

**THE MEANING OF INDEPENDENCE IN THE CONTEXT OF
AUDIT: DEMAND AND SUPPLY SIDE INTERPRETATIONS**

by

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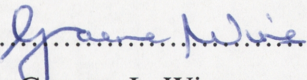
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DECLARATION

I hereby declare that this thesis is the entire work of the author and has not been submitted to any other university or educational institution for the award of any other degree. Furthermore, all sources used in the production of this thesis have been acknowledged in the usual manner.

Signed: 
Graeme L. Wines

Date: 10/12/2007
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ABSTRACT

Accounting represents a process of communication, with this communication primarily achieved via the financial reporting function. Users of financial reports, though, may harbour doubts and uncertainties with respect to the accounting processes by which financial reports are constructed and with respect to the resulting quality of the communicated information. Auditors therefore fulfil an assurance role. A key reason they can fulfil this role is their *independence* from the managements of the entities they audit.

This experimental study investigates the meaning of the concept of auditor independence utilising the *measurement of meaning* (semantic differential) framework originally proposed by Osgood, Suci and Tannenbaum (1957). The research provides insight into whether there is shared meaning of the concept of auditor independence between key parties to the financial reporting communication process and the extent to which those meanings are affected by various potential threats to, and safeguards of, auditor independence. The threats and safeguards examined represent contemporary auditor independence issues.

The experimental cases developed for the study allow examination of the impact on interpretations of auditor independence of alternative potential independence threats and safeguards. The potential auditor independence threats manipulated in the study were (a) non-audit services, (b) interlocking directorships among audit clients, (c) longer periods of audit firm tenure, and (d) a former audit firm partner being a director of the auditee company. The auditor independence safeguards manipulated were (a) additional external public oversight, (b) differing audit partner rotation

periods, and (c) the presence of a local (internal) independence board within the audit firm.

At a general level across all experimental cases, the three groups of research participants (auditors, financial report preparers and financial report users) were found to have a shared meaning of auditor independence. The major individual area in which there was a significant between-group difference in connotations (interpretations) of independence was that of the auditor provision of non-audit services.

Analysis of the experimental cases indicated that (a) significant differences in connotations of an auditor's independence existed between the auditor participants and the other two participant groups in the presence of audit firm provided non-audit services, even though the services were specified to comprise only traditional taxation services, (b) preparers and users exhibited equal independence concerns for low and high levels of taxation services, (c) in the presence of a high level of taxation services, none of the three participant groups perceived benefits to auditor independence from additional audit firm oversight by a public oversight board, (d) all groups perceived an adverse impact on auditor independence when interlocking directorships were present, (e) a longer period of audit firm tenure was not interpreted to adversely affect auditor independence when audit partner rotation policies exist, and this was unaffected by whether audit partner rotation occurred every four years or every seven years, (f) all participant groups agreed on the adverse impact on independence of a former audit firm partner being a director of the auditee company, even though it was specified that the former partner had not previously been involved in the audit of the auditee, and (g) the auditor and user participants agreed on the beneficial impact of the existence of a local independence board within the audit firm.

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CHAPTER 1

INTRODUCTION

Accounting represents a process of communication. In the context of communication by reporting entities in capital markets, this communication is primarily achieved via the financial reporting function (see, for example, Bedford and Baladouni, 1962; Goldberg, 1965; McClure, 1983; Australian Accounting Research Foundation, 1990; Houghton, 1997). However, users of financial reports may harbour doubts and uncertainties with respect to the accounting processes by which financial reports are constructed and with respect to the resulting quality of the communicated information (Lee, 1993). The demand for auditing is therefore derived from a demand to monitor and arbitrate on the application of accounting methods, to control the behaviour of managers in this respect and to verify the financial report (see, for example, Jensen and Meckling, 1976; Antle, 1982; Ball, 1989; Anderson, Francis and Stokes, 1993).

The aim of the audit function is to establish that communicated financial reports have a high degree of credibility and to create rational belief and confidence in those reports (Lee, 1993). An audit aims to provide assurance to the various stakeholders that the financial report information meets specified quality standards (Wolnizer, 1987; Lee, 1993). A major reason auditors can fulfil this assurance role is their *independence* from the managements who are responsible for the contents of financial reports (see, for example, De Angelo, 1981a; Watts and Zimmerman, 1981, 1983; Lee, 1993; Arruñada, 1999a).

This experimental study investigates the meaning of the concept of auditor independence using the *measurement of meaning* (semantic differential) framework originally proposed by Osgood, Suci and Tannenbaum (1957). The aim of the research is to provide insight into whether there is shared meaning of the concept of auditor independence between key parties to the financial reporting (accounting) communication process and the extent to which those meanings are affected by various potential threats to, and safeguards of, auditor independence. The key parties to the financial reporting communication process are central capital market participants with respect to the financial reporting function.

The research provides further theoretical and empirical insight into the concept of independence. It will also provide guidance for regulators, professional accounting bodies, educators and, especially, auditing standard setters. Although a large volume of auditor independence research exists, the issues examined in the study have not previously been investigated from the perspective of the *measured meaning* of the auditor independence concept. The Osgood *et al.* (1957) measurement of meaning framework allows investigation of the *connotative* meaning of the independence concept, this comprising the emotional associations, evaluations and judgments of the concept (Osgood *et al.*, 1957; Flamholtz and Cook, 1978; Bruno, 1980; Bagranoff, 1990).

1.1 THE ISSUE ADDRESSED IN THE THESIS

The audit function aims to provide assurance that communicated financial reports meet specified quality standards in order to satisfy the information needs of capital market participants. Audit quality is dependent on a whole range of factors related to the auditor acting with professional competence and due care. Definitions of audit

quality emphasise an auditor's *competence* and *independence* (DeAngelo, 1981a; Watts and Zimmerman, 1981). Auditor independence is fundamental to the audit function and a major factor impacting on audit quality. Independence has historically been seen to be one of the foremost standards with which auditors should comply,¹ and this continues to be the case. In fact, it is fair to say that auditor independence has become of increased importance over the past five or six years following the spate of corporate collapses earlier this decade involving, for example, Enron and WorldCom in the United States and HIH Insurance and One.Tel in Australia.

The primary objective of an audit is for the auditor to 'provide *independent* assurance to the shareholders that the directors have prepared the financial statements properly' (Auditing Practices Board, 2004a, para. 3, emphasis added). Independence is a major factor influencing an auditor's *reputation* (see, for example, Benston, 1975; Firth, 1990; Wilson and Grimlund, 1990), and Johnstone, Sutton and Warfield (2001, p. 2) state that independence 'is the most fundamental and vital asset possessed by the auditing profession.'

Professional accounting bodies and regulators have generally operationalised the independence concept by requiring auditors to be independent *in fact* and *in appearance* (see, for example, International Organization of Securities Commissions, 2002b; International Federation of Accountants, 2005; Accounting Professional and Ethical Standards Board, 2006a; American Institute of Certified Public Accountants, 2006). The independence pronouncements and standards issued by the various professional accounting organisations and regulatory bodies represent their attempts

¹ See, for example, Mautz and Sharaf (1961), Higgins (1962), Carey and Doherty (1966), Committee on Basic Auditing Concepts (1973), Subcommittee on Reports, Accounting and Management (1977), Carcello, Hermanson and McGrath (1992), Auditing and Assurance Standards Board (1999) and the European Commission (2000).

to provide a definition of auditor independence and to provide guidance for auditors when considering their independence in practice. The various statements therefore elaborate on the *meaning* of the concept of auditor independence, particularly by providing definitions and explanations of independence and by providing rules regarding various threats to auditor independence and safeguards that can be implemented to mitigate threats to reduce them to an acceptable level.

For the concept of auditor independence to be effectively implemented in practice, it is necessary for a shared understanding of the meaning of the concept to exist. However, it may be difficult for auditors to effectively consider and evaluate their independence, particularly in marginal situations, if the meaning of independence in the context of an audit is subject to ambiguity and uncertainty and if their interpretation of the meaning of the concept differs from that of other key parties and stakeholders. Many current professional pronouncements and other documents specify a general test for auditor independence based on what a reasonable and informed investor or other third party, having knowledge of all relevant facts and circumstances, would conclude to be acceptable (see, for example, Auditing Practices Board, 2004a; International Federation of Accountants, 2005; Accounting Professional and Ethical Standards Board, 2006b; American Institute of Certified Public Accountants, 2006). These statements require the auditor to identify and evaluate circumstances and relationships that create threats to independence and to take action by applying appropriate safeguards. However, what auditors and other reasonable and informed parties would conclude to be acceptable is largely dependent on their interpretation of the meaning of the concept of auditor independence, particularly in response to the various circumstances and conditions (threats and safeguards) that could impact on an auditor's actual and/or perceived independence.

The issue addressed in the study therefore focuses on whether there is shared meaning of the concept of auditor independence between different key parties to the financial reporting communication process.

1.2 OBJECTIVES OF AND MOTIVATIONS FOR THE RESEARCH

The research is designed to provide further investigation into the concept of auditor independence using an innovative research method not previously applied in the extant literature. The objective of the study is to determine the presence and extent of shared meaning of this important concept between different parties to the financial reporting communication process. The parties to the financial reporting communication process used as research participants are auditors, financial report preparers and financial report users.

Vigorous debate on auditor independence arose following the series of corporate collapses earlier this decade involving companies such as Enron and WorldCom in the United States and HIH Insurance and One.Tel in Australia. A number of formal inquiries and reviews were commissioned and reports prepared in Australia and internationally. These resulted in considerable substantive amendment to the legislative and professional rules and guidelines with the aim of strengthening the independence of auditors. As noted in the previous section, the pronouncements and standards issued by the relevant professional and regulatory bodies, in defining auditor independence and providing guidance for auditors, elaborate on the *meaning* of the concept of auditor independence. The research is therefore motivated by the various recent developments relating to the concept of auditor independence that may have impacted on the way in which the meaning of the concept of auditor

independence is interpreted by different parties to the financial reporting communication process.

It was noted in Section 1.1 that it is necessary for a common understanding of the meaning of the concept of auditor independence to exist if it is to be effectively implemented in practice. The study's general research question is therefore stated as:

Is there shared meaning of the auditor independence concept between key parties to the financial reporting communication process?

The research framework for the measurement of meaning originally developed by Osgood *et al.* (1957), and used in a number of prior studies examining accounting and auditing concepts, is used to investigate the study's general research question. In investigating the general research question, the measurement of meaning framework is used to investigate a number of contemporary auditor independence issues that have been questioned in relation to the companies involved in the recent corporate collapses and in the prior literature. These issues relate to (a) auditor independence threats highlighted in the literature, (b) independence safeguards introduced to mitigate independence threats, and (c) proposals for additional independence safeguards.

The specific potential independence threats examined in the study encompass (a) the auditor provision of non-audit services, (b) interlocking directorships among audit clients,² (c) longer periods of audit firm tenure, and (d) a former partner of the audit firm being a director of the audit client. The independence safeguards involve (a) additional auditor oversight by (i) an external body and (ii) a local (internal)

² Interlocking directorships arise when company boards of directors include directors who also serve on the boards of other companies, creating networks of inter-company ties (Mizruchi, 1996; Jubb, 2000; Houghton and Jubb, 2003a).

independence board, and (b) audit partner rotation. The study is therefore motivated by the ability of the Osgood *et al.* (1957) measurement of meaning framework to provide valuable research into these contemporary issues, particularly from the perspective of the way in which the threat and safeguard circumstances and conditions affect interpretations of auditor independence.

Research into interpretations of the meaning of the auditor independence concept can also be motivated by reference to the audit expectation(s) gap literature. The audit expectations gap has been defined as a 'divergence in expectations between auditors and the users of the audit function in respect of the objectives of the independent audit' (Godsell, 1993, p. 1) and as 'a representation of the feeling that auditors are performing in a manner at variance with the beliefs and desires of those for whose benefit the audit is being carried out' (Humphrey 1997, p. 9). Auditor independence has been argued to represent a central issue contributing to the expectations gap (see, for example, Hooks, 1991; Godsell, 1993; Humphrey, Moizer and Turley, 1993; Humphrey, 1997; Joint Committee of Public Accounts and Audit, 2002b). With respect to auditor independence, the expectations gap suggests differences between auditors and financial report users in interpretations of the meaning of the independence concept in individual contexts.

1.3 CONTRIBUTIONS TO KNOWLEDGE

The findings of the research have theoretical and policy implications that will contribute to knowledge. These applications are outlined in the following subsections.

1.3.1 Theoretical implications

The findings from the research will have theoretical implications. The study makes a methodological contribution by utilising the measurement of meaning research framework to examine a concept to which it has not previously been applied. The framework has been used extensively in many disciplines and its reliability, validity and effectiveness have been extensively tested (Heise, 1969; Kerlinger, 1973; Fishbein and Azjen, 1975). However, only a relatively small number of prior studies have applied the method to accounting and auditing concepts. The present study will therefore add to theory by showing how the method can be applied to examine further concepts within the auditing discipline.

In being the first study to apply the Osgood *et al.* (1957) measurement of meaning research framework to examine the concept of auditor independence, a conclusion can be drawn on whether the method represents a valid and useful tool for the purpose of examining interpretations of independence in specific contexts and across alternate parties to the financial reporting communication process. The study builds on earlier research that has examined perceptions of auditor independence in different contexts, in this case by focusing on contexts encompassing alternative potential independence threats and safeguards. In particular, the study makes a theoretical contribution by focusing on the three major groups of parties to the financial reporting communication process (auditors, financial report preparers and financial report users) in a single study.

1.3.2 Policy implications

The findings from the research also have policy implications for policy-makers. As noted above, the research will show whether the measurement of meaning research

framework represents a valid and useful tool for the purpose of examining interpretations of independence in specific contexts and across alternate parties to the financial reporting communication process. This will be useful for policy-makers in determining whether the method can provide a means to enable an improved understanding of the effects of potential independence threat and safeguard circumstances on interpretations of independence.

As noted in Section 1.2, the study investigates a number of contemporary auditor independence issues that have been questioned in relation to the companies involved in recent corporate collapses and in the prior literature. The research will therefore have practical application for policy-makers by providing further information on those specific independence issues.

In showing that the measurement of meaning framework can effectively be applied to examine the concept of auditor independence, the study signifies that the method can be utilised by policy-makers to prospectively evaluate the impact on interpretations of independence of any proposed changes to auditor independence rules. This indicates that, in developing new or revised rules, the method can be used by professional bodies, regulatory bodies and researchers to assess the reaction of various interested parties to any revisions prior to their finalisation. The method can also be used to assess reactions to variations of any proposed measures.

1.4 ORGANISATION OF THE THESIS

Following the introduction to the research in this chapter, Chapter 2 provides a review of relevant auditing and other literature concerning the nature of the audit assurance function and the concept of auditor independence.

Chapter 3 introduces the research framework for the *measurement of meaning* originally developed by Osgood *et al.* (1957). The chapter also provides an overview of the prior accounting and auditing studies that have utilised the measurement of meaning framework.

Chapters 4 and 5 describe the study's research method. Procedures for the construction of the study's research instrument are explained in Chapter 4. Development and administration of a pilot study used to guide development of the study's final research instrument is described, together with the pilot study results and conclusions drawn. The final research instrument is also explained.

The study's research participants, comprising auditors, financial report preparers and financial report users, are described in Chapter 5. These participants represent the major alternate groups of identifiable parties to the financial reporting communication process. Procedures for administration of the research instrument with the participants are also presented in the chapter.

The study's research hypotheses are developed in Chapter 6. The prior literature, on which the experimental case manipulations specified in the study's research instrument are based, is first presented. This literature provides the basis and justification for the auditor independence threat and safeguard manipulations in the experimental cases. This discussion is followed by development and statement of the research hypotheses.

The results from a number of initial data analysis procedures are presented in Chapter 7. These procedures provide an initial understanding of the research data and ensure the data is appropriate for subsequent statistical analysis.

The study's data analysis results are presented and interpreted in accordance with the study's research hypotheses in Chapters 8 to 10. Chapter 8 presents findings related to the cognitive structure within which the concept of auditor independence is considered by research participants. Findings from an examination of the measured meaning of auditor independence across the alternative experimental cases and research participant groups are presented in Chapters 9 and 10. Findings from between-group comparisons of the experimental cases are examined in Chapter 9, while Chapter 10 examines differences within each of the participant groups between related sets of experimental cases.

In concluding the thesis, Chapter 11 summarises the research findings and discusses research limitations. It also discusses the theoretical, methodological and policy implications of the research and concludes with some suggestions for future research.

CHAPTER 2

THE AUDIT FUNCTION, AUDITOR INDEPENDENCE AND THE MEANING OF THE INDEPENDENCE CONCEPT

This chapter provides an overview of the nature of the audit function and the concept of auditor independence. The chapter commences with a description of the audit function and the demand for auditing in Section 2.1, followed by an overview of the Australian institutional framework for statutory corporate audits in Section 2.2. The concept of auditor independence is introduced in Section 2.3. The conceptual framework approach to independence, requiring auditors to identify and evaluate independence threats and safeguards, is explained in Section 2.4. A summary of major recent developments impacting on auditor independence, concentrating on Australian developments, is presented in Section 2.5. Section 2.6 discusses issues relating to interpretations of the meaning of the concept of auditor independence, and a summary in Section 2.7 completes the chapter.

2.1 THE AUDIT AND ASSURANCE FUNCTIONS

2.1.1 Nature of the audit function

Accounting represents a process of communication (Bedford and Baladouni, 1962; Goldberg, 1965; McClure, 1983; Houghton, 1997; amongst many others), with communication primarily achieved through the financial reporting function (Australian Accounting Research Foundation, 1990). However, doubt and uncertainty

is associated with the accounting communication (financial reporting) process. Doubt and uncertainty can arise with respect to the accounting content of financial reports and the various accounting processes by which such reports are constructed (Lee, 1993). Of particular concern is the question of whether these processes provide the designated recipients with financial information meeting specified quality standards (Wolnizer, 1987; Lee, 1993). The audit function aims to provide this assurance.

An audit aims to establish the credibility of communicated financial reports and create rational belief and confidence in those reports (Lee, 1993). The primary objective of a financial statement audit is to ‘provide *independent* assurance to the shareholders that the directors have prepared the financial statements properly’ (Auditing Practices Board, 2004a, para. 3, emphasis added). Management typically has incentives to present the entity’s financial performance and financial position in the best possible light, and may be motivated to present financial information that is overly optimistic, misleading or false (Bazerman, Morgan and Loewenstein, 1997). The auditor obtains and evaluates audit evidence to obtain reasonable assurance as to whether the financial report gives a true and fair view or is presented fairly, in all material respects, in accordance with the applicable financial reporting framework (Auditing and Assurance Standards Board, 2006b; International Auditing and Assurance Standards Board, 2006a).¹ Sufficient and appropriate audit evidence must be obtained to enable the auditor to draw reasonable conclusions on which to base the audit opinion (International Auditing and Assurance Standards Board, 2004; Auditing and Assurance Standards Board, 2006c).

¹ In an audit pursuant to the *Australian Corporations Act 2001 (Cth)*, sections 307 and 308 require the auditor to form and report an opinion on whether the company’s financial report is in accordance with the *Act* and accounting standards, and on whether the financial report conveys a *true and fair* view.

The audit of a financial report can be viewed as an *agency* function and cost in situations where an agent, such as the board of directors of a company, is entrusted by a principal, such as the company's shareholders, to manage its resources and operations and to report thereon (Wallace, 1980, 1987). Monitoring and bonding mechanisms have the potential to control the behaviour of managers, and auditing is one of these mechanisms (Jensen and Meckling, 1976).² Auditing services are demanded as monitoring devices due to the potential conflicts of interest between owners and managers and between different classes of security holders (Watts, 1977; DeAngelo, 1981a; Watts and Zimmerman, 1981, 1986).

The auditor acts as an arbiter to determine the consistency of the agent's financial statements with specified accounting procedures (Ball, 1989). By being independent of those seeking capital, auditors add value in public capital markets by addressing inherent conflicts of interest and by protecting the interests of capital providers (Johnstone, Sutton and Warfield, 2001). By enhancing the credibility of financial reports, the audit function enhances the effectiveness of capital markets in allocating scarce resources by improving the decisions of financial report users, and also assists in lowering the cost of capital to auditee entities by reducing information risk (see, for example, Schuetze, 1994; Panel on Audit Effectiveness, 2000; Independence Standards Board, 2001; Ramsay, 2001).

The demand for auditing can also be viewed from an *information* perspective, with the audit function aiming to increase the quality of reported financial information (Wallace, 1980, 1987). Public confidence in the operation of capital markets depends,

² Other monitoring and bonding mechanisms include formal control systems, budget restrictions and incentive compensation systems (Jensen and Meckling, 1976; Watts and Zimmerman, 1986).

in part, on the credibility of the opinions and reports issued by auditors (Auditing Practices Board, 2004a). Investors demand audited financial reports as such reports provide information that is useful to their investment decisions. An audit is also valued as a means of improving the financial data utilised by managers for internal decisions.³ The information perspective predicts a demand for audited financial information 'as a means of reducing the risk of investments, improving internal and external decision making, enhancing gains from trade, and improving the portfolio investment position of individuals' (Wallace, 1980, p. 20).

A further demand for auditing is suggested by the *insurance* hypothesis. The audit market literature suggests that a valued attribute of an audit is that of implicit insurance.⁴ The *insurance* stems from the investor's potential right to recover from auditors any losses sustained by relying on audited financial statements that contain misrepresentations (Dye, 1993; Menon and Williams, 1994; Stokes, 2002). If an investor purchases shares or other securities on the basis of audited financial statements and subsequently sustains losses, and if some form of audit failure can be demonstrated, the legal system may provide recourse against the auditor. The auditor thus 'effectively functions as a potential (partial) indemnifier against investment losses' (Menon and Williams, 1994, p. 328). Unfortunately for auditors, it has been

³ For example, an audit can improve data for internal decision making by finding errors or by making employees more careful in preparing records subject to audit. Also, more accurate data for capital budgeting, inventory planning and production and pricing decisions can improve internal decision making (Wallace, 1980).

