
4. What is your position at the audit firm? _____
5. What is the name of your employer firm? _____
6. Have you ever been involved in an audit litigation case? _____ Yes _____ No

How many? _____

7. If you were involved in any audit litigation case(s), what was(were) the outcome(s)?

Did you settle _____ or go to court _____?

If you settled, when did you settle?

and why did you settle?

If you went to court, did you win?

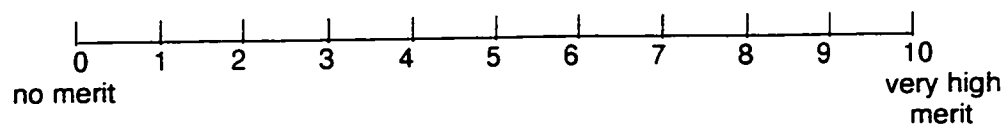
and why did you go to court?

8. In your own opinion, what is the impact of settling on an audit firm's success and reputation?

9. Which of these best describes your role during the experiment?

- _____ the defendant, Jones & Company
- _____ the plaintiffs, Bierhoff, Ltd. and Sutton Enterprises
- _____ the current auditor and advisor to the plaintiffs, Bierhoff, Ltd. and Sutton Enterprises

10. Auditors often argue that many of the litigation cases brought against them are without merit; the plaintiff is only suing the auditors because of their ability to pay. Please rate the level of merit of this case. (A high merit case is a case where the auditor should definitely be sued and a low merit case is a case where the auditor probably should not be sued.)



11. Are you aware of any recent developments in auditors' liability in the courts?

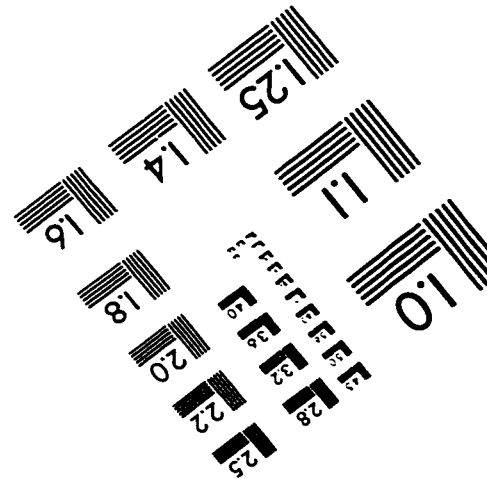
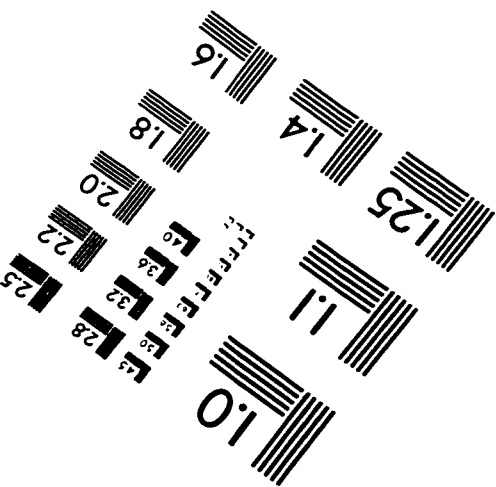
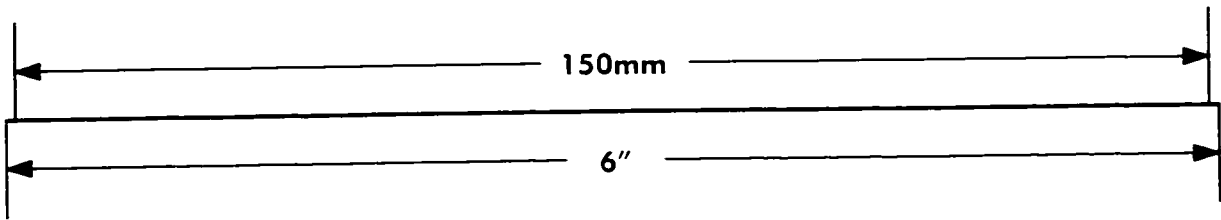
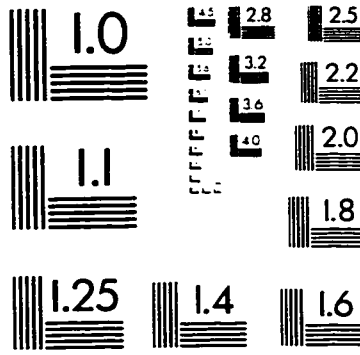
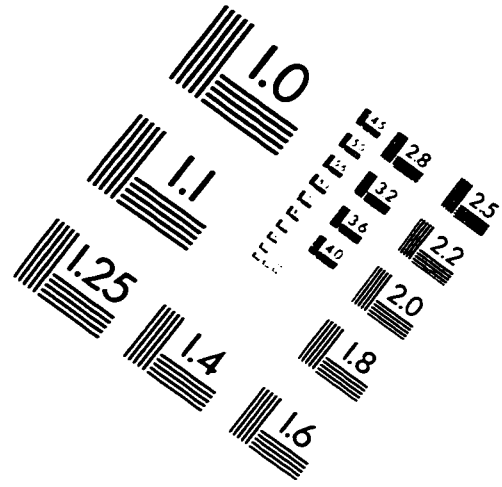
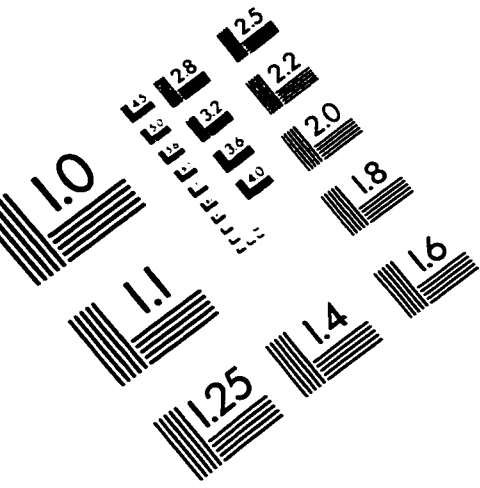
Where did you learn this information?

_____ Firm publication _____ Media _____ Colleague _____ Institute _____ Other

Any other comments?

You are done. Thank you for participating in this experiment. Please mail your materials back to the researcher in the large addressed envelope.

IMAGE EVALUATION TEST TARGET (QA-3)



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