⁴ See, for example, Wallace, 1980; Kellogg, 1984; Schwartz and Menon, 1985; Chow, Kramer and Wallace, 1988; Turpen, 1992; Rittenberg and Schwieger, 2001.

argued that they have become ‘the first tranche of insurance cover for investors and creditors against losses incurred in a corporate failure’ (Bartholomeusz, 2002).⁵

In summary, the audit function aims to provide assurance to dispel or considerably reduce doubts and uncertainties that may arise with respect to the accounting processes by which accounting reports are constructed. The quality of the work of an external auditor is said to significantly influence the public’s perception of the credibility of financial reports (International Organization of Securities Commissions, 2002b). Indeed, it has been argued that a quality difference in audits converts to a price differential in shares traded on stock markets (Houghton, 2002a; Houghton and Jubb, 2003b, 2003c).

2.1.2 Assurance services

Recent developments have seen continuing change in the environment in which the auditing profession operates. Largely due to the changing needs of users, the auditor’s role is expanding beyond the traditional financial reporting function to a broader range of assurance services and subject matters (Pound, 1997). It has been highlighted that there is now ‘a much broader range of functions or activities for which independent and expert opinions are being required’ (Gay and Simnett, 2000, p. 2). Accordingly, in addition to the traditional financial report attestation audit, auditors are increasingly providing broader *assurance* services. An assurance services engagement has been defined as ‘an engagement where an independent professional issues a written report that expresses a conclusion about the reliability of a subject matter for which an accountable party is responsible’ (Schelluch and Gay, 1997, p. 1).

⁵ The phrase *deep pocket syndrome* has been coined to refer to the fact that auditors may find themselves subject to lawsuit due to their professional indemnity insurance coverage (see, for example, Kothari, Lys, Smith and Watts, 1988; Palmrose, 1988, 1997; Schipper, 1991; Godsell, 1993; Menon and Williams, 1994; McLean, 2002).

The American Institute of Certified Public Accountants (AICPA) released a report of its Special Committee on Assurance Services, the Elliott Report, in 1997 (Special Committee on Assurance Services, 1997). The report suggested that assurance services represent the greatest opportunity for growth for the auditing profession and that such services are expected to form a platform for the future evolution of the profession. Assurance services are defined in the Elliott Report as ‘independent professional services that improve the quality of information, or its context, for decision makers’ (Special Committee on Assurance Services, 1997). The report states that this definition encompasses audit and attestation engagements and also accommodates many new service concepts.⁶

Information improvement is a core benefit of the audit-attest tradition, and this provides a foundation for further value-added assurance services (Elliott and Pallais, 1997). The strengths and competencies of the audit profession, in terms of audit methodology, standards, and techniques for evidence gathering and evaluation, have value and applicability as a process beyond financial information and extend to broader categories of information and assurance services (Pound, 1997). It has been argued that members of the auditing profession have a competitive advantage over other potential assurance providers because of their ‘professional standing, reputation for *independence* and quality of services provided’ (Schelluch and Gay, 1997, p. 2, emphasis added). The Elliott Report stressed that assurance services evolved naturally from attestation and audit services, and that the ‘roots of all three are in *independent*

⁶ The Elliott Report identifies a number of new assurance services having significant market potential, including those in the areas of risk assessment, entity performance (including entity performance measures and the reliability of information systems), systems reliability, electronic commerce, health care and aged care (Special Committee on Assurance Services, 1997). Other areas in which assurance reports are increasingly being demanded include those of environmental, social and sustainability issues, information systems, internal control, corporate governance processes, and compliance with grant conditions (International Federation of Accountants, 2004).

verification' (Special Committee on Assurance Services, 1997, emphasis added). Similarly, it has been argued that 'it is the *independence* and expertise of the practitioner that are sought after' (Gay and Simnett, 2005, p. 9, emphasis added).

2.2 THE REGULATORY AND INSTITUTIONAL FRAMEWORK FOR STATUTORY COMPANY AUDITS IN AUSTRALIA

To provide a further background to the audit function, a brief overview of the regulatory and institutional framework governing statutory company audits in Australia is provided in this section. The major elements of the Australian regulatory and institutional framework are (a) the Australian *Corporations Act 2001*, (b) the Australian Securities and Investments Commission (ASIC), (c) the Companies Auditors and Liquidators Disciplinary Board (CALDB), (d) the Financial Reporting Council (FRC), (e) the Auditing and Assurance Standards Board (AUASB), and (f) quality control processes stemming from professional self regulation and individual firm regulation.

The provisions of the *Corporations Act 2001* represent the starting point for any discussion of the regulatory framework for Australian company audits. Specified entities must prepare annual financial reports (s. 292),⁷ and these financial reports must be audited (s. 301). ASIC has responsibility for the registration of auditors under the Act (ss. 1279–1280).

The auditor is required to form an opinion (s. 307) and report that opinion to members (s. 308). The major requirement is for the auditor to form and report an

⁷ These entities are disclosing entities, public companies, large proprietary companies and registered schemes (s. 292(1)). The discussion in this section will concentrate on audits of annual financial reports.

opinion about whether the entity's financial report is in accordance with the *Corporations Act*, including in accordance with accounting standards and the provision of a *true and fair* view (ss. 307(a) and 308(1)).⁸ The audit must be conducted in accordance with auditing standards (s. 307A(1)), with the AUASB empowered to make these standards (s. 336(1)).

The auditor is required to give the audited entity's directors an independence declaration (s. 307(C)). This declaration of independence requires the auditor to state that, to the best of their knowledge and belief, there has been no contravention of the Act's auditor independence requirements or of any applicable code of professional conduct (s. 307(C)(1)(c)).

ASIC is the statutory body constituted to administer the *Australian Securities and Investments Commission Act 2001 (Cth)*,⁹ and is the body responsible for administration of the *Corporations Act 2001* and related regulations. A number of bodies have been created pursuant to these two Acts which impact on the regulation of auditors. The most important of these bodies are the CALDB, the FRC and the AUASB.

⁸ The auditor must also form an opinion on whether they have been given all information, explanation and assistance necessary for the conduct of the audit (s. 307(b)), whether the entity has kept financial records sufficient to enable a financial report to be prepared and audited (s. 307(c)), and whether the entity has kept other records and registers required by the Act (s. 307(d)). The *Corporations Act* also requires the auditor to report certain circumstances to ASIC (s. 311). These relate to circumstances (a) that the auditor has reasonable grounds to suspect represent a contravention of the Act, (b) that represent an attempt by any person to unduly influence, coerce, manipulate or mislead a person involved in the conduct of an audit, or (c) that represent an attempt by any person to otherwise interfere with the proper conduct of the audit (ss. 311(1)(a), 311(2)(a) and 311(3)(b)).

⁹ ASIC evolved from the Australian Securities Commission (ASC), which was originally established pursuant to the *Australian Securities Commission Act 1989 (Cth)* and which replaced the earlier National Companies and Securities Commission (NCSC) (Tomasic, Jackson and Woellner, 2002; Boros and Duns, 2007; Deegan, 2007). The Commission itself is a body corporate comprising three to eight members appointed by the Governor-General on the nomination of the relevant minister (ss. 8–9).

The CALDB is an independent statutory body administered under Part 11 of the *ASIC Act*. It was originally established in 1990, and members are appointed by the Treasurer (CALDB, 2007b). The CALDB has the functions and powers conferred on it by the *Corporations Act* (ss. 1292–1298) and the *ASIC Act* (ss. 203–223). As the board's name implies, it can take disciplinary action against registered auditors. In particular, the board is required to determine whether a registered auditor has contravened provisions of the *Corporations Act* in any of the following ways: (a) has failed to carry out their duties and functions adequately and properly, (b) is not a fit and proper person to remain registered, (c) is subject to disqualification, or (d) is otherwise ineligible to remain registered (CALDB, 2006, 2007a). Applications to the CALDB for disciplinary action can be made only by ASIC or the Australian Prudential Regulation Authority (APRA).¹⁰ Penalties for any contravention include the cancellation or suspension of registration, an admonition or reprimand, or a requirement for an undertaking by the auditor (CALDB, 2007a).

The FRC, a statutory body, was originally established on 1 January 2000 under s. 225 of the *ASIC Act* for the purpose of overseeing Australia's accounting standard setting process (FRC, 2007a). In addition to its original accounting standard setting oversight function, the FRC also provides broad oversight of the processes for the setting of Australian auditing standards (s. 225(1)(b)). This particularly involves overseeing the auditing standard setting body, the AUASB, appointing its members (other than the chair), determining its broad strategic direction, and giving it direction, advice or feedback on matters of general policy and procedures (s. 225(2A)). As will be discussed later in Section 2.5.1, the FRC's responsibilities were expanded from 1 July

¹⁰ APRA is the prudential regulator of the Australian financial services industry, and oversees banks, credit unions, building societies, general insurance and reinsurance companies, life insurance, friendly societies and certain members of the superannuation industry (APRA, 2007).

2004 to also include oversight of auditor independence requirements in Australia (s. 225(2B)).¹¹ The FRC has formed an *Audit Independence Committee* comprising three FRC members, none of whom can be a serving partner or an employee of an accounting firm, to assist it in the performance of the auditor independence functions conferred by the *ASIC Act* (FRC, 2007b). Also, ASIC conducts inspections of Australian audit firms on behalf of the FRC (Department of the Treasury, 2005; Jubb and Houghton, 2007). Two public reports to the FRC on the audit inspection program have been prepared to date (ASIC, 2005, 2006).

As noted above, audits under the *Corporations Act* must be conducted in accordance with auditing standards prepared by the AUASB (ss. 307A(1), 336(1)). The AUASB was reconstituted as an independent statutory body (body corporate), under the guidance of the FRC, on 1 July 2004 pursuant to the *Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004* (Commonwealth of Australia, 2004). The AUASB's standards, designated *ASAs*, are legislative instruments under the *Legislative Instruments Act 2003* and, as such, have the force of law (effective from 1 July 2006) for audits performed under the *Corporations Act* (AUASB, 2006a; Arens, Best, Shailer, Fiedler, Elder and Beasley, 2007).

The AUASB's specified powers under the *ASIC Act* (s. 227B(1)) are to (a) make auditing standards under s. 336 of the *Corporations Act* for the purposes of the corporations legislation, (b) formulate auditing and assurance standards for other purposes, (c) formulate guidance on auditing and assurance matters, (d) participate in and contribute to the development of a single set of auditing standards for world-wide

¹¹ Further details on ASIC and FRC auditor oversight and inspection functions will also be discussed in Chapter 6 when developing the study's research hypotheses.

use, and (e) advance and promote the main objects of the Australian financial reporting system.

The *ASIC Act* permits the AUASB to formulate auditing standards by adopting international standards (s. 227(B)(3)). It also allows the international standards to be modified to the extent necessary to take account of the Australian legal or institutional environment (s. 227(B)(4)). Accordingly, wherever possible the AUASB uses *International Standards on Auditing* (ISAs)¹² as the basis from which to develop Australian standards (AUASB, 2006a). The Australian standards do generally conform to the international standards, and any differences between an Australian standard and its international equivalent are described in each standard (Arens *et al.*, 2007).

Earlier discussion highlighted that auditors must comply with any applicable code of professional conduct (*Corporations Act*, s. 307(C)(1)(c)). The applicable Australian code is *APES 110: Code of Ethics for Professional Accountants* (APESB, 2006a), issued by the Accounting Professional and Ethical Standards Board (APESB).¹³ The APESB was established as an independent board to set the code of professional conduct and professional standards with which members of The Institute of Chartered Accountants in Australia (ICAA) and CPA Australia, and later members of the National Institute of Accountants (NIA), must comply (Accounting and Professional Ethical Standards Board, 2007; Portelli, 2007). The primary objectives of the APESB are to (a) develop and issue, in the public interest, professional and ethical standards that will apply to the membership of the professional bodies, and (b) provide a formal

¹² ISAs are issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC).

¹³ As will be discussed in Section 2.5.1, this code replaced the earlier *Professional Statement F.1* (The Institute of Chartered Accountants in Australia and CPA Australia, 2004).

and rigorous forum for the consideration, promulgation and approval of professional and ethical standards, with this performed in an open, timely, independent and proactive manner (APESB, 2007). Further detail on APES 110 is provided in Section 2.3.

Quality control processes stemming from professional self regulation and individual firm regulation represent the final major component of the regulatory and institutional framework for statutory company audits. The APESB, in a pronouncement aimed at reinforcing the requirements specified in APES 110, issued APES 320 *Quality Control for Firms* in May 2006 (APESB, 2006b). APES 320 requires individual audit firms to establish a system of quality control designed to provide it with reasonable assurance that the firm and its personnel comply with professional standards and regulatory and legal requirements and that reports issued by the firm or its engagement partners are appropriate in the circumstances (APESB, 2006b, s. 3). Pursuant to APES 320, quality control systems must include policies and procedures addressing six major elements: (a) leadership responsibilities for quality within the firm, (b) ethical requirements, (c) acceptance and continuance of client relationships and specific engagements, (d) human resources, (e) engagement performance, and (f) monitoring (APESB, 2006b, s. 7). APES 320 contains specific provisions to ensure independence requirements are complied with (APESB, 2006b, ss. 18–27).

Another APESB statement, APES 410 *Conformity with Auditing and Assurance Standards*, reinforces the *Corporations Act* provisions requiring auditors to comply with the Australian auditing standards (APESB, 2006c).

A further recent development designed to enhance quality control within audit firms has been the formation of the Australian Quality Review Board (AQRB). The AQRB

was established in December 2005 and publicly launched on 17 February 2006 (AQRB, 2006e). The AQRB is an independent, not-for-profit company established within the audit profession whose purpose is to monitor the processes by which participating audit firms seek to ensure their compliance with applicable professional standards and legal obligations regarding independence and audit quality (AQRB, 2006a, 2006c, 2006d). The AQRB board consists of individuals with broad knowledge and experience in legal, regulatory, business and auditing affairs (AQRB, 2006e). The ten current board members comprise accountants, a company secretary, lawyers, law professors, a former ASIC chairman, a former auditor-general and former Big Four accounting firm partners (AQRB, 2006b). Participation in AQRB reviews is voluntary and available to all Australian auditors of listed companies, with the Big Four accounting firms agreeing to be involved from the time of the board's commencement (AQRB, 2006e).¹⁴ The review process is transparent in that a summary report of each audit firm review is published and made publicly available (AQRB, 2006a).¹⁵

Professional self regulation is based on (a) high entry standards for professional membership, (b) high standards of performance and conduct required of members, and (c) the power to discipline, and in extreme cases to dismiss from membership, those whose performance falls short of required standards (Leung, Coram and Cooper, 2007). Two major components of professional self regulation relevant to the auditing function are mandatory continuing professional education (CPE) and

¹⁴ The four Big Four firms remain the only participating firms and the only ones for which quality control reviews, for 2006 and 2007, have been prepared (AQRB, 2006f, 2007).

¹⁵ The AQRB states that the work of the AQRB will be transparent in three ways: (a) each participating firm files a quality control report, which is made public, (b) AQRB publishes a summary report, with a more detailed report that may contain commercially sensitive material or detailed comments being only available to the monitored firm, and (c) an annual report is published by the AQRB commenting on the overall review process (AQRB, 2006a).

programs for quality control and practice (peer) reviews. The major professional accounting bodies, CPA Australia and the ICAA, require members to undertake 120 hours of compulsory CPE over a three year period (Gay and Simnett, 2005). They also independently undertake quality assurance reviews of accounting practices, with serious deficiencies in quality control standards subject to disciplinary action (Arens *et al.*, 2007; Leung *et al.*, 2007). The quality (peer) reviews, undertaken by trained public practitioners, consider the quality control policies and procedures established by the firm to ensure they comply with professional standards and are followed (Gay and Simnett, 2005; Arens *et al.*, 2007). The resulting assessments are discussed with the reviewed member, with these subject to strict confidentiality rules (Gay and Simnett, 2005; Arens *et al.*, 2007). Any unsatisfactory findings must be remedied and are subject to a follow-up review (Gay and Simnett, 2005; Arens *et al.*, 2007).

2.3 THE CONCEPT OF AUDITOR INDEPENDENCE

The Australian *Code of Ethics for Professional Accountants*, APES 110, issued by the Accounting Professional and Ethical Standards Board (APESB, 2006a), specifies ethical rules for accountants. The code includes rules for independence, and is based on the parallel publication issued by the International Federation of Accountants (IFAC, 2005). These two publications emphasise that a 'distinguishing mark of the accountancy profession is its acceptance of the responsibility to act in the public interest' (IFAC, 2005, s. 100.1; APESB, 2006a, s. 100.1). To meet this responsibility, the code specifies five fundamental principles that members must comply with, these being (a) integrity, (b) objectivity, (c) professional competence and due care, (d) confidentiality, and (e) professional behaviour (IFAC, 2005, s. 100.4; APESB, 2006a, s. 100.4). The second of these fundamental principles, objectivity, is of particular relevance to auditors, with the United States Securities and Exchange

Commission (SEC) stating that independence ‘is understood to refer to a mental state of objectivity and lack of bias’ (SEC, 2000, p. 3). The Auditing Practices Board in the United Kingdom states that ‘independence is related to and underpins objectivity’ (Auditing Practices Board, 2004a, para. 12).

Pursuant to the Australian and international codes, the principle of objectivity requires members not to compromise their professional or business judgment because of bias, conflict of interest or the undue influence of others, and to avoid relationships that bias or unduly influence professional judgment (IFAC, 2005, ss. 120.1 and 120.2; APESB, 2006a, ss. 120.1 and 120.2). In providing guidance on the requirement for objectivity for members performing assurance engagements, the codes explicitly point to the specific guidance on independence specified therein (IFAC, 2005, s. 280.2; APESB, 2006a, s. 280.2). APES 110 explains that, in assurance engagements, the concept of independence is fundamental to compliance with the principles of integrity and objectivity and that these underlying principles are consistent with objective and impartial judgment (APESB, 2006a, s. 290).¹⁶

The quality of an individual audit depends on a whole range of factors related to the auditor acting with professional skill and due care, with definitions of audit quality emphasising an auditor’s *competence* and *independence* (DeAngelo, 1981a; Watts and Zimmerman, 1981). These two characteristics have been described as the ‘pillars’ of auditing (Houghton 2002a, Houghton and Jubb 2003b).

¹⁶ The AICPA (2006, s. 55.01) states that independence ‘precludes relationships that may appear to impair a member’s objectivity in rendering attestation services.’ The Auditing Practices Board (2004a) distinguishes objectivity and independence by stating that objectivity is a personal behaviour characteristic concerning the auditor’s state of mind, while independence relates to the circumstances surrounding the audit, including the financial, employment, business and personal relationships between the auditor and the client.

To create a demand for audit services, auditors must convince the market of their independence (as well as, of course, their competence). It has long been recognised that a reputation for independence is an auditor's greatest professional asset and that any negligence on an auditor's part will leave them open to severe penalties in the form of, *inter alia*, a loss of reputation (see, for example, Owens, 1941; Ashley, 1942). An auditor's reputation, once established, increases the demand for his or her services and fees. Reputation serves as a *collateral bond* for independence, in that the reputation of an auditor found to be less independent than expected will be damaged and the present value of his or her audit services will be reduced (Watts and Zimmerman, 1986).

In the early auditing conceptual literature, independence has been emphasised as being fundamental to auditing (see, for example, Sharaf and Mautz, 1960; Mautz and Sharaf, 1961; Committee on Basic Auditing Concepts, 1973). For example, Mautz and Sharaf (1961, p. 204) state that '[t]he significance of independence in the work of the independent auditor is so well established that little justification is needed to establish this concept as one of the cornerstones in any structure of auditing theory.'

More recently, Johnstone, Sutton and Warfield (2001, p. 2) stated that independence 'is the most fundamental and vital asset possessed by the auditing profession.' Observations on the importance of auditor independence are supported by surveys of various groups of financial report preparers and users (see, for example, Schulte, 1965; Hartley and Ross, 1972; Beck, 1973; Lavin and Libby, 1977; Firth, 1980, 1981). With the rise of the information age, Levitt (2000) referred to the auditing

profession as the 'public's profession' and emphasised the continued, timeless value of credibility, objectivity and independence.¹⁷

The pronouncements and standards of various professional and regulatory bodies require auditors to be independent both in fact (independence of mind) and in appearance (see, for example, International Organization of Securities Commissions, 2002b, para. 4; IFAC, 2005, s. 290.8; AICPA, 2006, s. 55.04; APESB, 2006a, s. 290.8). Independence in fact exists when auditors are actually able to act with objectivity, integrity, impartiality and freedom from any conflict of interest. The *Australian Corporations Act 2001* specifies a test for independence in fact where a conflict of interest situation will be considered to exist when 'the auditor, or a professional member of the audit team, is not capable of exercising objective and impartial judgment in relation to the conduct of the audit of the audited body' (s. 324CD(1)(a)).

Mautz and Sharaf (1961) refer to independence in fact as *practitioner independence*, where the individual auditor is able to maintain the proper attitude and freedom in the planning of the audit program (programming independence), in the performance of verification work (investigative independence) and in the preparation of the audit report (reporting independence). Necessary conditions for independence in fact are 'honesty' and an 'independent attitude of mind' (Moizer, 1997, p. 57). This *independence of mind* should enable an individual auditor to be free from the effects of threats to independence that would be sufficient to compromise their objectivity (Independence Standards Board, 2001) and to be able to act with integrity and

¹⁷ At the time of making this statement, Arthur Levitt was the Chairman of the SEC.

exercise objectivity and professional scepticism (IFAC, 2005, s. 290.8; APESB, 2006a, s. 290.8).

Because the auditor's independence must be accepted by shareholders and other third parties, and as these parties usually have no way of ascertaining the presence or absence of independence in fact, independence must be apparent as well as real (Axelson, 1963; Shockley, 1982). In addition to being independent in fact, it is necessary that auditors are 'seen to be independent by means of explicit and public signals that this is so' (Lee, 1993, p. 99). Because objectivity can rarely be observed directly, the confidence of investors and others in the independence of the auditor rests largely on their perceptions (SEC, 2000). This is the concept of independence in appearance, where the auditor should be perceived by others to be independent. The test for independence in appearance specified in the *Australian Corporations Act 2001* specifies that a conflict of interest situation will exist when 'a reasonable person, with full knowledge of all relevant facts and circumstances, would conclude that the auditor, or a professional member of the audit team, is not capable of exercising objective and impartial judgment in relation to the conduct of the audit of the audited body' (s. 324CD(1)(b)).

The auditor will be independent in appearance when no potential conflict of interest exists that could tend to jeopardise public confidence in the auditor's independence in fact (Higgins, 1962; Gill, 1979). It is important for the auditor to be seen to be in a position in which it is possible to exercise independence as the 'confidence of shareholders and others is more likely to be hinged on the visible than on the invisible aspects of the concept' (Lee and Kenley, 1985, p. 75). Independence in appearance requires the avoidance of situations of such significance that a reasonable and informed third party would reasonably conclude that the auditor's integrity,

objectivity or professional scepticism had been compromised (IFAC, 2005, s. 290.8; AICPA, 2006; APESBa, 2006, s. 290.8).

Wolnizer (1987) argues that accountants have extended the notion of independence in fact to independence in appearance to demonstrate that there are justifiable grounds for public confidence in the impartiality and trustworthiness of auditors' judgments. While auditing is sometimes referred to as fulfilling a *quasi-judicial* function, Gilling (1980) argues that such a description is not complete or accurate, but that the profession's acceptance and reliance on this notion lies in emphasising the importance of the attribute of independence. Further, in the process of defining, defending and extending its jurisdiction, the accounting profession has attached considerable importance to its image and *aura* of independence (Sikka and Willmott, 1995).

With respect to assurance services, independence is a key attribute that has enabled, and will continue to enable, auditors to expand into a wider range of assurance areas. The audit tradition is a professional asset of incalculable value, deriving from the marketplace need for decision-making information of high quality (Elliott, 1997). A major aspect of this tradition is the concept of independence and, when extended to wider audiences and subject matters, 'decision makers are likely to be most comfortable with assurance from an *independent* party qualified to judge the quality of information' (Elliott, 1997, p. 62, emphasis added). It is this attribute of independence that has enabled auditors to expand into the provision of a broader range of assurance services (Schelluch and Gay, 1997; Gay and Simnett, 2005).

2.4 AUDITOR INDEPENDENCE THREATS AND SAFEGUARDS

The IFAC and APESB ethical codes adopt a conceptual framework approach, requiring professional accountants to identify, evaluate and address threats to compliance with the fundamental ethical principles (IFAC, 2005, s. 100.5; APESB, 2006a, s. 100.5).¹⁸ Threats to auditor independence represent circumstances that could impair independence (AICPA, 2006). Where identified threats are not clearly insignificant, the codes require professional accountants to apply safeguards to eliminate the threats or reduce them to an acceptable level so that compliance with the fundamental principles is not compromised (IFAC, 2005, s. 100.5; APESB, 2006a, s. 100.5). Safeguards are controls that mitigate or eliminate threats to independence, and range from partial to complete prohibitions of the threatening circumstance to procedures that counteract the potential influence of the threat (AICPA, 2006). Audit firms in individual audit engagements should evaluate any threats to independence, and the nature of safeguards required, in deciding whether to accept or continue an engagement (IFAC, 2005, s. 290.13; APESB, 2006a, s. 290.13).

The international and Australian ethical codes provide examples of circumstances that may create threats to independence. These include, for example, threats arising from financial interests in the client, loans and guarantees, close business relationships, family and personal relationships, employment and recent service with the client, serving as an officer or director on the client's board, long association of senior audit personnel with the client, the provision of non-audit services to the client, fees and pricing, gifts and hospitality, and actual or threatened litigation (IFAC, 2005, ss. 290.100–290.214; APESB, 2006a, ss. 290.100–290.214). The examples provided

¹⁸ This conceptual framework approach is also the basis for the rules in, for example, the United Kingdom (Auditing Practices Board, 2004a) and the United States (AICPA, 2006).

in the codes are not meant to represent an exhaustive list (IFAC, 2005, s. 290.12; APESB, 2006a, s. 290.12), but do illustrate the wide range of circumstances that can potentially threaten auditor independence in individual audit engagements.

The codes also provide examples of safeguards necessary to eliminate potential independence threats or reduce them to an acceptable level. For example, there are various prohibitions relating to threats arising from significant financial interests, material loans, significant business relationships, serving as an officer or director on the client's board, and gifts and hospitality.¹⁹ Similarly, legislative provisions specify various prohibitions to protect against independence threats. For example, the provisions of the *Australian Corporations Act 2001* (ss. 324CE–324CH) specify that an individual auditor, an audit firm or an audit company contravenes the Act's independence requirements if, for example, they (a) are an officer or audit-critical employee of an audited body, (b) are a partner or employee of an officer or an audit-critical employee of an audited body, (c) have an investment or a beneficial interest in an investment in an audited body, (d) owe an amount of more than \$5000 to, or are owed an amount by, an audited body, a related body corporate or an entity that the audited body controls, (e) are liable under a guarantee of a loan made to the audited body, a related body corporate or an entity that the audited body controls, or (f) are entitled to the benefit of a guarantee given by the audited body, a related body corporate or an entity that the audited body controls.

In addition to outright prohibitions, other individual safeguards are also specified to mitigate certain specific independence threats. As an example, a possible safeguard

¹⁹ See, for example, IFAC (2005, ss. 290.113–290.119, 290.129, 290.132, 290.149, 290.151, 290.213) and APESB (2006a, ss. 290.113–290.119, 290.129, 290.132, 290.149, 290.151 and 290.213).

specified to mitigate the threat arising from a long association of senior personnel with the client is that of rotating senior personnel, audit partners or the engagement quality control reviewer (IFAC, 2005, ss. 290.153 and 290.154; APESB, 2006a, ss. 290.153 and 290.154). Similarly, examples of possible safeguards specified to mitigate the threat arising from the audit firm provision of non-audit services include (a) policies and procedures to prohibit professional staff from making management decisions for the audit client, (b) discussing independence issues related to the provision of the non-audit services with those charged with governance, such as the audit committee, (c) policies within the auditee regarding the oversight responsibility for the provision of the non-audit services, (d) involving an additional professional accountant to advise on the potential impact of the non-audit services on auditor independence, (e) disclosing the nature and extent of fees charged to those charged with the auditee's governance, and (f) ensuring the personnel providing the non-audit services do not participate in the audit engagement (IFAC, 2005, s. 290.163; APESB, 2006a, s. 290.163).

In discussing and providing examples of potential threats to auditor independence and safeguards to mitigate those threats, this section highlights that there are a range of potential threats and safeguards which the auditor must evaluate in individual audit engagements. A number of these specific threats and safeguards are examined in this study. In developing the study's research hypotheses, detailed discussion of these threats and safeguards, and the relevant prior literature, is presented in Chapter 6.

2.5 RECENT AUDITOR INDEPENDENCE DEVELOPMENTS

While auditor independence has been subject to considerable research since the 1960s, it continues to represent an issue of substantial contemporary importance.

Auditor independence has been subject to vigorous debate in recent years, particularly resulting from the major corporate collapses and financial difficulties earlier this decade of companies such as Enron, Cendant, WorldCom, Global Crossing, Microstrategy, Sunbeam, Tyco International, Waste Management, and Xerox in the United States,²⁰ and of Harris Scarfe, HIH Insurance and One.Tel in Australia.²¹ A detailed summary of the various recent Australian developments, and a brief summary of the major parallel developments in the United States, are provided in this section to illustrate their significant nature.

2.5.1 Australian developments

Fundamental questions of auditor independence and the audit function have, as noted above, been raised in the Australian financial press following the recent Australian corporate collapses and financial difficulties of Harris Scarfe, HIH Insurance and One.Tel. Headlines such as '[a]uditors face conflict crackdown' (Hepworth, 2001) and 'HIH shows auditors need more to fear' (Wade, 2001) are examples of a questioning of auditor independence.²² The then Federal Government Minister for Financial Services and Regulation stated 'Harris Scarfe, HIH and One.Tel have raised community concerns about the effectiveness of the audit process and I perceive there has been some loss of confidence in our corporate accounts' (Hockey, 2001b).

²⁰ See, for example, Burns (2001a, 2001b), Collins (2001, 2002a, 2002b), Dow Jones Newswires (2001), Voreacos (2001) and Williams (2002).

²¹ See, for example, Chenoweth (2001, 2002), Evans (2001), Fenton-Jones (2001), Frith (2001), Harris (2001a), Harrison (2001), Horton (2001), Laurence (2001), Murray (2001), Ramsay (2001), Rudy (2001), Towers (2001), Valentine (2001), Way and Voorhaar (2001), White (2001), Buffini (2002a), Buffini and Fenton Jones (2002) and Woodley (2002).

²² Questions regarding auditor independence were also raised in the settlement of litigation taken by the liquidator of Southern Equities Corporation (formerly Bond Corporation) against the company's former auditor for the audit of the company's financial statements for the period 1988 to 1990 (Altmann, 2001a, 2001b; Milne, 2001).

In response to these developments, the Australian federal government commissioned an inquiry into the state of auditor independence in Australia in 2001 (Hockey, 2001a, 2001b; Patrick, 2001; Ravlic, 2001a). The inquiry was undertaken by Professor Ian Ramsay from the University of Melbourne's Centre for Corporate Law and Securities Legislation, and examined existing Australian legislation, professional requirements, and recent international developments. The report by Professor Ramsay was released in early October 2001 (Ramsay, 2001).

The Ramsay report recommended significant revisions to the auditor independence rules, including rules governing employment, financial and business relationships between audit firms and their audit clients (Ramsay, 2001, pp. 7–10). The report recommended the creation of a statutory *Auditor Independence Supervisory Board*, with such a Board playing 'a vital role in ensuring public confidence in the independence of auditors by monitoring implementation of the new regime, compliance with it, and important international developments in the area of auditor independence' (Ramsay, 2001, p. 12). The report also recommended that the Australian Stock Exchange listing rules be amended to require all listed companies to have an audit committee (Ramsay, 2001, p. 14). With respect to the auditor provision of non-audit services, the report recommended a revision of the profession's ethical rules and the disclosure in company financial reports of the amount of all non-audit services, divided by category of service, with appropriate discussion of those services (Ramsay, 2001, pp. 10–11). A statement in company financial reports by the audit committee or board of directors as to whether they had considered whether the

provision of those non-audit services was compatible with maintaining the auditor's independence was also recommended (Ramsay, 2001, p. 11).²³

The Australian Securities and Investments Commission (ASIC) also announced an investigation into auditor independence in June 2001 (ASIC, 2001; Dixon and Martin, 2001). ASIC surveyed the Top 100 listed companies to improve the level of information about auditor independence available to industry, government and regulators. The survey questioned companies about 'relationships with their external audit firm, including any business or professional relationships that exist outside their role as external auditors' (ASIC, 2001, p. 1). Survey results were published in January 2002 (ASIC, 2002a), with ASIC expressing some concerns relating to auditor independence (ASIC, 2002b; Buffini and Fenton-Jones, 2002).²⁴

The two major Australian professional accounting bodies, CPA Australia and The Institute of Chartered Accountants in Australia (ICAA) announced, in May 2002, that they had agreed to a new 'internationally harmonised standard for professional independence' based on the standard developed by IFAC (ICAA and CPA Australia, 2002b). The new standard replaced the former *Professional Statement F.1* in the *Joint Code of Professional Conduct* of the two bodies (ICAA and CPA Australia, 2002a). In reissuing *Professional Statement F.1*, the accounting bodies were keen to emphasise that this development would improve the profession's independence rules.

²³ While the release of the Ramsay report was generally welcomed by the Australian professional accounting bodies (CPA Australia, 2001a, 2001b; ICAA, 2001a, 2001b), it was not universally accepted. Various commentaries and letters in the financial press immediately expressed concerns that the report's recommendations did not go far enough (see, for example, Eveleigh, 2001; Harris, 2001b; Longo, 2001; Sykes, 2001; Turnbull, 2001; Walker, 2001).

²⁴ The major concerns expressed by ASIC related to the high level of non-audit services fees earned by audit firms, a lack of rigour in processes to manage potential conflicts between companies and their auditors, and a reluctance to adopt auditor rotation procedures (ASIC, 2002b).

They stated at the time that the revised standard was ‘tailored to reflect Australian community expectations’ and that the measures ‘not only strengthen existing guidelines and reflect international best practice, but take the lead on the implementation of a number of key recommendations outlined in the Ramsay Report’ (ICAA and CPA Australia, 2002b). While adoption of the new standard was not to be mandatory until 31 December 2003, members were ‘strongly encouraged to immediately align ongoing and future engagements with the new standard’ (ICAA and CPA Australia, 2002b).

The Australian Federal Treasurer foreshadowed, in early February 2002, that a review of auditing laws would be a high priority for the government (McFarlane and Marris, 2002; Murphy and Walker, 2002; Walters, 2002a). This would occur once a Royal Commission into the collapse of HIH, originally scheduled to deliver its findings by 30 June 2002, was completed.²⁵ However, reflecting an increased priority for such a review, the Treasurer announced a process for the examination of audit regulation and corporate disclosure as the next phase in the Government’s *Corporate Law Economic Reform Program* (CLERP) in June 2002 (Treasurer of the Commonwealth of Australia, 2002). The subsequent CLERP 9 discussion paper, *Corporate Disclosure: Strengthening the Financial Reporting Framework* (Commonwealth of Australia, 2002) was released in September 2002 and addressed, *inter alia*, auditor independence issues.

Major proposals with respect to auditor independence canvassed in the CLERP 9 discussion paper were (a) expansion of the responsibilities of the FRC to oversee

²⁵ The Royal Commission into the failure of the HIH Insurance group was announced by the Federal Government on 18 June 2001. Findings were originally to be released on 30 June 2002, but this deadline was subsequently extended to 28 February 2003 and then 4 April 2003. The final report of the Commission was publicly released on 16 April 2003 (Attorney General for Australia, 2003; Lewis, 2001; Main, 2002; Treasurer of the Commonwealth of Australia, 2003).

auditor independence requirements, (b) amendment of the *Corporations Act 2001* to (i) include a general statement of principle requiring the independence of auditors,²⁶ (ii) require auditors to make an annual declaration, addressed to the board of directors, that they have maintained their independence, and (iii) further restrict employment and financial relationships between auditors and their clients,²⁷ and (c) support for the Australian accounting profession's revised *Professional Statement F.1* (Commonwealth of Australia, 2002, pp. 1–3). The report also supported more extensive disclosures in company annual reports of non-audit services fees (Commonwealth of Australia, 2002, pp. 3–4).²⁸ With respect to the appointment and removal of auditors, the report proposed audit partner rotation after a five year period (Commonwealth of Australia, 2002, p. 4).

A further Australian inquiry into auditor independence was that of the Joint Committee of Public Accounts and Audit, a statutory committee of the Commonwealth Parliament. The inquiry was announced in April 2002 (Fabro, 2002; Joint Committee of Public Accounts and Audit, 2002a). The committee's final report

²⁶ The wording for this general statement of principle was that 'an auditor is not independent with respect to an audit client if the auditor is not, or a reasonable person with full knowledge of all relevant facts and circumstances would conclude that the auditor is not, capable of exercising objective and impartial judgment on all issues encompassed within the auditor's engagement' (Commonwealth of Australia, 2002, p. 46).

²⁷ Specific restrictions included a two year *cooling-off* period before a former audit partner who was directly involved in the audit of a client could become a director of the client or take a position with the client involving responsibility for fundamental management decisions (Commonwealth of Australia, 2002, p. 2).

²⁸ Disclosure was recommended of fees paid for the various categories of non-audit services provided, together with a statement of whether the audit committee was satisfied that the provision of non-audit services was compatible with auditor independence (Commonwealth of Australia, 2002, p. 3). This would include an explanation as to why the provision of certain non-audit services, if contracted, did not compromise auditor independence. These categories were a) preparing accounting records and financial statements of the audit client, b) valuation services, c) internal audit services, d) information technology (IT) systems services, e) temporary staff assignments, f) litigation support services, g) legal services, h) recruitment of senior management for the audit clients, and i) corporate finance and similar activities (Commonwealth of Australia, 2002, pp. 3–4).

was tabled in parliament in September 2002 (Joint Committee of Public Accounts and Audit, 2002b), but was somewhat overshadowed by the release of the CLERP 9 discussion paper on the same day.

The Joint Committee's report was less prescriptive in its recommendations than the CLERP 9 discussion paper.²⁹ Major recommendations impacting on auditor independence were that the *Corporations Act 2001* be amended to (a) require all listed public companies to have an independent audit committee, (b) require audit firms to submit an annual report to ASIC detailing how independence issues have been managed and outlining any pertinent future independence management issues, (c) provide ASIC with authority to investigate and address independence issues, (d) require ASIC to publish benchmark criteria used for determining the adequacy of the internal systems and processes of large audit firms, and (e) include a statement in the legislation requiring auditors to be independent.³⁰

The report of the HIH Royal Commission into the failure of HIH Insurance was released in April 2003. Included in the Commission's terms of references was an investigation of the extent to which decisions or actions of the company's auditors contributed to the failure of the company or to undesirable corporate governance practices (HIH Royal Commission, 2002).

²⁹ For example, with respect to non-audit services and auditor rotation, the committee noted that 'while legislative changes prohibiting the simultaneous provision of all non-audit services and the rotation of audit firms are more popular reactions in the eyes of the general public, these responses may not achieve the outcomes desired' (Joint Committee of Public Accounts and Audit, 2002b, p. 107). The committee stated that such proposals 'may impede audit quality and drive up the costs of audit and related services' (Joint Committee of Public Accounts and Audit, 2002b, pp. 107–8).

³⁰ The wording for this recommended statement was '[t]he auditor must be independent of the company in performing or exercising his or her functions or powers under this Act' (Joint Committee of Public Accounts and Audit, 2002b, p. xxv).

Major proposals regarding auditor independence recommended by the Commission were (a) a general standard of auditor independence to be stated in all relevant legislation and standards,³¹ (b) disclosure in company annual reports of all non-audit services provided by the audit firm, the fees applicable to each type of work, and an explanation of why those non-audit services do not compromise audit independence, and (c) an extension of the CLERP 9 discussion paper's proposals regarding (i) former audit personnel becoming directors or employees of audit clients³² and, (ii) rotation of audit personnel³³ (HIH Royal Commission, 2003, pp. lxvii–lxviii).

A bill of the CLERP 9 draft provisions, the *CLERP (Audit Reform and Corporate Disclosure) Bill 2003*, was released in October 2003 (Commonwealth of Australia, 2003). The final legislation, embodied in the *CLERP (Audit Reform and Corporate Disclosure) Act 2004*, was passed on 25 June and received royal assent on 30 June 2004 (Commonwealth of Australia, 2004). The provisions affecting auditor independence were generally consistent with those in the original CLERP 9 discussion paper. The major impact of the legislation was to make contraventions of the statutory independence requirements an offence for which individual auditors

³¹ The wording for this recommended statement was '[a]n auditor is not independent with respect to an audit client if the auditor might be impaired – or a reasonable person with full knowledge of all relevant facts and circumstances might apprehend that the auditor might be impaired – in the auditor's exercise of objective and impartial judgment on all matters arising out of the auditor's engagement' (HIH Royal Commission, 2003, p. lxvii).

³² The Commission's proposals were for (a) a cooling-off period of four years before a former partner directly involved in the audit of the client could become a director or take a senior management position with a client, (b) this restriction to be extended to include key senior audit personnel, (c) a two year cooling-off period for former partners who were not directly involved in the audit of a client, and (d) a prohibition on any more than one former partner of an audit firm at any one time being a director of, or taking a senior management position with, the client (HIH Royal Commission, 2003).

³³ The proposals was for the requirement for the rotation of the lead engagement partner and review partner to be extended to include key senior audit personnel (HIH Royal Commission, 2003, p. lxviii).

and/or audit firms would be liable to penalties under the *Corporations Act 2001* (Commonwealth of Australia, 2004, Divisions 3–5).

The ICAA and CPA Australia reissued *Professional Statement F.1* in December 2004 (ICAA and CPA Australia, 2004). While the statement was reissued to be more aligned with the CLERP 9 legislation, the professional bodies stressed that the conceptual framework approach adopted in the statement contrasted with the prescriptive approach of the *Corporations Act*, and therefore that members also needed to refer to the legislation to determine any additional obligations (ICAA and CPA Australia, 2004, s. 2).³⁴

The final major Australian auditor independence development discussed in this subsection is that of the incorporation of the Accounting Professional and Ethical Standards Board (APESB). Earlier discussion in Section 2.2 discussed the establishment of the APESB. To reiterate, the board was established on 7 February 2006 to set the code of professional conduct and professional standards with which members of the specified professional bodies must comply (Accounting and Professional Ethical Standards Board, 2007; Portelli, 2007).

As a result of the establishment of the APESB, *Professional Statement F.1* was replaced with the new *APES 110: Code of Ethics for Professional Accountants*, which became operative from 1 July 2006 (APESB, 2006a). As noted in Section 2.3, APES 110 was based on the parallel IFAC code which had been revised in June 2005

³⁴ The relevant section stated that ‘members and other readers of this Statement should recognize that adherence to this Statement is not a substitute for legislation and members and other readers must refer to the Corporations Act to determine their additional obligations as auditors, as this Statement does not ensure compliance with the law’ (ICAA and CPA Australia, 2004, s. 2).

(IFAC, 2005). However, in developing APES 110, various additional sections were added by the APESB to suit Australian circumstances.

These various developments impacted on the specific independence threats and safeguards examined in the present study. Accordingly, the relevant developments are discussed in further detail in Chapter 6 when developing the study's research hypotheses.

2.5.2 Developments in the United States

A discussion of recent auditor independence developments would not be complete without mentioning the United States *Sarbanes-Oxley Act of 2002*. The provisions of the *Sarbanes-Oxley Act* impact not only on auditors in the United States but also, due to the extra-territorial operation of the Act's registration provisions, on foreign (and hence Australian) accounting firms conducting audits of foreign subsidiaries and affiliates of United States issuers and of foreign private issuers (SEC, 2003, McClelland and Stanton, 2004).

The series of accounting scandals beginning with Enron and culminating with WorldCom captured headlines and stimulated the United States Congress to act (Carmichael, 2004). The result was the *Sarbanes-Oxley Act of 2002*, formally titled the 'Corporate and Auditing Accountability, Responsibility and Transparency Act', enacted on 30 July 2002b (Committee on Financial Services, 2002). The two main developments affecting auditors were the creation of the Public Company Accounting Oversight Board (PCAOB) and the enactment of various auditor independence provisions.

The provisions establishing the PCAOB and specifying its functions are stated under Title I of the *Sarbanes-Oxley Act* (ss. 101–109). The PCAOB’s specified role is to ‘oversee the audit of public companies ... in order to protect the interests of investors and further the public interest in the preparation of informative, accurate, and independent audit reports’ (s. 101(a)). Oversight and enforcement authority over the board is the role of the SEC (s. 107).

Specific duties of the PCAOB are to (a) register public accounting firms that prepare audit reports for issuers, (b) establish or adopt auditing, quality control, independence and other standards relating to the preparation of audit reports, (c) conduct inspections of registered accounting firms and associates, (d) conduct investigations and disciplinary proceedings, (e) perform other duties or functions as the board or SEC determines to be necessary or appropriate, (f) enforce compliance with the rules and standards relating to the preparation and issuance of audit reports, and (g) manage the board’s operations (s. 101(c)).

Major oversight functions of the board include a continuing program of inspections to assess the degree of compliance of registered firms and associated persons with applicable rules and standards (s. 104) and the conduct of investigations and disciplinary proceedings (s. 105). For the purpose of inspecting Australian firms registered with the PCAOB, a *Statement of Protocol* between ASIC and the PCAOB was entered into in July 2007 ‘to enhance cooperation in the supervisory oversight of auditors and public accounting firms that practice in the two regulators’ respective jurisdictions’ (PCAOB, 2007). By virtue of amendments enacted in the *Australian Securities and Investments Commission Amendment (Audit Inspection) Act 2007*, ASIC has been empowered to undertake inspections on behalf of the PCAOB.

The auditor independence provisions are specified under Title II of the *Sarbanes-Oxley Act* (ss. 201–209). These provisions have also been adopted by the SEC in its auditor independence rules (SEC, 2003). Major provisions relate to the auditor provision of non-audit services (ss. 201–2), audit partner rotation (s. 203), and conflict of interest situations (s. 206).

The non-audit services provisions prohibit a range of non-audit services to audit clients (s. 201),³⁵ and require the pre-approval by the company's audit committee, in most cases, of any other non-audit services (s. 202).

The audit partner rotation rules require partner rotation after a maximum of five years. The Act makes it unlawful for a firm to provide audit services to an issuing entity if the lead or coordinating partner, or the partner responsible for reviewing the audit, has performed audit services for that issuer in each of the previous five years (s. 203). While the *Sarbanes-Oxley Act* is silent with regard to the period of time before a partner can return to the audit client engagement, the SEC specifies a five year *time out* period in its rules (SEC, 2003).

The conflict of interest rules specified in the *Sarbanes-Oxley Act* stipulate a cooling off period of one year before individuals participating in an audit can take certain positions with the audit client. In this respect, the Act makes it unlawful for an accounting firm to perform an audit if the audit client's chief executive officer, controller, chief financial officer, chief accounting officer or any person serving in an

³⁵ The prohibited categories of non-audit services are (a) bookkeeping or other services related to the accounting records or financial statements of the audit client, (b) financial information systems design and implementation, (c) appraisal or valuation services, fairness opinions or contribution-in-kind reports, (d) actuarial services, (e) internal audit outsourcing services, (f) management functions or human resources, (g) broker or dealer, investment adviser or investment banking services, (h) legal services and expert services unrelated to the audit, and (i) any other service that the PCAOB determines, by regulation, to be impermissible.

equivalent position has previously been employed by the accounting firm and participated in the audit in any capacity during the one year period preceding the date of initiation of the audit (s. 206).

The above represents a brief summary of the relevant provisions in the *Sarbanes-Oxley Act*. As with the applicable Australian independence developments, the Act's provisions that are relevant to the independence threats and safeguards examined in the present study are discussed in further detail in Chapter 6 when developing the study's research hypotheses.

2.6 INTERPRETATIONS OF THE MEANING OF THE INDEPENDENCE CONCEPT

The independence pronouncements and standards issued by the major professional accounting organisations and regulatory bodies represent their attempts to provide a definition of auditor independence and to provide guidance for auditors when considering their independence in practice. In so doing, these statements elaborate on the *meaning* of the concept of auditor independence, particularly by presenting explanations of independence and by providing rules and guidelines regarding various threats to auditor independence and safeguards to protect against independence impairment.

Independence has been described as a 'common English word which has assumed a special significance in the linguistic structure of the accounting profession' (Bartlett, 1991, p. 12), but linguistic difficulties exist with the specialised usage of the word (Burton, 1980; Bartlett, 1991). As a result, the nature of independence has been debated by practitioners and academics, and has been subject to intense empirical research, over the past five or so decades (Bartlett, 1993).

In prescribing rules and concepts related to auditor independence, the relevant pronouncements provide explanations and guidelines related to the meaning of the independence concept. However, as with many common words that assume specialised connotations, Bartlett (1991) argues that the meanings attributed to the concept of independence have been poorly specified. This raises questions as to the meaning that various parties ascribe to the concept of auditor independence and whether there are commonalities in those perceived meanings.

It has often been stated that auditor independence is an elusive notion that has been difficult to reduce to an easily understood or precise definition (see, for example, Sharaf and Mautz, 1960; Antle, 1984; Lee and Kenley, 1985). Elliott and Jacobson (1992, p. 34) argue that the profession's authoritative literature 'does not contain an unmistakably clear concept for establishing independence rules.' Schuetze (1994) observes that the concept is abstract and difficult to define either generally or in its peculiar application to the professional accountant.

The discussion above highlights the difficulty of reducing the concept of independence to an easily understood or precise definition, particularly as it is subject to a multitude of contexts in individual audit engagements. In considering actual independence as a state of mind, Lee and Kenley (1985, p. 75) argue that this is 'not an ideal basis on which to place the confidence of the shareholders and other interested persons, mainly because of its intangible qualities.' It is for this reason that the *appearance* of independence is such a fundamental component of the concept of independence. However, prior research indicates that different parties tend to have alternative perceptions of the contexts and situations under which independence

might be impaired.³⁶ Hence, interpretations of the meaning of the independence concept can be subject to ambiguity and uncertainty.

Antle (1984, p. 1) observed that professional rules on auditor independence 'are lengthy and subject to constant reinterpretation.' The current efforts of the various professional and regulatory bodies in this regard indicate that this continues to be the case. The independence pronouncements and standards issued by the various professional accounting organisations and regulatory bodies represent their attempts to provide a definition of auditor independence and to provide general concepts and practical guidance for auditors. Hence, these statements elaborate on the meaning of the concept of auditor independence, while the need for constant revision to the pronouncements reflects the difficulty of reducing the meaning of the concept to a set of universally accepted rules.³⁷

The ethical codes of IFAC and the APESB note that:

The use of the word "independence" on its own may create misunderstandings. Standing alone, the word may lead observers to suppose that a person exercising professional judgment ought to be free from all economic, financial and other relationships. This is impossible, as every member of society has relationships with others. Therefore, the significance of economic, financial and other relationships should also be evaluated in the light of what a reasonable and informed third party having knowledge of all relevant information would

³⁶ See, for example, Schulte (1965), Briloff (1966), Titard (1971), Hartley and Ross (1972), Lavin (1976), Firth (1980), Shockley (1981), Pany and Reckers (1983, 1984), Lindsay *et al.* (1987).

³⁷ Scott (1992) suggests that, in modern societies, an important category of the rules and belief systems that arise are sets of *rational myths*. The concept of auditor independence and associated professional rules can be considered in this light. In explaining rational myths, Scott (1992) notes that the beliefs and rules are *rational* in the sense that they identify specific social purposes and then specify, in a rule-like manner, the activities to be carried out to achieve them. However, the beliefs and rules are *myths* in the sense that they depend, for their effectiveness, on the fact that they are widely shared, or are promulgated by individuals or groups that have been granted the right to determine such matters.

reasonably conclude to be unacceptable. (IFAC, 2005, s. 290.9; APESB, 2006a, s. 290.9)

The test of what a 'reasonable and informed third party would reasonably conclude' is common to many of the professional and regulatory organisations' statements (see, for example, Auditing Practice Board, 2004a; AICPA, 2006). The test is implicit in the *Australian Corporations Act 2001* where, as noted earlier in Section 2.3, a conflict of interest will be considered to exist if 'a reasonable person with full knowledge of all relevant facts and circumstances, would conclude that the auditor, or a professional member of the audit team, is not capable of exercising objective and impartial judgment in relation to the conduct of the audit of the audited body' (s. 324CD(1)(b)). However, what any reasonable and informed party would reasonably conclude to be acceptable or unacceptable is largely dependent on their interpretation of the meaning of the concept of auditor independence. This, in turn, affects their connotations and perceptions of independence in individual contexts.

For the above 'reasonable and informed party' test to be effective, it is necessary for a common understanding and interpretation of the meaning of the concept of auditor independence to exist. It may be difficult for auditors to effectively consider and evaluate their independence, particularly in marginal situations, if the exact meaning of independence is subject to uncertainty and if their own interpretation of the concept differs from that of financial report users and other parties to the financial reporting communication process. The reliance on the test of 'what reasonable and informed third parties would conclude' in the various pronouncements indicates the relevance of research examining connotations of independence within individual contexts.

Research into the meaning of the auditor independence concept can also be motivated by reference to the audit expectation(s) gap literature.³⁸ Independence issues have been argued to be at ‘the heart of the audit expectations debate’ (Humphrey, 1997, p. 19), and the independence concept has been identified as a central issue contributing to the expectations gap (see, for example, Hooks, 1991; Godsell, 1993; Humphrey *et al.*, 1993; Joint Committee of Public Accounts and Audit, 2002b). Particular concerns relate to the commercialisation of the profession and the joint supply of audit and non-audit services to audit clients, with critics emphasising the loosely constructed, ritualistic nature of audit practice and the ability of economic pressures to influence such practice behind the protective veil of claims to professional independence and judgment (see, for example, Humphrey and Moizer, 1990; Mitchell and Sikka, 1993; Pentland, 1993; Power, 1995). The expectations gap indicates differences in views on the nature and role of auditing. With respect to auditor independence, the expectations gap suggests differences between auditors and financial report users in interpretations (connotations) of the independence concept in individual contexts.

2.7 SUMMARY

The chapter provided an overview of the audit function and the concept of auditor independence. This included discussion of the conceptual framework approach to independence, requiring identification and evaluation of independence threats and safeguards, and of major recent developments impacting on auditor independence.

³⁸ The audit expectations gap has been defined as a ‘divergence in expectations between auditors and the users of the audit function in respect of the objectives of the independent audit’ (Godsell, 1993, p. 1) and as ‘a representation of the feeling that auditors are performing in a manner at variance with the beliefs and desires of those for whose benefit the audit is being carried out’ (Humphrey 1997, p. 9). The expectations gap has also been described as a difference in orientation between the buyer and seller of audit services (Sikka, Puxty, Willmott and Cooper, 1992).

The discussion of issues relating to interpretations of the meaning of the concept of auditor independence highlights that the concept of independence has specialised connotations in the audit context, but that the concept is abstract and difficult to precisely define. It may therefore be difficult for auditors to effectively consider and evaluate their independence if the exact meaning of the concept is subject to uncertainty and if their own interpretation of the concept differs from that of other parties to the financial reporting communication process.

The overview of the audit function and auditor independence contained in the chapter provides the basis for the introduction of the research method for the measurement of meaning in the following chapter.

CHAPTER 3

THE MEASUREMENT OF MEANING: A FRAMEWORK FOR RESEARCH

Following the previous chapter's discussion of the concept of auditor independence, the aim of this chapter is to present the study's research question and introduce the measurement of meaning research framework.

The chapter proceeds as follows. The study's general research question is presented in Section 3.1. The measurement of meaning research framework which forms the basis of the study's research method is described in Section 3.2. Section 3.3 provides an overview of the prior accounting and auditing studies that have utilised the measurement of meaning framework. The study's investigative questions are presented in Section 3.4, followed by a summary in Section 3.5. The chapter provides the basis for a discussion of the study's research method, presented in Chapters 4 and 5.

3.1 GENERAL RESEARCH QUESTION

The study's general research question is stated as:

Is there shared meaning of the auditor independence concept between key parties to the financial reporting process?

It was emphasised at the conclusion of the previous chapter that the independence pronouncements and standards issued by the professional accounting organisations

and regulatory bodies provide guidance for auditors when considering their independence in practice, and that these pronouncements and standards elaborate on the *meaning* of the concept of auditor independence. This study advances the prior auditor independence research by utilising an experimental research method specifically designed to examine interpretations (connotations) of the meaning of particular concepts. This method is based on the *measurement of meaning* framework originally developed by Osgood *et al.* (1957).¹ The measurement of meaning framework is employed in this study to provide insight into whether there is *shared meaning* of the concept of auditor independence between alternative groups of identifiable parties to the financial reporting communication process, and the extent to which those meanings are affected by various situations or circumstances that represent potential threats to, and safeguards of, auditor independence.

3.2 THE MEASUREMENT OF MEANING FRAMEWORK AND SEMANTIC DIFFERENTIAL ANALYSIS

3.2.1 Overview of the measurement of meaning framework

The purpose of this study is to examine the connotative (measured) meaning of the auditor independence concept by means of semantic differential analysis. Semantics is defined in the *Collins English Dictionary* as ‘the branch of linguistics that deals with the study of meaning, changes in meaning, and the principles that govern relationship between signs and symbols and what they represent’, and concerns ‘the relationship of a word, sign or symbol to a real-world object or event’ (Godfrey, Hodgson and Holmes, 2003, p. 29). This study examines the concept of auditor independence from a semantic perspective. This is particularly appropriate as ‘it is the

¹ Earlier work leading to the framework was published in Osgood (1952) and Osgood and Suci (1955).

semantic relations that make a theory realistic and meaningful' (Godfrey *et al.*, 2003, p. 29).

Developed by Osgood *et al.* (1957), semantic differential analysis presents a means for measuring the *connotative* meaning of concepts.² Connotative meaning refers to an accumulation of emotional association that a particular referent has acquired arising from personal experience (Johnson, 1992). Connotative meanings include the emotional associations to particular concepts (Bruno, 1980) and evaluations of concepts (Bagranoff, 1990). They imply some judgment of a concept (Flamholtz and Cook, 1978) and give rise to an individual's reactions to a concept (Osgood *et al.*, 1957; Bagranoff, 1990).

Based on psychology and learning theory, Osgood (1952) defined meaning as a *representational mediation* process. According to this view, the meanings which different individuals have for the same signs will vary to the extent that their behaviours toward whatever is signified have varied. This is because the composition of the representational process, the meaning of the sign, is dependent on the nature of the total behaviour occurring while the sign is being established. While the meaning of many primary, perceptual signs will be quite consistent across individuals, the meaning of many other signs will reflect the idiosyncrasies of individual experience (Osgood *et al.*, 1957).

Connotative meaning can be contrasted with *denotative* meaning, which is the ordinary or literal meaning of a concept and what it denotes. Denotation is the element of meaning that gives an object or concept a name (Flamholtz and Cook,

² Connotative meaning is also referred to as *affective* meaning, being closely related to the behavioural dimensions of emotion or feeling (Osgood, 1962, 1969; Osgood, May and Miron, 1975).

1978). The denotative meaning of a symbol (word, concept, phrase or some other linguistic form) involves the communication of an objective description or definition, rather than a subjective attitude or emotion (Adelberg and Farrelly, 1989). For example, the word *dog* denotes a 'domesticated canine mammal' (Collins English Dictionary). In a study examining both denotative and connotative meanings of financial statement terminology, Adelberg and Farrelly (1989) found that it was connotative meaning that revealed the more important differences in meaning.³ Even with agreement between communicating parties as to denotative meaning, the parties can display different behaviours in their response to a symbol or concept (Osgood *et al.*, 1957; Hronsky and Houghton, 2001). For example, returning to the earlier *dog* example, an animal devotee may have a completely different behavioural reaction to the object *dog* than a small child who has a fear of such animals.⁴

With reference to the concept of auditor independence, the various professional and regulatory pronouncements might be considered to provide statements of the ordinary or literal (denotative) meaning of the independence concept. However, alternative parties may nevertheless differ in their interpretations of the connotative meaning of the concept in different situations, such as in the presence of particular threats to an individual auditor's independence. For example, a number of prior studies have found differences between auditors and users in perceptions of auditor independence impairment when an audit firm also provides non-audit services (see, for example, Briloff, 1966; Hartley and Ross, 1972; Lavin, 1976; Firth, 1980; Shockley, 1981; Lindsay, Rennie, Murphy and Silvester, 1987). This suggests possible differences in

³ Adelberg and Farrelly (1989) used two psycholinguistic techniques, classification analysis and association analysis, in their study.

⁴ Baganoff, Houghton and Hronsky (1994) use the accounting example of *profit* to illustrate the distinction. While the denotative meaning of profit is the excess of revenues over expenses, the connotative meaning might be that it is good, necessary and valuable.

the connotative meaning of independence held by auditors and users in the presence of auditor provided non-audit services.

Osgood (1952) argued that, as the basic function of language was the communication of meaning, ordinary language could be used to differentiate between concepts and measure their meaning. Accordingly, pursuant to the semantic differential technique for the measurement of meaning, bipolar adjectives for the concept under investigation are constructed. Examples of bipolar adjectives (adjectival pairs) that have been utilised in prior accounting studies include exact–estimated, bad–good, measurable–unmeasurable, necessary–unnecessary, objective–subjective, tangible–intangible, static–dynamic and flexible–inflexible.⁵ The prior accounting studies have tended to use at least 20 of these bipolar adjectives for each concept examined. The adjectival pairs are generally presented on a seven point scale, with research participants indicating the position on each scale that reflects their perception of the relationship between the adjective and the concept.⁶ Marking the position on the semantic scale indicates the ‘direction and intensity’ of the judgment of the concept (Osgood *et al.*, 1957, p. 35; Osgood, 1976, p. 16). An individual’s judgment of a concept across a series of scales serves to allocate that concept ‘to a point in semantic space’ (Haried, 1972, p. 377).

To measure connotative meaning, the bipolar adjectives that represent factors or dimensions that define meaning for the particular concept are selected. This is achieved by factor analysing the semantic scales to identify the scales which group

⁵ See, for example, Haried (1972, 1973), Flamholtz and Cook (1978), McNamara and Moores (1982, 1995), Houghton (1987a, 1987b, 1988, 1997), Bagranoff (1990), Houghton and Messier (1990), Houghton and Hronsky (1993), Bagranoff *et al.* (1994) and Hronsky and Houghton (2001). These studies are discussed in Section 3.3.

⁶ Osgood *et al.* (1957) found a seven point scale to be suitable in defining semantic space in many different experiments, and a seven point scale has been used in most research since.

together to define each single dimension of meaning (Flamholtz and Cook, 1978). Factor analysis, discussed in further detail in the following sub-section, enables identification of the structure, referred to as the *cognitive structure*, within which the research participants hold the selected concept (McNamara and Moores, 1982; Houghton, 1987a, 1987b). This structure signifies the dimensions of the participants' responses and is representative of the dimensionality within which the participants hold their meanings with respect to the concept or concepts under investigation (Houghton and Messier, 1990). The factors reflect the score profile or the semantic space associated with the concept, which can then be used to determine similarities or differences in meaning (Bagranoff, 1990). For example, by reference to factor scores, different concepts can be examined to determine whether they have the same or different meanings. Similarities or differences in concept meanings between individuals, groups and particular contexts can also be investigated.

Osgood *et al.* (1957) proposed three dimensions for the general domain of connotative meaning (that is, for common concepts within ordinary fields of usage). Concepts were considered within an *E-P-A* (Evaluative, Potency, Activity) structure. The *evaluative* dimension comprises semantic scales such as good–bad, the *potency* dimension comprises scales such as strong–weak, and the *activity* dimension comprises scales such as active–passive.⁷ Osgood *et al.* (1957, p. 325) concluded that these three factors 'have reappeared in a wide variety of judgmental situations, particularly where the sampling of concepts has been broad.' These three dimensions

⁷ Factor analysis results from Osgood *et al.* (1957, p. 45) indicate that the semantic scales associated highly with the *evaluative* factor were good–bad, nice–awful, beautiful–ugly, honest–dishonest, sweet–sour and fair–unfair. Scales associated highly with the *potency* factor were strong–weak, large–small, heavy–light, rugged–delicate and hard–soft. Scales associated highly with the *activity* factor were fast–slow, active–passive and sharp–dull.

of meaning have been supported in many prior studies, including across different cultures (see, for example, Osgood, 1962, 1969; Miron, 1969; Osgood *et al.*, 1975).⁸

Of the three dimensions, the evaluative factor plays the dominant role in meaningful judgments (Osgood *et al.*, 1957, p. 38). The relative weights of the three dimensions have been reasonably consistent in many prior studies, with the evaluation dimension accounting for approximately double the amount of variance of either the potency or activity dimensions (Osgood *et al.*, 1957, p. 325). In the original Osgood *et al.* (1957) study, the evaluative factor explained over four times the variance of either of the potency or activity dimensions.

The semantic differential has been extensively used in many disciplines, and its reliability, validity and effectiveness have been extensively tested (Heise, 1969; Kerlinger, 1973; Fishbein and Azjen, 1975). While, in comparison to other disciplines, semantic differential analysis has not been extensively used in accounting and auditing research, the prior studies have indicated that it is well developed and reliable. These prior studies are summarised in Section 3.3.

3.2.2 Factor analysis and the measurement of meaning

Factor analysis warrants specific discussion as it is the principal statistical method used within the measurement of meaning framework. It is the method used to determine the dimensions of connotative meaning for the concept or concepts being examined.

⁸ Miron (1969, p. 189) stated that the *E-P-A* factor structure 'has been replicated far more often under far more diverse circumstances than most other inferential "facts" of our science.'

Factor analysis refers to a class of multivariate statistical methods which aim to identify the underlying structure in a relatively large number of variables. It is a technique that summarises patterns of correlations among observed variables to reduce them to a smaller number of factors, thereby resulting in considerable parsimony (Tabachnick and Fidell, 2001).

While factor analysis is a generic name given to a class of multivariate statistical methods (Hair, Anderson, Tatham and Black, 1998), there are many variants. The two major subsets are *component* (or *principal component*) analysis and *common factor* analysis (Kim and Mueller, 1978b; Gorsuch, 1983). The latter subset is often referred to simply as factor analysis, and hence confusion arises as to whether the term is being used in its generic sense as a class of methods or in its narrower, statistical variant sense. Factor analysis is explained in this sub-section in its generic sense. The distinction between component analysis and common factor analysis, and its effect on the current study's research analysis, is discussed in Chapter 8.⁹

Factor analysis is applied to a single set of variables to discover which of them form coherent subsets that are relatively independent of one another (Tabachnick and Fidell, 2001). The two primary uses for factor analysis are summarisation and data reduction (Hair *et al.*, 1998). In summarising the data, factor analysis derives underlying dimensions that describe the data in a smaller number of factors than the original individual variables. A factor is essentially a 'dimension or construct which is a condensed statement of the relationships between a set of variables' (Kline, 1994, p. 5) Data reduction can be achieved by calculating scores (factor scores) for each

⁹ It is sufficient to observe here that the component and common factor methods differ with respect to preparation of the observed correlation matrix for extraction of the factors and in the underlying theory for their use (Kim and Mueller, 1978b; Hair *et al.*, 1998; Tabachnick and Fidell, 2001).

underlying dimension and substituting them for the original variables. Factor scores are a composite measure calculated as a weighted linear combination of the observed, underlying variables (Kim and Mueller, 1978a; Hair *et al.*, 1998).

To develop the measurement of meaning framework, Osgood *et al.* (1957) selected 20 concepts considered to be diversified in meaning. These included concepts such as 'lady', 'boulder', 'sin', 'lake', 'symphony', 'Russian', 'fire' and 'fraud'. Research participants indicated their interpretation of each of the 20 concepts by reference to 50 semantic differential (seven point) scales.¹⁰ Factor analysis was used to reduce this large number of semantic scales to a smaller number of factors considered to characterise the alternative dimensions of connotative meaning. As noted earlier, factor analysis identified three underlying dimensions of meaning, these being interpreted by Osgood *et al.* (1957) as *evaluative*, *potency* and *activity* dimensions.

Factors represent combinations of variables that are correlated with one another but which are largely independent of other subsets of variables. They are considered to reflect the underlying processes that created the correlations among the variables (Tabachnick and Fidell, 2001). Factor analysis is based on the fundamental assumption that it is these underlying factors that are responsible for the covariation among the observed variables (Kim and Mueller, 1978a).

After selecting and measuring a set of variables, the first major step in deriving factors is to prepare a correlation matrix between the individual variables. This allows investigation of the interrelationship among the variables to determine which have high correlation with each other but low correlation with other subsets. The factor analytic approach is used to assess whether the observed correlations can be

¹⁰ Participants were 100 undergraduate introductory psychology students.

explained by the existence of a small number of hypothetical variables or constructs (Kim and Mueller, 1978a).

The second major step is to extract a set of factors from the correlation matrix and determine the number of factors that can adequately explain the observed correlations among the individual variables. The percentage of variance in the data 'explained' by the factor solution increases as more factors are extracted, but parsimony is decreased (Tabachnick and Fidell, 2001). While as many factors could be extracted as there are variables, a trade-off is required to retain enough factors for an adequate fit but not so many as to lose parsimony.¹¹

Factors are formed to maximise their explanation of the entire variable set (Hair *et al.*, 1998), with the restriction that factors are orthogonal to (uncorrelated with) each other (Kim and Mueller, 1978a). The first factor is derived to account for as much variance as possible. The second factor is then derived to account for as much of the residual variation left unexplained by the first factor, and this process can be continued until the number of factors extracted equals the number of variables.

To obtain an *initial solution*, the researcher must either specify the number of factors to be extracted or establish the criterion by which the number of factors to be extracted can be determined (Kim and Mueller, 1978a). While the issue of the number of factors to be extracted is discussed in greater detail in Chapters 4 and 8 in the context of this study's research data, the major criterion relates to evaluating the percentage of total variance explained by the extracted factors. The first factor accounts for the most variance and the factors are ordered in size as they are extracted

¹¹ Hair *et al.*, (1998, p. 103) use the analogy of focusing a microscope to illustrate this trade-off: '[t]oo high or too low an adjustment will obscure a structure that is obvious when the adjustment is just right.'

(Kline, 1994). The selection decision is then based on determining where to draw the line with respect to the percentage of the total variance represented by the extracted factors, typically by reference to factor *eigenvalues*¹² and/or a *scree test*.¹³ The selection decision must also take into account the composition, interpretability and substantive importance of the extracted factors, and statistical procedures are also available to evaluate whether factors are robust and stable (Kim and Mueller, 1978b; Stevens, 1986).

After determining the number of factors that can adequately account for the observed correlations between the variables, the third major step involves *rotating* the factors to increase interpretability. It is generally assumed that rotation will be undertaken so that the factors have a greater likelihood of being relevant and meaningful (Gorsuch, 1983). The goal of rotation is to simplify the pattern of factor loadings and obtain a more readily interpretable solution. Regardless of the underlying true model, the initial solution often results in variables having substantial loadings on more than one factor (Kim and Mueller, 1978b). Rotation, achieved by manipulating or adjusting the factor axes, minimises the number of variables that load on each factor (Hair *et al.*,

¹² The *eigenvalue* of a factor indicates how much variance it accounts for. As each variable contributes a value of one to the eigenvalues, the total of the eigenvalues equals the number of variables. For example, in a factor analysis with 20 variables where the first factor extracted accounts for 43 per cent of the total variance, its eigenvalue would be 8.6. If the second and third factors account for 21 and three per cent of the total variance respectively, their eigenvalues would be 4.2 and 0.6. In this example, the usual eigenvalue selection criteria would result in a two factor solution. The third factor would not be considered important as its eigenvalue is less than one and therefore contributes less variance (explanation) than a single variable.

¹³ The scree test involves plotting eigenvalues against factors, with the shape of the resulting curve being used to determine the cutoff point. The maximum number of factors to extract is indicated by the point at which the curve begins to straighten out and form a straight line with a near horizontal slope (Kim and Mueller, 1978b; Hair *et al.*, 1998). The cut-off point therefore occurs where the rate of change in the eigenvalues decreases sharply (Houghton, 1988).

1998).¹⁴ Rotation does not, though, change the degree of fit between the data and the factor structure (Kim and Mueller, 1978a).

Factor loadings indicate the correlation between the original variables and the factors, and are ‘the key to understanding the nature of a particular factor’ (Hair *et al.*, 1998, p. 89). Loadings can be positive or negative depending on whether the individual variable is positively or negatively associated with the factor. Loadings of higher absolute value indicate that the individual variable is representative of the factor. Loadings with an absolute value of at least .50 are generally accepted to meet a ‘practical significance’ criterion (Hair *et al.*, 1998, p. 111).¹⁵

Factors are interpreted by analysing the factor loadings which are largest in absolute magnitude. An individual factor is interpreted by attempting to determine what the highly loading variables have in common. Stevens (1986) observes that the researcher’s task is to give a name to the construct that underlies variability, thereby identifying the factor substantively.

If required, the fourth major step in factor analysis is data reduction, achieved by calculating factor scores. Factor scores, or scales, are ‘estimates of the scores subjects would have received on each of the factors had they been measured directly’ (Tabachnik and Fidell, 2001, p. 626). Coefficients, or weights, are calculated with which to combine the values of the observed variables to represent the underlying factor. The variables with the highest loadings will have the highest weightings

¹⁴ The two major types of rotation are *orthogonal* and *oblique*. Pursuant to orthogonal rotation, the reference axes are maintained at 90 degrees and the factors are therefore uncorrelated. Oblique rotation does not retain the 90 degree angle between the reference axes, and the extracted factors therefore become correlated to some extent (Kim and Mueller, 1978b; Hair *et al.*, 1998).

¹⁵ Comrey and Lee (1992) suggest that loadings in excess of .71 are excellent, .63 very good, .55 good, .45 fair and .32 poor.

(factor score coefficients) in calculating the factor scores. Hence, the value of an individual variable will have a large effect on the score of the factor on which it loads highly, but only a small and possibly negligible effect on the scores of factors on which it loads to only a minor extent. In the context of the semantic differential technique, factor scores are used to indicate the *measured meaning* of the particular concept (Houghton and Messier, 1990; Houghton and Hronsky, 1993; Hronsky and Houghton, 2001).

In summary, factor analysis refers to a class of multivariate statistical methods that summarises patterns of correlations among observed variables to reduce them to a smaller number of factors. This allows identification of the dimensions or constructs underlying the data, and enables data reduction through the calculation of factor scores.

In the context of the measurement of meaning framework and the semantic differential technique, factor analysis enables identification of the dimensions, or cognitive structure, underlying the connotative meaning of particular concepts. A particular issue, though, is evaluating whether the factors comprising the dimensions of meaning are robust and stable. This requires analysis of whether the extracted factors are comparable within individual groups of research participants and between any alternative groups (Nunnally, 1978; Everett and Entekin, 1980; Everett, 1983). This aspect is discussed within the following section, and the specific application of factor analysis, including factor comparability analysis, in this study is discussed in Chapters 4 and 8.

3.3 PRIOR ACCOUNTING AND AUDITING MEASUREMENT OF MEANING STUDIES

3.3.1 Foundation accounting and auditing studies

Haried (1972, 1973) established that the measurement of meaning framework could be applied to the examination of accounting concepts. Haried (1972) administered a research instrument, comprising 33 semantic scales across 18 accounting related concepts,¹⁶ to a variety of sophisticated and unsophisticated research participants.¹⁷ Of the 33 scales, 30 were specifically developed by Haried as being relevant to financial report terms. Three additional scales (good–bad, active–passive and strong–weak), representing the general *E-P-A* dimensions from Osgood *et al.* (1957), were also used. Seven factors, comprising 26 of the 33 scales, were extracted by the study, with these being considered to represent alternative dimensions of meaning. The seven alternative dimensions were labelled ‘objectivity’, ‘evaluation’, ‘control’, ‘activity’, ‘time’, ‘stability’ and ‘necessary’.

Haried (1973) used a subset of 15 of the semantic scales from the 1972 study in a further study of accounting concepts, with research participants comprising accountants, financial analysts, lawyers, investment club members and students. These scales were drawn from across the seven dimensions (factors) found in the earlier study. Findings confirmed the adaptability of the semantic differential as a ‘sensitive, reliable, and valid instrument for measuring connotative meanings conveyed by terms used in financial reports’ (Haried, 1973, p. 143). However, Haried

¹⁶ The concepts employed in the study were accounting definitions and terminology, such as ‘asset’, ‘goodwill’, ‘liability’, ‘retained earnings’, ‘depreciation expense’, ‘extraordinary item’, ‘net income’, ‘working capital’, ‘generally accepted accounting principles’ and ‘stock dividend’ (Haried, 1972, p. 384).

¹⁷ Research participants comprised practising accountants, investment club members and a variety of graduate and undergraduate accounting and non-accounting students.

did not consider the technique to be successful in testing hypotheses regarding semantic problems in accounting communication, such as in determining differences in meaning between the financial report preparers and the user groups.¹⁸ This conclusion was to be tested in later research by Houghton (1988), discussed later in this sub-section.

While Haried (1972, 1973) concentrated on the meaning of accounting terms utilised in financial reports, Oliver (1974) examined eight basic concepts utilised in formulating the financial report message, these being 'accounting', 'income determination', 'consistency', 'disclosure', 'matching', 'valuation', 'cost', and 'revenues and expenses'. The study used ten semantic scales, comprising the four *evaluative*, three *potency* and three *activity* scales possessing the highest factor loadings in Osgood *et al.* (1957). Findings confirmed these to be successful in detecting differences in the meanings of the selected accounting concepts between accounting educators and practising professionals.¹⁹ While Oliver's (1974) study was considered to have been correct in accepting the *E-P-A* structure, Houghton (1997) argued that use of the Osgood *et al.* (1957) scales without adaptation to the accounting domain of meaning was less valid than Haried's (1972, 1973) use of scales specifically developed for examining accounting concepts.

Flamholtz and Cook (1978) applied semantic differential analysis to examine the connotative meaning of 11 accounting concepts, six of which related to human resource accounting. Twelve semantic scales were used, comprising seven from Osgood *et al.* (1957) deemed to be particularly relevant to the chosen concepts and an

¹⁸ Haried (1973) concluded that an alternative technique which measures the denotative aspect of meaning, the *antecedent-consequent* method, was more appropriate for this purpose.

¹⁹ The practising professionals comprised accountants, financial analysts, securities dealers, financial executives and bankers.

additional five considered by the researchers to be relevant to human resource accounting. A four factor cognitive structure was identified which was only partially consistent with the *Osgood et al. (1957) E-P-A* structure. This comprised two alternative evaluative-type factors, labelled 'evaluative/utility' and 'evaluative/operationalization', and two potency-type factors, labelled 'potency/benign' and 'potency/strong'. An activity-type factor was not identified by the study. Differences in the connotative meaning of a number of the alternative concepts, by reference to the extracted factors, were found by the study, although no significant differences in the connotative meanings of the concepts between the accountant and manager participant groups were detected.

Karvel (1979) utilised 48 semantic scales, including 21 from *Osgood et al. (1957)* and 17 from *Haried (1972)*, in a study examining the connotative meaning of alternative audit opinion paragraphs. Research participants were accountants, lawyers, financial analysts and managers/executives. While non-response problems existed with this study (*Houghton, 1986*), *Karvel (1979)* confirmed the scales to be robust with respect to measuring audit report meaning and to be capable of detecting between-group differences in meaning.

*McNamara and Moores (1982)*²⁰ replicated *Haried's (1972)* study with undergraduate student participants, using the 33 semantic scales and 13 of the 18 accounting concepts from *Haried (1972)*. Findings indicated a cognitive structure with four main factors; 'relevance', 'reliability', 'potency/significance' and 'timeliness'.

A crucial issue that arises in the use of semantic differential analysis is determining the number of factors (dimensions of meaning) that should be identified. The above

²⁰ This working paper was subsequently published as *McNamara and Moores (1995)*.

studies of accounting and auditing concepts were not particularly rigorous in establishing the number of factors that should comprise the dimensions of connotative meaning. In particular, Houghton (1988) was critical of the seven factor model identified by Haried (1972, 1973) and the resulting conclusion that the semantic differential technique had limited applicability to the study of accounting. Houghton therefore sought to show that Haried's results were inaccurate.

Houghton (1988) re-analysed Haried's (1973) data utilising a more rigorous method to test the reliability and stability of the factor solution. Using *factor comparability* analysis,²¹ Houghton found a three factor solution to be generally robust and stable for all participant groups except the students, and found these factors to have characteristics consistent with an *E-P-A* structure. The structure was found to be stable, both between and within groups, for the 'sophisticated' groups (accountants, financial analysts and lawyers). Further, based on this shared three-factor structure, Haried's (1973) hypotheses were re-tested for the three sophisticated groups. Significant between-group and between-concept differences were found. Accordingly, the major contributions of Houghton (1988) were to confirm that the measurement of meaning framework could be validly and reliably applied to the examination of accounting concepts, but that it was important to test whether any cognitive (factor) structure representing dimensions of meaning was robust and stable.

²¹ Factor comparability analysis was originally designed to test between-group comparability (Nunnally, 1978), but can also be used to test comparability within groups (Everett and Entrekin, 1980). In comparing two groups or sub groups, separate factor analyses are run for each group and two sets of factor scores are derived by applying the factor score coefficients from each analysis to all responses. Correlations between the two sets of factor scores are then calculated to determine comparability, with only high correlations indicating a robust and stable factor structure.

The final study that can be considered to have provided a foundation for application of the measurement of meaning framework to accounting and auditing concepts is Houghton (1987a). Utilising 22 of the semantic scales from Haried (1972), being those that had factor loadings greater than 0.5, Houghton (1987a) examined the connotative meaning of the concept 'true and fair view'. Utilising factor comparability analysis, findings indicated differences in cognitive structures for 'lay' users (private, non-institutional shareholders) and 'sophisticated' accountants (preparers). The former group exhibited only a simple, single factor structure, while the accountants exhibited a more complex, three factor structure similar to an *E-P-A* structure. This is consistent with the view that experts in a particular field exhibit a more complex structure within their field than non-experts (Foa and Foa, 1974). Accordingly, Houghton (1987a) confirmed the usefulness of the sub-set of 22 of Haried's (1972) scales in evaluating accounting concepts, and also identified possible differences in cognitive structures between 'naive' and 'sophisticated' parties to the financial reporting communication process.

In summary, the earlier studies published between 1972 and 1982 showed that the measurement of meaning framework could be used to examine accounting and auditing concepts. A major limitation, though, was that these studies had not rigorously determined the number of alternative dimensions of meaning that should be identified. Using more rigorous factor comparability analysis, Houghton (1988) showed that robust and stable dimensions of meaning could be extracted. The further contributions of Houghton (1987a) were to identify a set of semantic scales that exhibited reliability and to highlight differences in cognitive structures between naive and sophisticated parties to the financial reporting communication process.

3.3.2 Further accounting and auditing studies

Building on the foundation studies summarised in the previous sub-section, a further seven major studies have employed the measurement of meaning framework within the accounting and auditing domain.

Three of these studies (Houghton, 1987b; Houghton and Hronsky, 1993; Houghton, 1997) examined the meaning of a number of general accounting concepts and conventions for various groups of students, accountants and financial report users. Houghton (1987b) examined the connotative meaning of 13 basic accounting concepts and conventions using MBA students. The research instrument, comprising 17 of Haried's (1972) semantic scales,²² was administered at both the commencement and completion of the students' MBA accounting course. Findings indicated significant changes over the period in the meaning to the students of the accounting concepts and conventions. Results also showed changes in the cognitive structure underlying those concepts, indicating that these structures can change with relevant education. Four major dimensions of meaning were identified ('potency', 'evaluative', 'activity' and 'manageable'), although this structure showed a tendency to move toward a three dimensional *E-P-A* structure over the study period.

Houghton and Hronsky (1993) investigated the extent to which there was shared meaning between accounting practitioners and final year accounting students of 15 fundamental accounting concepts. The semantic scales used were the 22 highly loading scales from Haried (1972) as used in Houghton (1987a). Findings indicated a shared structure between the students and practitioners that was generally consistent with an *E-P-A* structure. However, the positioning of the concepts within this

²² These 17 scales comprised 14 that loaded highly on the first three factors from Haried (1972), together with one heavily loading scale from each of the next three factors.

structure was not shared, with a number of highly significant differences in measured meaning between the two groups.

Houghton (1997) examined the connotative meaning of seven basic accounting concepts using accountants, bankers, managers and private non-institutional shareholders as research participants. The first three of these groups, representing 'sophisticated' groups possessing 'business experience', exhibited three factor cognitive structures with similarities to an *E-P-A* structure. However, the private shareholders held the meaning of the accounting concepts within a simplistic, one-dimensional framework. This indicated a lack of shared meaning between the sophisticated and non-sophisticated groups. For the three sophisticated groups, a small number of differences in measured meaning of the accounting concepts existed between accountants and bankers and between accountants and managers. A larger number of significant differences existed between bankers and managers.

While the above studies examined general accounting concepts and conventions, Houghton and Messier (1990) extended the measurement of meaning research by examining concepts of relevance to auditing and audit reports. Houghton and Messier (1990) examined the meaning held by auditors and bank lending officers of six alternative types of unqualified and qualified audit reports with alternative wordings. The alternative wordings were based on changes in the relevant auditing standards in the United States. As a mail questionnaire mode of data collection was used, only 12 semantic differential scales were employed in an attempt to maximise responses. These 12 were randomly selected from the 22 highly loading scales from Haried (1972). Findings revealed a cognitive structure partially consistent with an *E-P-A* structure, with 'evaluative', 'obligatory' and 'potency' dimensions of meaning identified. Within this factor structure, findings revealed significant differences

between the auditors and bankers, between the alternate audit report wordings from the two audit standards, and between the alternative types of unqualified and qualified reports.

The measurement of meaning method was extended by Johnson (1992) to examine management accounting concepts. Nine concepts were examined, examples of which were 'budget', 'product cost', 'variance' and 'return on investment'. Twelve semantic scales were used, eight of which were from Haried (1972) and four developed by the researcher for the specific purpose of examining management accounting concepts.²³ Findings indicated a three factor cognitive structure, comprising 'evaluative', 'activity' and 'control' dimensions of meaning.

Two further studies, Bagranoff *et al.* (1994) and Hronsky and Houghton (2001), extended the research by examining associations between measured meaning and accounting decision making. Both studies examined the 'extraordinary items' accounting concept under various regulatory definitions and sought to determine whether auditors' extraordinary items classification decisions were systematically associated with variations in measured meaning.

Bagranoff *et al.* (1994) examined whether there was shared meaning of the 'extraordinary items' concept among United States and Australian auditors. The 22 semantic scales from Haried (1972) and Houghton (1987a) were used, and significant differences in cognitive structure were found between the two groups of auditors. A three factor structure, exhibiting similarities to an *E-P-A* structure, was discerned for the Australian auditors, while a five factor structure was identified for the United

²³ These four scales were 'important-unimportant', 'irrelevant-relevant', 'cost-oriented-revenue-oriented' and 'operational-strategic'.

States' auditors. The first two factors for the US auditors were labelled 'activity' and 'potency', but the remaining three were not capable of easy labelling. Study results showed some subtle differences between the two auditor groups in decisions on whether particular items should be classified as extraordinary, illustrating the link between connotative meaning and accounting decision making.

Hronsky and Houghton (2001) examined the measured meaning of the extraordinary items concept in the context of a regulated change in their definition in the relevant Australian accounting standard. The research participants, experienced auditors, were presented with ten case scenarios where the exercise of judgment was required to determine whether each scenario satisfied the extraordinary items definition. Using a between-subjects design, one group of auditors determined classification decisions based on the superseded extraordinary items definition while the second group used the new definition. Utilising the 22 semantic scales validated in the prior studies, a cognitive structure consistent with an *E-P-A* structure was found. The auditors' extraordinary items classification decisions were found to be systematically associated with differences in measured meaning of the extraordinary items definition. As with the findings of Bagranoff *et al.* (1994), this provides support for the link between connotative meaning and accounting decision making.

In summary, with a small number of notable exceptions, the later studies have generally supported the *E-P-A* structure, or some variation of that structure, for sophisticated groups of accountants, auditors and accounting information users. They have generally also found shared meanings of concepts within individual groups, but some differences in measured meaning between alternate groups. Taken together, the studies support the use of the measurement of meaning framework and semantic differential analysis in examining accounting and auditing concepts. In particular, the

studies show that robust and stable cognitive structures within which accounting and auditing concepts are interpreted can be discerned by the method.

3.4 INVESTIGATIVE QUESTIONS

The study's general research question was stated in Section 3.1 as follows:

Is there shared meaning of the auditor independence concept between key parties to the financial reporting communication process?

Investigative questions are the more specific questions that a researcher must address to satisfactorily answer the general research question (Emory, 1991). This chapter's discussion of the measurement of meaning framework and the semantic differential technique provides the justification for the following specific investigative questions required to address the general research question:

What are the dimensions underlying the connotative meaning of the auditor independence concept?

Are the dimensions underlying the connotative meaning of the auditor independence concept consistent with the E-P-A structure of Osgood et al. (1957)?

Are the dimensions underlying the connotative meaning of the auditor independence concept consistent (shared) between key parties to the financial reporting communication process?

To what extent are measured meanings of the auditor independence concept affected by various situations that represent potential threats to, and safeguards of, independence?

Are there observable differences in the measured meaning of the auditor independence concept between alternative groups of key parties to the financial reporting communication process in response to various situations that represent potential threats to, and safeguards of, independence?

3.5 SUMMARY

An explanation of the Osgood *et al.* (1957) measurement of meaning research framework, which aims to assess the *connotative meaning* of individual concepts, was presented in this chapter. This framework forms the basis for the present study's research method. An overview of the development of the measurement of meaning method in prior accounting and auditing studies was provided in the chapter, and the study's general research question and investigative questions were presented.

The chapter's discussion of the measurement of meaning framework provides the basis for the explanation of the present study's research method, contained in Chapters 4 and 5. The research question and investigative questions also presented in this chapter provide the basis for the study's research hypotheses. These are developed in Chapter 6.

CHAPTER 4

RESEARCH INSTRUMENT CONSTRUCTION

Following the previous chapter's discussion of the research framework for the measurement of meaning, the aim of this and the following chapter is to describe the study's research method utilising that framework.

The study examines the connotative meaning of the concept of auditor independence within an experimental research framework. In utilising the measurement of meaning framework to examine the concept of auditor independence across various settings, selection is required of (a) alternative experimental audit case scenarios to enable investigation of the meaning of the concept across alternative settings, (b) the semantic differential scales to be utilised to measure connotative meaning, and (c) research participants. This chapter describes construction of the research instrument encompassing the experimental cases and the semantic scales. Information on the research participants and administration of the research instrument is presented in Chapter 5.

A pilot study was undertaken to guide construction of the final research instrument. Development of the pilot study is described in Section 4.1, together with results from the study and conclusions drawn. The final research instrument is described in Section 4.2, followed by a summary in Section 4.3.

4.1 PILOT STUDY

A pilot study was undertaken for the purpose of providing input into the development of the final research instrument, and particularly to guide the development of the alternative experimental audit case scenarios and the selection of the semantic scales to be used in the study.

A pilot study is a 'small-scale test-run for a planned piece of empirical research' (Buckingham and Saunders, 2004, p. 293). The aims of a pilot study are to test the research instrument or other aspects of the research method on a trial sample for fine-tuning purposes (De Vaus, 2002) and to ensure that the planning of the proposed study, and its research tools, are correct, suitable, reliable and valid (Sarantakos, 2005). In the present study, the major aim of pilot testing was to determine the suitability of the 22 semantic differential scales from prior accounting and auditing research for the purpose of measuring the connotative meaning of the concept of auditor independence.

While the pilot study and its findings now form part of the published literature (Wines, 2006), they are presented here in their original form.

4.1.1 Pilot study research instrument

The pilot study research instrument is reproduced in Appendix 1. The instrument comprised an introduction and general instructions for research participants, followed by three experimental audit engagement case scenarios. After each of the three scenarios, participants were presented with a response sheet requesting them to complete, for each case, (a) an initial question eliciting their perception of the audit

firm's independence in the presented scenario on a seven point scale,¹ and (b) their interpretation of the audit firm's independence in relation to the 22 semantic scales (seven point scale) from the prior accounting and auditing research.

Applying the semantic differential technique to measure connotative meaning requires the selection of appropriate semantic scales. While Osgood *et al.* (1957, p. 80) believed that standard factors of judgment exist, they emphasised that 'the particular scales which may, in any given research problem, best represent these factors are variable and must be carefully selected by the experimenter to suit his (her) purpose.' Researchers should select scales on some rational basis, such as by reference to pre-test results or careful judgment against pre-established criteria (Bagranoff, 1990). If the concept or concepts to be measured 'belong to a domain that previous studies have examined, the researcher may use the same set (or a subset) of adjectives from that study' (Bagranoff, 1990, p. 73).

While the concept of auditor independence is within the general domain of accounting and auditing, it is obviously not an identical concept to those examined in the prior studies summarised in Chapter 3. However, the scales used in those prior studies do represent those most rigorously tested across various accounting and audit report settings and have proven to be valid, reliable and robust. In pre-testing the scales, Houghton (1997) found they covered multi-dimensional semantic space, exhibited stability, had relevance and did not induce subject fatigue. As the

¹ The wording for this question was based on the guidelines expressed in the version of *Professional Statement F.1* applicable at the time (ICAA and CPA Australia, 2002, paras 10 and 14).

development of original scales is an extremely complex task,² the present study's approach has been to pre-test the existing 22 scales to determine their suitability for measuring the meaning of the auditor independence concept. These semantic scales are shown in Table 4.1 under their *E-P-A* category headings. The table highlights that the 22 scales are distributed evenly across each of the *E-P-A* categories.

² For a discussion of the method used to develop semantic differential scales, see Triandis (1959), Haried (1972) and Houghton (1988). Scales are generally developed by a *triad* procedure, which is an adaptation of the Kelly Repertory Test (Kelly, 1955). Participants are presented with sets of three concepts which act as stimulus terms. For example, Haried (1972) utilised 14 sets of financial report stimulus terms, two examples of which were a) asset, equity, liability, and b) book value, market value, cost. Participants are requested to a) identify which of the three stimulus terms in each set differs the most from the other two, b) describe the characteristic that makes it different, c) describe that characteristic in a single adjective, and d) state the logical opposite (antonym) of that adjective.

Evaluative (E) Scales	Potency (P) Scales	Activity (A) Scales
Bad–Good Beneficial–Adverse Controllable–Uncontrollable Discretionary–Required Necessary–Unnecessary Objective–Subjective Safe–Risky Unexpected–Expected	Complete–Incomplete Indirect–Direct Exact–Estimated Measurable–Unmeasurable Real–Imaginary Tangible–Intangible Strong–Weak	Inflexible–Flexible Long-term–Short-term Planned–Unplanned Passive–Active Static–Dynamic Temporary–Permanent Variable–Constant
Studies in which the above scales were developed and used: Houghton (1987a) Houghton (1987b) (subset of 17 scales) Houghton (1988) Houghton and Hronsky (1993) Houghton (1997) Houghton and Messier (1990) (subset of 12 scales) Bagranoff <i>et al.</i> (1994) Hronsky and Houghton (2001)		

Table 4.1: Semantic scales developed and used in prior accounting and auditing studies

A secondary aim of pilot testing was to guide the development of alternative experimental cases. The criterion was to develop cases where variability in the semantic differential scales, in measuring connotations of auditor independence under those scenarios, would be expected. This allows the cognitive structure (dimensions) within which participants interpret the auditor independence concept to be identified.

The pilot research instrument presented participants with three hypothetical audit engagement (experimental) case scenarios, as follows:

- *Case 1:* No major potential threats to auditor independence;
- *Case 2:* Audit firm provision of a relatively high level of non-audit services;
- *Case 3:* Former audit firm partner as a director of the auditee.

Table 4.2 provides further information on the experimental cases with respect to the auditee company, the audit firm and audit engagement partner, and the experimental manipulations.

Auditee Company:	<ul style="list-style-type: none"> -Public company operating in retailing. -Listed on the Australian Stock Exchange (ASX) for the past 20 years. -Size: Market capitalisation ranking of around number 200 on the ASX. -Sound financial position. -Eight member board, with a clear separation of chairman and managing director functions. -None of the directors act as a director of any other company audited by the incumbent audit firm. -Effective audit committee, comprising three non-executive directors, established eight years ago. -No directors were previously employees, associates or partners of the audit firm (manipulated in Case 3).
Audit firm/Audit engagement partner:	<ul style="list-style-type: none"> -Unnamed 'Big Five' audit firm. -Four years audit firm tenure, with the same audit engagement partner over that period. -Unqualified audit opinions issued in all years by current and prior auditors. -Current year audit fee of \$162 500, representing approximately 5% of the total audit fee revenue of the audit firm office, located in 'an Australian State capital city'. -No additional audit firm remuneration from non-audit services over the period of the audit engagement (manipulated in Case 2).
Potential audit threat manipulations:	<ul style="list-style-type: none"> -Provision of additional non-audit services (tax compliance, tax planning, information technology systems advice, feasibility studies, mergers and acquisitions advice) of three to four times the audit fee over the audit firm's four year tenure period (Case 2). -Former partner as director of auditee: Director resigned 18 months earlier after over 17 years with the audit firm, becoming director of the auditee 12 months earlier (Case 3).

Table 4.2: Experimental case scenario information — Pilot study research instrument

As noted in Table 4.2, the information on the auditee company specified in all three pilot study cases portrayed a financially stable retailing company publicly listed on the Australian Stock Exchange (ASX)³ with a market capitalisation ranking of 'around number 200'. Strong corporate governance was indicated by reference to a clear separation of the chairman and managing director functions and an effective audit committee comprising three non-executive directors.

All three cases specified the auditor being an unnamed 'Big Five' audit firm to portray an audit by a 'high quality' auditor. DeAngelo (1981b) argued that audit firm size has a major influence on audit quality, as audit firms with a greater number of clients have more to lose if they are perceived not to be competent and independent. Empirical studies have, in general, found higher audit fees for the first tier (previously Big Eight, Big Six, Big Five and now Big Four) auditors.⁴ This suggests that audit clients are prepared to pay higher fees to first tier auditors because those auditors are perceived to be providers of higher quality audits.

Each of the three pilot study cases specified that the audit firm had been incumbent for the previous four years. This was to suggest an audit that was not a new engagement but also not one representing a lengthy period of tenure. The cases also specified that the same partner had managed the audit engagement over the four year tenure period.

The current year audit fee was stated to be \$162 500 in all three cases. This figure was derived from actual audit fees for the 2002 financial year for a sample of nine

³ The Australian Stock Exchange merged with the Sydney Futures Exchange in July 2006 and now operates under the brand 'Australian Securities Exchange' (ASX Ltd, 2006).

⁴ See, for example, Francis (1984), Francis and Stokes (1986), Palmrose (1986a), Francis and Simon (1987), Simon and Francis (1988) and Craswell, Francis and Taylor (1995).

companies (excluding banks, financial services companies and trusts) around a market capitalisation ranking of 200 on the ASX.⁵ The average audit fee for the sample of nine companies was \$174 378.⁶ The current year audit fee specified in the pilot study (\$162 500) was slightly below the average fee for the sample companies.

The first experimental case represented an audit scenario in which no major threats to auditor independence were indicated. The audit scenarios selected for Cases 2 and 3 incorporated examples of significant potential threats to auditor independence highlighted in the literature. While various independence threats could have been selected, these two satisfied the purpose of providing clear contrasts to a situation where no major potential threats existed.

The effect on auditor independence of the joint supply of audit and non-audit services has been the subject of debate and research since at least the 1960s.⁷ As far back as the late 1970s, it was stated that 'few aspects of the practice of accountancy have been questioned more frequently or scrutinized more closely than the potential effects of MAS (management advisory services) on audit independence' (Klion, 1978, p. 77). Also, the spate of corporate collapses earlier this decade brought a renewed focus to the issue.⁸ Case 2 in the pilot research instrument indicated that the accounting firm had provided additional non-audit services, mainly comprising tax compliance work,

⁵ The 2002 year was the latest financial year preceding administration of the pilot study. As explained later in Section 4.1.2, the pilot study instrument was administered to research participants in June 2003.

⁶ Reflecting considerable variation in audit fees for the sample companies, the minimum and maximum fees were \$37 290 and \$438 484 respectively, the median fee was \$96 682 and the standard deviation was \$137 736.

⁷ See, for example, Cony (1961), Mautz and Sharaf (1961), Trueblood (1961), Hylton (1964), Brooker and Staunton (1966), Schulte (1966, 1967), Hoenemeyer (1967) and Kell (1968).

⁸ See, for example, Ramsay (2001), Commonwealth of Australia (2002), Joint Committee of Public Accounts and Audit (2002), HIH Royal Commission (2003), Imhoff, (2003) and Wyatt (2004).

tax planning, information technology systems advice, feasibility studies and mergers and acquisitions advice.⁹

The remuneration for the non-audit services specified in Case 2 amounted to between three and four times the audit fee for each of the current and prior three years of the audit engagement. For the sample of nine companies used as a basis for determining the audit fee specified in the pilot study experimental cases, the non-audit services fees amounted to an average of 220 per cent of the audit fee.¹⁰ The non-audit services fees stated in Case 2 (399 per cent of the audit fee in the current year) was specified to portray a high level of auditor provided non-audit services.¹¹

Case 3 in the research instrument indicated that one of the auditee company's directors, who had become a director 12 months earlier, had previously been employed in the incumbent audit firm for a total period of over 17 years, with 11 of these as a partner. The scenario indicated that the current audit engagement partner had been with the audit firm for the entire period in which the director (former partner) had previously been with the audit firm, although the director had not previously been involved in the audit of the auditee. The case indicated that the current audit engagement partner had worked as an audit supervisor and manager on several audits for which the director had previously been the manager or audit engagement partner, hence indicating a previous close working relationship between

⁹ As will be discussed in Chapter 6, some of these non-audit services became subject to later legislative limitations. However, while 'information technology services' and 'corporate finance and similar activities' were mentioned as an area of concern in the CLERP 9 discussion paper (Commonwealth of Australia, 2002, pp. 3–4), all the non-audit services listed were permissible at the time the pilot study was undertaken.

¹⁰ The minimum and maximum non-audit fees amounted to 33 per cent and 861 per cent of the company audit fee respectively, with a median of 130 per cent of the audit fee and a standard deviation of 252 per cent.

¹¹ This was almost twice the average non-audit services percentage of 220 per cent for the sample companies, but was less than one-half the highest non-audit services percentage of 861 per cent.

the two. Prior research has indicated that financial report users' perceptions of auditor independence tend to be diminished when an auditor accepts employment with a client (Imhoff, 1978; Koh and Mahathevan, 1993; Parlin and Bartlett, 1994; Kaplan and Whitecotton, 2001). This threat scenario was particularly relevant given the HIH Insurance collapse, where three of HIH's directors, including the chairman, were formerly partners of the incumbent audit firm (Ramsay, 2001; HIH Royal Commission, 2003).

4.1.2 Pilot study research participants

The pilot study research instrument was administered in June 2003 to 103 undergraduate students at the end of their single semester third year auditing course at two Australian universities. The research instrument was administered in the same week at each university under controlled conditions. The independence topic had been taught at each university over a one week period early in the semester in accordance with the normal course curriculum.¹² The content of the auditing course at each university and their coverage of auditor independence were similar in nature.

Eighty-nine usable responses were received from the 103 pilot research instruments distributed to students, representing a usable response rate of 86.4 per cent. Non-usable responses involved students either not completing the research instrument at all or completing it in an obviously careless manner or without any thought. Examples of the latter were students marking the midpoint or the same endpoint of all scales for all three cases, or ticking the scales in the form of a pattern for all cases.

¹² That is, there was no change in emphasis in the courses on the issues comprising the experimental cases.

Given the pilot study results summarised in the following sub-section, which established the general suitability of the pilot research instrument, the non-usable response rate of 13.6 per cent was not considered to be excessive. The usable response rate for students would be expected to be lower than for more committed, expert and mature groups of participants.

4.1.3 Pilot study results

Descriptive statistics¹³ of the semantic scale data from the pilot study, presented in descending order of variance, are shown in Table 4.3. Lusk (1973) suggests a procedure for choosing scales based on the computation of variances following pre-testing, with scales showing the greatest variance being selected for the final study. Table 4.3 indicates that the 22 scales had variances of between 1.72 and 3.84 (seven point scale), and all had a range from the lowest to highest possible values. Also, a mix of evaluative, potency and activity scales is evident in the scales that exhibited highest variances. The ten scales with variances exceeding 2.5 comprised five evaluative, two potency and three activity scales. Of the 13 scales with variances exceeding 2.3, there were six evaluative, three potency and four activity scales.

¹³ All statistical analyses undertaken in this thesis were conducted using the *Statistical Package for the Social Sciences* (SPSS), Version 12.0 (SPSS Inc, 2002) and Version 14.0 (SPSS Inc, 2005).

Semantic scale (E-P-A)	Variance	Standard Deviation	Mean	Minimum	Maximum
Safe-Risky (E)	3.84	1.96	4.28	1	7
Strong-Weak (P)	3.77	1.94	4.08	1	7
Bad-Good (E)	3.40	1.85	3.94	1	7
Discretionary-Required (E)	3.07	1.75	4.67	1	7
Beneficial-Adverse (E)	3.06	1.75	3.76	1	7
Variable-Constant (A)	3.02	1.74	4.15	1	7
Objective-Subjective (E)	2.93	1.71	3.96	1	7
Complete-Incomplete (P)	2.71	1.65	3.99	1	7
Long-term-Short-term (A)	2.66	1.63	3.50	1	7
Temporary-Permanent (A)	2.54	1.60	4.29	1	7
Controllable-Uncontrollable (E)	2.43	1.56	3.48	1	7
Passive-Active (A)	2.40	1.55	4.16	1	7
Real-Imaginary (P)	2.34	1.53	3.53	1	7
Necessary-Unnecessary (E)	2.29	1.51	2.30	1	7
Unexpected-Expected (E)	2.28	1.51	4.57	1	7
Measurable-Unmeasurable (P)	2.22	1.49	3.31	1	7
Exact-Estimated (P)	2.21	1.49	3.96	1	7
Planned-Unplanned (A)	2.16	1.47	3.22	1	7
Indirect-Direct (P)	2.09	1.44	4.22	1	7
Tangible-Intangible (P)	2.03	1.42	3.87	1	7
Inflexible-Flexible (A)	2.00	1.42	4.16	1	7
Static-Dynamic (A)	1.72	1.31	3.90	1	7

N = 267 (89 participants times three experimental cases)

Table 4.3: Pilot study descriptive statistics

Consistent with the prior measurement of meaning literature, the data reduction process used for the semantic differential data was factor analysis with varimax (orthogonal) rotation (see, for example, Osgood *et al.* 1957, Houghton 1987a, 1987b, 1988; Houghton and Messier 1990; McNamara and Moores 1995; Hronsky and Houghton 2001). The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.921, a level considered to be ‘marvellous’ (Kaiser 1970, 1974). Bartlett’s test of sphericity was significant at $p < .001$.¹⁴

Factor analysis of all responses revealed five factors with an eigenvalue of greater than one, as shown in Panel A of Table 4.4. The scree plot presented in Panel B suggested anywhere between a one and five factor solution.

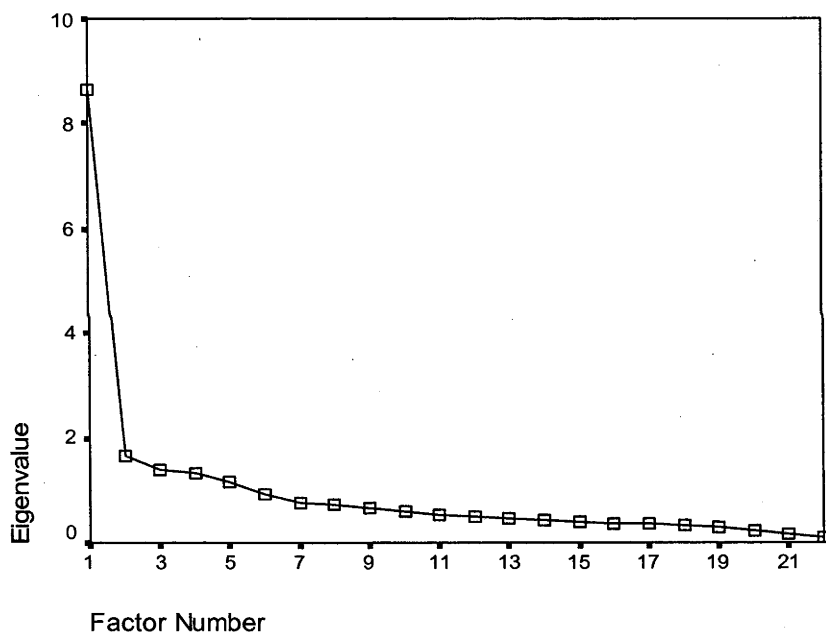
The participants’ responses were randomly split into two halves to enable factor comparability testing (Nunnally, 1978; Everett and Entrekin, 1980; Houghton, 1987a, 1988). Separate factor analyses were run for each half, and two sets of factor scores were derived by applying the factor score coefficients from each half to the responses of all participants. Correlations between the two sets of factor scores were then calculated to determine comparability.¹⁵ Results of the factor comparability analysis for three, two and single factor models are presented in Panel C of Table 4.4.

¹⁴ Bartlett’s test statistic equalled 3094.0 (231 degrees of freedom). Bartlett’s test is used to evaluate the overall significance of all correlations within the correlation matrix (Hair *et al.*, 1998; Tabachnick and Fidell, 2001).

¹⁵ Parametric Pearson correlation coefficients were calculated as the factor scores represented interval data.

Panel A: Eigenvalues and proportion of variance explained

Factor	Eigenvalue	% of variance	Cumulative %
1	8.63	39.24	39.24
2	1.65	7.49	46.73
3	1.39	6.32	53.05
4	1.33	6.06	59.11
5	1.16	5.25	64.36
6	0.93	4.22	68.58
7	0.77	3.48	72.06
8	0.73	3.32	75.38
9	0.68	3.08	78.46
10	0.60	2.74	81.20

Panel B: Scree plot**Panel C: Factor comparability analysis**

	Split-half correlation coefficients		
	Factor 1	Factor 2	Factor 3
3 factor model	0.930	0.844	0.380
2 factor model	0.941	0.823	
1 factor model	0.988		

Table 4.4: Pilot study eigenvalues, scree plot and factor comparability analysis

The eigenvalues and scree plot indicate the dominance of the first factor extracted. With an eigenvalue of 8.63, it explained over five times the variance of the second factor (eigenvalue of 1.65). This dominance of the first factor can be compared with the prior accounting and auditing studies utilising these 22 scales and in which eigenvalues were published.¹⁶ In prior studies deriving three or four factor solutions, the highest eigenvalue was 6.76 (Hronsky and Houghton, 2001). The only study finding a higher eigenvalue than in the pilot study was Houghton (1987a), where a single factor solution had an eigenvalue of 9.1 for shareholder participants (Houghton, 1987a).

The results of factor comparability testing presented in Panel C of Table 4.4 indicated that a three factor model was not robust and stable for the pilot study data, given the correlation of only 0.380 for the third factor. In contrast, the single factor model was highly robust and stable. Fifteen of the 22 scales had factor loadings on the single factor exceeding 0.5, while another three scales had loadings of at least 0.478. Hence, 18 of the 22 scales had high loadings (at least 0.478) under the single factor model.¹⁷

The two factor model had a structure approaching stability. The first factor's correlation coefficient was 0.941. The second factor's correlation of 0.823 was above the arbitrary threshold of 0.8 initially suggested by Everett and Entreken (1980, p 169), but below the more rigorous cutoff of 0.9 suggested by Everett (1983) and Houghton (1987a, 1987b, 1988). Table 4.5 shows the nature of the factors obtained under the two factor model. As with the single factor model, 15 of the 22 scales had factor loadings above 0.5.

¹⁶ These studies were Houghton (1987a, 1987b, 1988, 1997), Houghton and Messier (1990), Houghton and Hronsky (1993) and Hronsky and Houghton (2001).

¹⁷ The four scales with low factor loadings were discretionary–required, inflexible–flexible, necessary–unnecessary, and static–dynamic.

Panel A: Rotated factor matrix – 2 factor model

Scales	Factors	
	1	2
Strong–Weak	.808 P	.398
Safe–Risky	.771 E	.401
Objective–Subjective	.758 E	.214
Bad–Good	-.756 E	-.389
Beneficial–Adverse	.701 E	.405
Complete–Incomplete	.662 P	.441
Exact–Estimated	.568 P	.377
Temporary–Permanent	-.066	-.645 A
Unexpected–Expected	-.211	-.629 E
Long-term–Short-term	.120	.607 A
Real–Imaginary	.497	.590 P
Variable–Constant	-.302	-.556 A
Indirect–Direct	-.201	-.554 P
Tangible–Intangible	.237	.532 P
Measurable–Unmeasurable	.199	.520 P
Planned–Unplanned	.406	.470
Passive–Active	-.425	-.459
Controllable–Uncontrollable	.390	.370
Discretionary–Required	-.213	-.255
Inflexible–Flexible	-.200	-.100
Necessary–Unnecessary	.251	.101
Static–Dynamic	-.214	.082

(Extraction Method: Principal Axis Factoring)
(Rotation Method: Varimax)

Panel B: Factor structure

Factor 1: EMPHASIS	Factor 2: VARIABILITY
Strong–Weak	Permanent–Temporary
Safe–Risky	Expected–Unexpected
Objective–Subjective	Long-term–Short-term
Good–Bad	Real–Imaginary
Beneficial–Adverse	Constant–Variable
Complete–Incomplete	Direct–Indirect
Exact–Estimated	Tangible–Intangible
	Measurable–Unmeasurable

(Individual scales are reversed in Panel B above where necessary to denote positive correlation between individual scales and the relevant factor)

Table 4.5: Pilot study two factor cognitive structure

The two factors identified were partially consistent with the standard *E-P-A* (evaluative, potency, activity) structure. Factor 1 consisted of scales with both evaluative and potency dimensions, but this combination is explainable. For the independence concept, the safe, objective, good and beneficial *evaluative* scales are similar in effect to the strong, complete and exact *potency* scales. For example, high objectivity is traditionally associated with auditor independence, and such independence would also be considered to be strong. Accordingly, given the nature of the individual evaluative and potency scales comprising this first factor, the factor could be labelled EMPHASIS.

Factor 2 consisted of scales with both activity and potency dimensions. The permanent-temporary, expected-unexpected, long-term-short-term and constant-variable scales represent *activity* scales having temporal connotations. The real-imaginary, direct-indirect, tangible-intangible and measurable-unmeasurable scales have been associated in prior research with a *substantiveness* factor, a sub-set of *potency* (Houghton, 1987a, 1988, 1997; Houghton and Messier, 1990; Houghton and Hronsky, 1993; Bagranoff *et al.*, 1994). With respect to the concept of auditor independence, the activity and potency (substantiveness) scales comprising this second factor do have a high degree of similarity. For example, an assessment of independence as permanent and long-term also indicates that it is real, direct and tangible. Accordingly, given the nature of the individual activity scales comprising this second factor, a factor label of VARIABILITY could be used.

Further comparison can be made of the factor scores between the three case scenarios to determine whether there was a significant difference in connotations of independence between the scenario where no major potential independence threats

were present and those where potential threats were introduced. Table 4.6 shows the placement of the independence concept within the two factor cognitive structure.¹⁸

Factor placements, presented in Panel A of Table 4.6, were positive for both the EMPHASIS and VARIABILITY factors for Case 1 but negative for both factors for Cases 2 and 3. The results of one-way analysis of variance (ANOVA) show significant differences in factor scores for both factors between the experimental cases.

¹⁸ To aid interpretability, and consistent with prior studies, factor placements are obtained by multiplying factor scores by 100.

Panel A: One-way ANOVA of factor placement means

Case scenarios	Factor placements	
	EMPHASIS	VARIABILITY
1. No major threats	+88	+50
2. Non-audit services	-33	-15
3. Ex-audit partner director	-55	-35
ANOVA: <i>F</i>	117.6	27.15
<i>p</i>	< .001	< .001

(The signs of factor placements have been reversed to simplify interpretation)

Panel B: Post hoc comparison tests of factor placements**Factor 1: EMPHASIS**

Case scenarios	Mean Difference	Scheffé	Bonferroni
Case 1 versus Case 2	121	$p < .001$	$p < .001$
Case 1 versus Case 3	143	$p < .001$	$p < .001$
Case 2 versus Case 3	22	$p = .094$	$p = .089$

Factor 2: VARIABILITY

Case scenarios	Mean Difference	Scheffé	Bonferroni
Case 1 versus Case 2	65	$p < .001$	$p < .001$
Case 1 versus Case 3	85	$p < .001$	$p < .001$
Case 2 versus Case 3	20	N.S.	N.S.

N.S. = Not significant

Table 4.6: Pilot study case placements within two factor cognitive structure

The results of the post hoc comparison tests presented in Panel B of Table 4.6 show no significant difference in factor placements on either of the two factors, at $p < .05$, between Cases 2 and 3.¹⁹ There was a difference of moderate significance between these two cases for the EMPHASIS factor. There were, though, highly significant differences in factor scores for the two factors between Cases 1 and 2 and between Cases 1 and 3. In summary, for both the factors EMPHASIS and VARIABILITY, factor placements were significantly higher in the no major threat scenario (Case 1) in comparison to Cases 2 and 3. For the two factors, factor placements were positive in Case 1 where no major potential independence threats were present, but were negative in Cases 2 and 3 where potential independence threats were indicated. In the two case scenarios where potential independence threats were present, the audit firm's independence was considered, in the terminology of the factor labels adopted, to have less *emphasis* (for example, to be weaker, more risky, less objective and less beneficial) and to have greater *variability* (for example, to be more temporary, more short-term, less real and more intangible).

The initial question following each case scenario in the pilot research instrument elicited participants' perceptions of the audit firm's independence. Mean perception scores for Cases 1 to 3 on the seven point scale were 6.02, 3.13 and 2.70 respectively. One-way ANOVA indicated a significant difference in these responses ($F = 189.37$,

¹⁹ Post hoc tests, also known as posttests and multiple comparison techniques, are conducted after an ANOVA to determine which mean differences are significant (Gravetter and Wallnau, 2004). The three most popular of these are *Bonferroni*, *Scheffé* and *Tukey* (Lindman, 1992; Agresti and Finlay, 1997). Bonferroni is considered to have the greatest power when the number of comparison tests is small (Lindman (1992). Tukey is limited to tests of contrasts with equal sample sizes (Lindman, 1992). The Scheffé test is accepted as the most conservative and flexible of the popular methods and is more suitable for testing complex comparisons (Hair *et al.*, 1998; Tabchnick and Fidell, 2001; Gravetter and Wallnau, 2004). Based on these considerations, the approach in the present study is to show both Bonferroni and Scheffé results.

$p < .001$).²⁰ Of relevance to an evaluation of the two factor cognitive structure, the perception scores were significantly correlated (at $p < .001$) with both the EMPHASIS and VARIABILITY factors.²¹

4.1.4 Conclusions from the pilot study

The pilot study results can be summarised as follows:

- All 22 scales exhibited variability across the three case scenarios, and all had a range from the lowest to highest of the possible values. A mix of scales across those generally considered to represent evaluative, potency and activity dimensions was evident in the scales exhibiting the highest variances.
- While the analysis did not reveal a three factor *E-P-A* structure for the student participants, significant aspects of such a structure were found within the two factor model.²² While the second factor did not have a split-half correlation of 0.9, the correlation of 0.823 indicated 67.7 per cent shared variance. Also, the two factors under this model were interpretable and could be considered to have substantive importance.
- Factor scores for both factors under the two factor model were significantly different between the case where no major independence threats were indicated and the two cases where threat scenarios were introduced. These factor scores were significantly correlated with participants' perception scores.
- Under the more robust and stable single factor model, 18 of the 22 scales had high loadings. These scales represented a mix of evaluative, potency and activity scales.

Based on the above findings, it was concluded that the 22 semantic scales were suitable for examining the connotative meaning of the auditor independence concept,

²⁰ Post hoc comparison testing indicated significant differences between the first and second and the first and third cases (at $p < .001$).

²¹ Spearman correlation coefficients between the perception scores and the EMPHASIS and VARIABILITY factors were 0.782 and 0.453 respectively. Non-parametric Spearman correlations were calculated as the perception scores represented ordinal data.

²² Osgood *et al.* (1957, p. 79) recognised that the *E-P-A* structure might not be applicable to all cases.

and therefore were appropriate for use in the final research instrument for the study.²³ This conclusion was particularly based on the exhibited variability of the scales across the different experimental cases, the fact that a robust and stable two factor cognitive structure appeared to be emerging, and the fact that a robust and stable single factor model was found.

The pilot study also provided input into issues of relevance in developing the study's final research instrument. These issues related to the format of the research instrument and experimental cases, the participants' understanding and completion of the research instrument, and statistical analysis issues.

The pilot study indicated that the format of the research instrument and experimental cases was appropriate in terms of being understandable and capable of completion in a reasonable period of time.²⁴ Further, the cases elicited variability in participants' responses to the semantic scales. The instructions for completing the research instrument tasks were understandable to the student participants and enabled them to effectively complete the required tasks.

Finally, the statistical analysis methods undertaken were found to be appropriate. In particular, the measurement of meaning research framework, utilising semantic differential analysis and factor analysis, was successfully applied to the pilot study's data, and various statistically significant differences between the different experimental cases were found.

²³ While four of the scales did not have high loadings under either the single or two factor models, it was decided to utilise all 22 scales in the final research instrument for consistency with the prior research.

²⁴ The students completed the research instrument containing the three experimental cases in a maximum of 50 minutes.

4.2 FINAL RESEARCH INSTRUMENT

The final research instrument is described in this section, focusing on the semantic differential scales, the experimental case scenarios and the alternate versions of the research instrument.²⁵

4.2.1 Semantic differential scales

Based on the pilot study results, and as noted in sub-section 4.1.4 above, the 22 semantic differential scales from the prior accounting and auditing studies were assessed as being suitable for examining the connotative meaning of the auditor independence concept. Accordingly, those 22 scales were utilised in the final research instrument.

4.2.2 Experimental case scenarios

The experimental cases developed for the final research instrument were designed to enable investigation of any variability in measured meaning across different scenarios and between different research participant groups. Nine cases were developed representing alternative hypothetical, but realistic, audit engagement scenarios.

The experimental cases manipulated the audit engagement scenarios with respect to potential independence threats and safeguards. The justification for these various case manipulations and the prior research on which they are based are provided in Chapter 6 when developing the study's research hypotheses. However, to introduce the manipulations here, the potential threats to auditor independence were:

²⁵ The final research instrument was developed with the input and feedback at various stages of a number of other academics. These particularly included the PhD supervisor and four experienced accounting and economics academics at Deakin University.

- Interlocking directorships among audit clients;
- Longer period of audit firm tenure;
- Provision of non-audit (taxation) services;
- Former audit firm partner as a director of the auditee.

The independence safeguards manipulated in the cases were:

- Period of audit partner rotation;
- Audit subject to additional oversight by the United States Public Company Accounting Oversight Board (PCAOB);
- Local (internal) independence board within the audit firm.

The above experimental manipulations represent contemporary auditor independence issues. They comprise potential independence threats highlighted in the literature that can presently arise, independence safeguards introduced to mitigate potential independence threats, or proposals for additional independence safeguards. As noted above, the prior literature justifying selection of the threat and safeguard conditions and forming the basis for development of the experimental case scenarios is presented in Chapter 6.

Figure 4.1 presents an overview diagram of the experimental cases. This is followed by Table 4.7, which provides further details on the cases with respect to the auditee company, the audit firm and audit engagement partner, and the experimental manipulations.

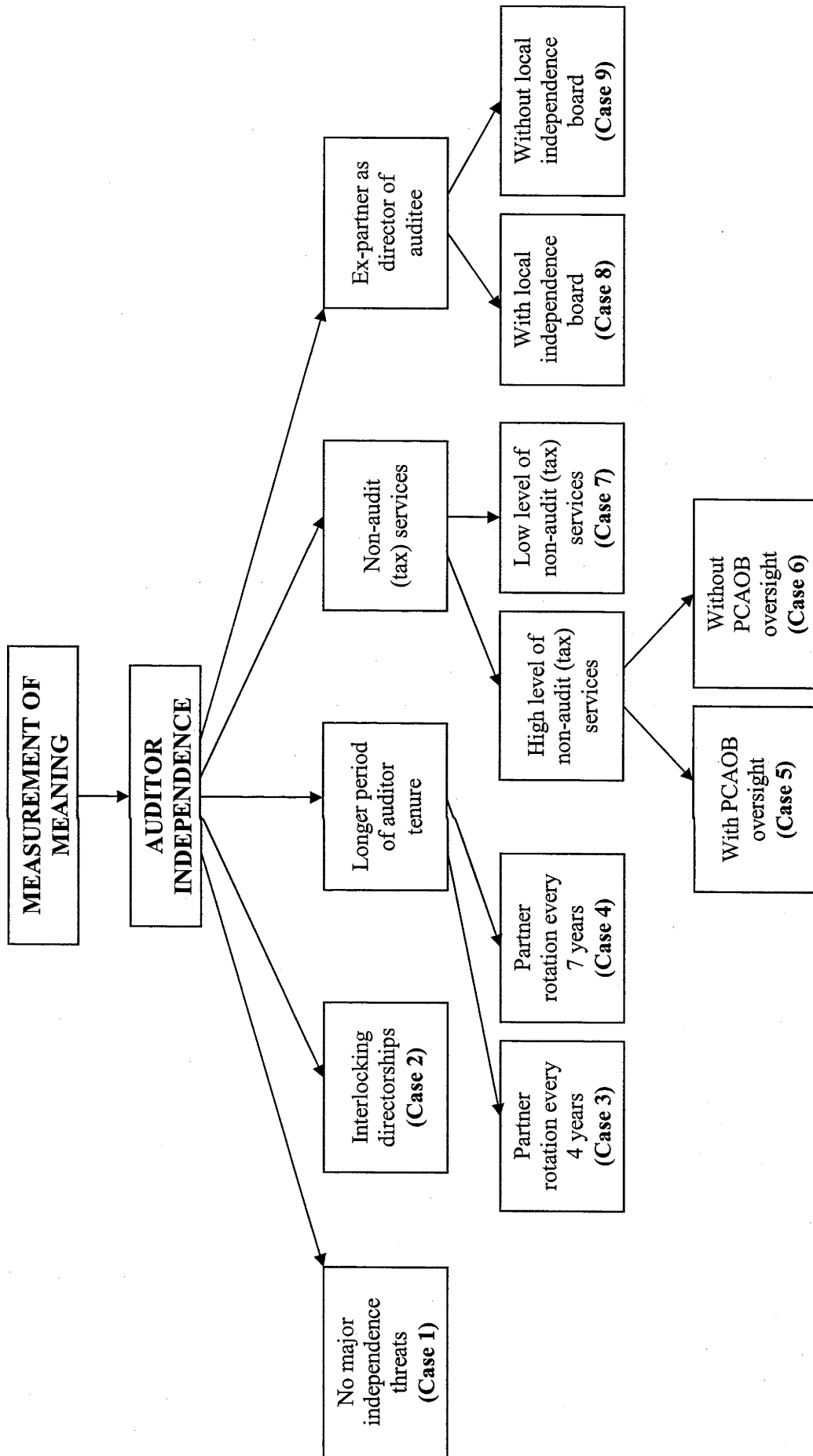


Figure 4.1: Overview diagram of experimental cases

Auditee Company:	<ul style="list-style-type: none"> -Public company operating in retailing. -Listed on the ASX for the past 20 years. -Size: Market capitalisation ranking of around number 200 on the ASX. -Sound financial position. -Eight member board, with a clear separation of chairman and managing director functions. -None of the directors act as a director of any other company audited by the incumbent audit firm (manipulated in Case 2). -Effective audit committee, comprising three non-executive directors, established eight years ago. -No directors were previously employees, associates or partners of the audit firm (manipulated in Cases 8 and 9).
Audit firm/Audit engagement partner:	<ul style="list-style-type: none"> -Unnamed 'Big Four' audit firm. -Unqualified audit opinions issued in all years by current and prior auditors. -Four years audit firm tenure, with the same audit engagement partner over that period (manipulated in Cases 3 and 4). -Current year audit fee of \$192 500, representing approximately 5% of the total audit fee revenue of the audit firm office, located in 'an Australian State capital city'. -No additional audit firm remuneration from non-audit services over the period of the audit engagement (manipulated in Cases 5, 6 and 7).
Potential audit threat manipulations:	<ul style="list-style-type: none"> -Interlocking directorships (Case 2): Three of the eight directors also non-executive directors of other companies currently audited by the incumbent audit firm. -Nine years audit firm tenure (Cases 3 and 4). -Provision of additional non-audit (taxation) services over the audit firm's four year tenure period: Low level (approximately one-half the audit fee, Case 7) and high level (three to four times the audit fee, Cases 5 and 6). -Former audit partner as director of auditee: Director resigned 12 months earlier after 17 years with the audit firm, becoming director of the auditee eight months earlier (Cases 8 and 9).
Audit safeguard manipulations:	<ul style="list-style-type: none"> -Period of audit partner rotation (with nine years audit firm tenure): four years (Case 3) and seven years (Case 4). -Auditor and audit firm subject to oversight by the US PCAOB due to debt and equity raising by the auditee in the United States (Case 5). -Local (internal) independence board within the audit firm, comprising a panel of four experts (Case 8).

Table 4.7: Experimental case scenario information — Final research instrument

A summary of the scenario information presented in the final research instrument experimental cases was summarised in Table 4.7. It was concluded in sub-section 4.1.4 that the experimental cases in the pilot study were understandable to research participants and that the research instrument was capable of completion in a reasonable period of time. Also, the measurement of meaning research framework, utilising semantic differential analysis and factor analysis, was successfully applied to the data from the pilot study's experimental cases. Accordingly, the basic audit engagement scenario information developed for the final research instrument experimental cases, as summarised in Table 4.7, was substantially based on that in the pilot study cases.

The information on the auditee company specified in all nine cases in the final research instrument, as in the pilot study, portrayed a financially stable retailing company publicly listed on the ASX with a market capitalisation ranking of around number 200. Strong corporate governance was indicated by reference to a clear separation of the chairman and managing director functions and an effective audit committee comprising three non-executive directors.

All nine cases specified the auditor being an unnamed 'Big Four' audit firm to portray an audit by a high quality auditor. The nine cases specified that unqualified audit opinions had been issued in all years by the current and prior auditors. In all except Cases 3 and 4 where audit firm tenure was manipulated to indicate a longer nine year tenure period, the cases specified, as in the pilot study, an audit firm tenure period of four years.

While the current year audit fee was stated to be \$162 500 in the pilot study cases, this was increased to \$192 500 in the final research instrument cases. This was to

reflect the later time period in which the final research instrument was administered,²⁶ and the significant increase in Australian audit fees being forecast at the time following increases in professional indemnity insurance premiums, the corporate collapse of HIH Insurance, the demise of *Andersen* resulting in the 'Big Five' becoming the 'Big Four', and the various proposals for audit reform being advanced and debated.²⁷

4.2.3 Research instrument: Alternate versions and variations

Three alternate versions of the research instrument were developed, each containing three experimental cases. Version 1 contained Cases 2, 3 and 5, Version 2 contained Cases 4, 6 and 8 and Version 3 contained Cases 1, 7 and 9.

It would be unreasonable to expect individual research participants to complete all nine experimental cases, as fatigue effects would be likely. Fatigue effects result in participant performance on a research task deteriorating as a result of boredom or tiredness (Haslam and McGarty, 2003). Accordingly, based on a decision that an individual participant could realistically respond to three cases in a reasonable time, the nine experimental cases were distributed, as described above, between the three major alternate versions of the research instrument.²⁸

Six variations within each of the three versions of the research instrument were developed. This was to protect against order effects. Order effects occur when

²⁶ The pilot study research instrument was administered in June 2003 while, as noted in the following chapter, administration of the final research instrument commenced in March 2004.

²⁷ See, for example, Bartholomeusz (2002), Buffini (2002b), Walters (2002b), Palmer (2003), Walters and Andrews (2004) and Wilson (2004). As administration of the research instrument commenced in March 2004, listed public company annual reports for the year ended 30 June 2004 were not available at that time to confirm the extent of any audit fee increases.

²⁸ As noted in Section 4.1.3, student participants completed the pilot study research instrument, comprising three cases, in a maximum of 50 minutes.

participant responses in experimental research are affected by the order in which they are made. They represent '(e)xperimental effects that result from the sequencing of experimental treatments or the completion of dependent measures' (Haslam and McGarty, 2003, p. 89), and can arise when the experimental tasks are completed in a serial manner (Balnaves and Caputi, 2001).

Order effects could potentially arise in the current research from the presentation order of the experimental cases and the semantic differential scales. Accordingly, for each of the three major versions of the research instrument, alternate variations presented the three experimental cases applicable to that version in all six possible orders. Also, three variations in the order of presentation of the semantic differential scales were used. These variations involved switching the top and bottom halves of the 22 scales and 'flipping' the end points of the individual scales.

A summary of the distribution of the cases between the three major versions of the instrument, and the variations within each of the three versions, is presented in Table 4.8. Panel A of the table summarises the experimental cases presented within each of the three major versions of the research instrument. Panel B summarises the variations within each of the three major research instrument versions. The third column of Panel B presents the presentation order of the cases within each variation of the research instrument, while the final column shows the variations in the order of presentation of the semantic scales. As described above, three variations in the order of presentation of the scales were used, involving switching the top and bottom halves of the 22 scales and flipping the scale end points. Scales were presented in the same order as in the pilot study in the first variation (see Appendix 1). In the second variation, the end points of the final 11 scales were flipped and the top and bottom halves then switched. The third variation altered the order of presentation of the

scales contained in the first version by flipping the end points of the first 11 scales and then switching the top and bottom halves.

Panel A: Versions of research instrument

Version	Company name	Case scenario
<u>Version 1</u>		
-Case 2	Operations Ltd	Interlocking directorships.
-Case 3	Corporation Ltd	Longer period of audit firm tenure (nine years); partner rotation every four years.
-Case 5	Holdings Ltd	High level of tax non-audit services with additional PCAOB oversight.
<u>Version 2</u>		
-Case 4	Anonymous Ltd	Longer period of audit firm tenure (nine years); partner rotation every seven years.
-Case 6	Company Ltd	High level of tax non-audit services without additional PCAOB oversight.
-Case 8	Enterprise Ltd	Ex-partner as a director of the auditee; audit firm with local independence board.
<u>Version 3</u>		
-Case 1	Hypothetical Ltd	No major potential independence threats.
-Case 7	Entity Ltd	Low level of tax non-audit services without additional PCAOB oversight.
-Case 9	Retail Ltd	Ex-partner as director of auditee; audit firm without local independence board.

Panel B: Variations in research instrument versions

	Variations in Version	Case order	Semantic scale order
Version 1 (Cases 2, 3, 5)	1A	2, 3, 5	Variation 1
	1B	2, 5, 3	Variation 1
	1C	3, 2, 5	Variation 2
	1D	3, 5, 2	Variation 2
	1E	5, 2, 3	Variation 3
	1F	5, 3, 2	Variation 3
Version 2 (Cases 4, 6, 8)	2A	4, 6, 8	Variation 1
	2B	4, 8, 6	Variation 1
	2C	6, 4, 8	Variation 2
	2D	6, 8, 4	Variation 2
	2E	8, 4, 6	Variation 3
	2F	8, 6, 4	Variation 3
Version 3 (Cases 1, 7, 9)	3A	1, 7, 9	Variation 1
	3B	1, 9, 7	Variation 1
	3C	7, 1, 9	Variation 2
	3D	7, 9, 1	Variation 2
	3E	9, 1, 7	Variation 3
	3F	9, 7, 1	Variation 3

Table 4.8: Alternate versions of the research instrument

The nine cases were distributed between the three major versions of the research instrument to allow *between-subjects*, rather than *within-subjects*, comparisons. A within-subjects research design involves changes to an independent variable where the same participants are exposed to the variable manipulations, while a between-subjects design involves different participants being exposed to the manipulations (Balnaves and Caputi, 2001; Haslam and McGarty, 2003). Within-subjects designs therefore compare responses from the same group of research participants, while between-subjects designs compare responses of different groups.

Prior auditor independence *perception* studies investigating the effects of the auditor provision of non-audit services to audit clients indicate that it is important to employ a between-subjects design. Early studies employing within-subjects designs generally found that individual research participants perceived an impairment of auditor independence when non-audit services were also provided.²⁹ However, in a study employing a between-subjects design, McKinley, Pany and Reckers (1985) did not find decreased perceptions of independence when the auditor also provided non-audit services. To investigate this anomaly, Pany and Reckers (1987) devised a three part study utilising two within-subjects and one between-subjects design. In the within-subjects design, respondents perceived an impairment of auditor independence when there was a joint provision of audit and non-audit services. However, this perception of independence impairment was not found in the between-subjects design. This finding was also replicated by Gul and Windsor (1994). These results suggest that the design of the experiment can be critical to the research results, and that a between-

²⁹ See for example, Titard (1971), Hartley and Ross (1972), Lavin (1976, 1977), Lavin and Libby (1977), Reckers and Stagliano (1981), Shockley (1981), Pany and Reckers (1983, 1984) and Knapp (1985).

subjects design is appropriate for experimental research investigating interpretations of auditor independence under various scenarios.

Hence, the case comparisons investigated in this study are based on between-subjects comparisons. While individual participants did each respond to three cases, this study's analysis only compares responses from different participant groups. That is, comparisons are made only between responses to cases in different versions of the research instrument.³⁰

4.2.4 Format of research instrument

The prior sub-sections explained the semantic differential scales and experimental cases utilised within the research instrument. This sub-section outlines how the entire research instrument was compiled for presentation to research participants.

The first section of the research instrument, reproduced in Appendix 2.1, contained the cover sheet and instructions. The instructions contained general guidance on completing the semantic scales and introduced the three cases that followed.

The three cases applicable to the individual version of the research instrument were then presented. The full text of each of these appears in Appendix 2.2.

Each case was followed by a response sheet, the three versions of which are reproduced in Appendix 2.3. Participants were firstly asked to respond, on a seven point scale with end points 'Strongly Agree' and 'Strongly Disagree', to the question 'To what extent do you agree with the statement that the audit firm in this case would

³⁰ Hence, for example, between-subjects comparison can be made of responses to Case 7 (low level of tax services without PCAOB oversight), Case 6 (high level of tax services without PCAOB oversight) and Case 5 (high level of tax services with PCAOB oversight) as these three cases appear in different versions of the research instrument.

have maintained its independence'. This was followed by the 22 semantic scales, which participants completed in response to the statement 'I interpret the independence of the audit firm in this case situation to be.' A final question, asking for a 'Yes/No' response, was 'If you were a non-executive director of the company in this case, would you regard the audit appointment to be satisfactory with respect to the independence of the audit firm?' Accordingly, in addition to the 22 semantic scales, participants provided two additional responses to questions seeking their perception of the audit firm's independence, one on a seven point scale and the other seeking a dichotomous response.

Following the response sheet for each case was a series of four questions, one for each major version of the research instrument, designed as *manipulation checks*. Manipulation checks, comprising specific questions embedded in the questionnaire, assess how participants perceive and interpret the particular manipulation (Gravetter and Forzano, 2006). In the present study, it allows a conclusion to be drawn on whether participants understood the manipulations of the potential auditor independence threats and safeguards in the case scenarios they were presented with. The three versions of the manipulation check questions are shown in Appendix 2.4

The final section of the research instrument, shown in Appendix 2.5, sought biographical details of the participants. These included details on current occupation, years experience in that occupation, use of audited financial reports, professional accounting association membership, gender, age and educational background.

4.3 SUMMARY

Construction of the study's research instrument was summarised in this chapter. Discussion was included of the pilot study research instrument, pilot study results,

conclusions drawn from those results, and a description of the final research instrument developed on the basis of the pilot study. The discussion in the chapter provides a background for the following chapter's description of the study's research participants and administration of the research instrument with those participants.

CHAPTER 5

RESEARCH PARTICIPANTS

Following the previous chapter's discussion of construction of the research instrument, the aim of this chapter is to describe the study's research participants and procedures for administration of the research instrument.

The study seeks to examine whether there is shared meaning of the auditor independence concept between groups of key parties to the financial reporting communication process. It was highlighted in Chapter 2 that it will be difficult for auditors to effectively consider and evaluate their independence, particularly in marginal situations, if the exact meaning of independence is subject to ambiguity and uncertainty and if their own interpretation of the meaning of the concept differs from that of other parties to the financial reporting communication process.

The three major parties to the financial reporting communication process are financial report preparers, auditors and financial report users. The study's research participants selected to represent these three groups are described in this chapter. The research instrument was administered with the research participants between 23 March 2004 and 5 May 2005.

The chapter proceeds as follows. Sample size considerations are discussed in Section 5.1. A description of the auditor research participants, and administration of the research instrument with them, is provided in Section 5.2. Sections 5.3 and 5.4

present these details for the financial report preparer and financial report user participant groups. Comparative statistics for the three research participant groups are presented in Section 5.5, and a chapter summary in Section 5.6 completes the chapter.

5.1 SAMPLE SIZE CONSIDERATIONS

Before discussing the study's research sample, it is necessary to consider sample size requirements. For factor analysis, the sample must be large enough to enable reliable correlation estimation (Tabachnick and Fidell, 2001). The required sample size is also affected by the magnitude of population correlations and the number of factors, as a smaller sample size is possible where there are strong correlations and a small number of distinct factors (Guadagnoli and Velicer, 1988; Tabachnick and Fidell, 2001). Comrey and Lee (1992) give, as a guide, sample sizes of 200 as being 'fair', 300 as 'good' and 500 as 'very good'. Hair *et al.* (1998) provide, as a general rule, a minimum sample size of at least five times as many observations as there are variables to be analysed, with a more acceptable sample size having ten times as many variables. In the current study, with the 22 semantic differential scales as the major variables, a ten to one ratio would suggest a required sample size of 220.

Sample size considerations also apply to comparison of the individual experimental cases. As illustrated in Chapter 4 in relation to the pilot study analysis, analysis of variance (ANOVA) is used to compare factor placements for the different experimental cases. This procedure is used in the study to analyse differences in factor placements for each case between the different research participant groups. With the three research participant groups each providing responses to nine

experimental cases,¹ there are 27 cells for analysis. Assuming a minimum of 20 responses in each cell, this would result in 540 observations in total. This exceeds the required sample size for factor analysis purposes of 220 calculated by applying the formula of Hair *et al.* (1998) and of 500 as specified by Comrey and Lee (1992) as being ‘very good’. Accordingly, a sample of at least 540 observations, comprising a minimum of 20 responses to each of the nine experimental cases for each of the three participant groups, would be suitable to satisfy sample size requirements. As there are three groups of participants each providing responses to three cases, the sample size required to provide the 540 observations is 60 for each participant group, equalling 180 individuals in total.²

5.2 AUDITORS

On the supply side of the audit market, auditors comprise the first group of research participants for the study. It is auditors, both as individuals and as members of audit firms, who are required to maintain their independence in accordance with relevant professional and statutory requirements.

Eighty auditors participated in the study. This exceeded the requirement for a sample of 60 individuals representing auditors, as discussed in Section 5.1. Panel A of Table 5.1 shows that 49 auditors (61.3 per cent) were from ‘Big Four’ audit firms and 31 (38.8 per cent) from ‘Second Tier’ firms. This indicates that the auditors were drawn from a cross-section of firm types.

¹ As explained in Chapter 4, this is achieved by using three major versions of the research instrument, each containing three experimental cases.

² That is, if each participant group has 60 participants, 20 participants in each group can respond to each of the three versions of the research instrument. As there are three participant groups, the total number of individual participants will be 180. With each participant responding to three experimental cases, the total number of case observations will be 540.

As summarised in Panel B of Table 5.1, the research instrument was administered with auditors within participating audit firms in one of two ways. The first method involved the researcher personally administering the instrument with auditors within their audit firm during office hours. Twenty (25 per cent) of the research instruments were administered in this way. This is the ideal way to administer the research instrument, as it maximises researcher control over administration. However, it was not possible to gain audit firm approval for this administration method in all cases. The alternative method involved the research instrument being forwarded to the audit firm and the firm itself distributing the instrument to participants. The firm then collected the completed instruments and returned them to the researcher. This was the method for 60 (75 per cent) of the auditors.

The majority of auditor participants were male. Panel C of Table 5.1 shows that, for the 75 participants providing gender details, 22 (29.3 per cent) were female and 53 (70.7 per cent) male.

To ensure that auditor participants would be aware of, and would have been exposed to, the types of independence issues pertinent to this study, experienced auditors were selected as participants. Hronsky and Houghton (2001) defined an experienced auditor as one with at least three years experience in auditing. The average audit experience of the auditor research participants was 10.3 years, with a minimum of three years and a maximum of 31 years.

Panel D of Table 5.1 presents a frequency distribution of the years of audit experience of the auditor participants. The majority (64 per cent) of the 75 auditor participants providing audit experience information had between five and 15 years audit experience. Twenty per cent had at least 15 years experience, while only sixteen per

cent had three to five years experience. Hence, the auditor participants can be considered to represent experienced auditors.³

³ Audit firms were requested to only select participants with at least three years experience, so there is no reason to believe the five non-respondents to this question did not have this length of experience.

Panel A: Participant audit firms

Audit firm	N	N	%
Big four:			
Big Four firm 1	38		
Big Four firm 2	6		
Big Four firm 3	5	49	61.3
Second tier:			
Second Tier firm 1	10		
Second Tier firm 2	8		
Second Tier firm 3	6		
Second Tier firm 4	4		
Second Tier firm 5	3	31	38.7
Total:	80	80	100.0

Panel B: Research instrument administration

Administration method	N	%
By researcher personally	20	25.0
By audit firm	60	75.0
Total:	80	100.0

Panel C: Gender

Gender	N*	%
Female	22	29.3
Male	53	70.7
Total:	75	100.0

* There were five non-responses to this question.

Panel D: Auditing experience

Experience	N*	%
3 years to < 5 years	12	16.0
5 years to < 10 years	30	40.0
10 years to < 15 years	18	24.0
15 years to < 20 years	7	9.3
20 years to < 25 years	4	5.3
25 years to < 30 years	2	2.7
≥ 30 years	2	2.7
Total:	75	100.0

* There were five non-responses to this question.

Table 5.1: Auditor research participants

5.3 FINANCIAL REPORT PREPARERS

On the demand side of the audit market, financial report preparers represent the second research participant group. Preparers are required to interact with auditors in preparing, and making decisions on, the content of audited financial reports. Interaction also occurs in the course of the auditor's gathering of audit evidence from sources within the auditee entity. It is therefore to be expected that preparers would be cognisant of audit, including independence, issues. It was highlighted in Chapter 2 that an audit enhances the credibility of financial reports and assists in lowering an auditee's cost of capital by reducing information risk. A credible, independent audit is therefore in an auditee entity's interests, and preparers are the individuals having a major responsibility for the content of financial reports.

The research instrument was administered with preparers by means of mail. A mailing list of potential preparer participants, based on a prior study, was obtained from the PhD supervisor. An initial letter inviting participation in the research project, including a reply-paid envelope, was sent to 378 individuals. Eighty-eight (23.3 per cent) responded indicating their willingness to be involved, and copies of the research instrument were sent to these individuals. Follow up letters were sent after six weeks. Seventy-one completed and usable research instruments were received as a result of these processes. This represented an 80.7 per cent response rate from those replying to the initial invitation. This sample size of 71 exceeded the requirement for a sample of 60 individuals representing financial report preparers, as discussed in Section 5.1.

Table 5.2 provides details of the preparer participants. Panel A shows the roles of the participants. Panel B shows the type of entity with which the participants were

associated. All entities with which participants were associated were audited. Panel C shows participant gender details.

The average length of experience of the preparer participants in their 'current occupation' was 11.5 years. Panel D of Table 5.2 presents a frequency distribution of the years of experience of the preparer participants. All except five of the 70 preparers responding to this question had at least three year's experience in their current occupation. The five with less than three year's experience all had at least a university bachelors degree and were all members of a professional accounting association. One of the five was aged in the 26 to 30 year age group, one was in the 31 to 35 year age group, while the other three were at least 36 years of age. The one non-respondent to the experience question was a financial controller. Given the employment roles of the preparers and their years of experience in those roles, it can be concluded that the preparer participants represent relatively experienced preparers.

Panel A: Preparer roles

Preparer	N	%
Accountant	25	35.2
Chief Executive Officer	3	4.3
Chief Financial Officer	12	16.9
Chief Operating Officer	5	7.0
Director	3	4.3
Financial Controller	13	18.3
Financial Manager	5	7.0
Manager	5	7.0
Total:	71	100.0

Panel B: Employment

Employment entity	N	%
Listed public company	15	21.1
Non-listed company	46	64.8
Local government council/authority	3	4.2
Professional association	3	4.2
Community organisation	4	5.7
Total:	71	100.0

Panel C: Gender

Gender	N	%
Female	15	21.1
Male	56	78.9
Total:	71	100.0

Panel D: Experience in current occupation

Experience	N*	%
1 years to < 3 years	5	7.1
3 years to < 5 years	10	14.3
5 years to < 10 years	16	22.9
10 years to < 15 years	18	25.7
15 years to < 20 years	8	11.4
20 years to < 25 years	6	8.6
25 years to < 30 years	2	2.9
≥ 30 years	5	7.1
Total:	70	100.0

* There was one non-response to this question.

Table 5.2: Preparer research participants

5.4 FINANCIAL REPORT USERS

Also on the demand side of the audit market, financial report users represent the third research participant group. Report users are a major party to the financial reporting communication process as recipients of financial reports. An audit aims to establish the credibility of communicated financial reports and create rational belief and confidence in those reports for the benefit of report users.

The financial report user participants represented a mixture of professional bank analysts and private investors. The final sample of 69 user participants comprised 19 bank analysts and 50 private shareholders. This sample size exceeded the requirement for a sample of 60 individuals representing financial report users, as discussed previously in Section 5.1.

The user participants were the most difficult of the three groups to gain access to for purposes of the research, and hence it was necessary to administer the research instrument with these two groups of users to achieve a suitable sample size. Each of these user participant groups are described in the following two sub-sections.

5.4.1 Bank analyst research participants

The professional bank analysts were research, credit and financial analysts from two of the four major Australian banks.⁴ The research instruments were forwarded to individual contacts in the two banks who distributed them to participants. They then collected the completed instruments and returned them to the researcher. This resulted in 19 completed research instruments; 11 from one bank and eight from the other.

⁴ The four major Australian banks are the Australia and New Zealand Banking Group (ANZ), the Commonwealth Bank, the National Australia Bank (NAB) and the Westpac Banking Corporation.

Table 5.3 provides details of the bank analyst research participants. Panel A shows gender details, while Panel B shows the experience of the analysts in their 'current occupation'. The average experience of the participants in their current occupation was 7.5 years, with a minimum of 1.5 years and a maximum of 20 years. Panel B shows that six participants had between 1.5 and three years experience and 13 had at least 3 years experience. Of the former group, five had two years experience and one had 1.5 years experience.⁵

Given the direct relevance of the occupation (bank analyst) of these participants to the research question, all 19 of these participants were retained for use by the study.

⁵ The participant with 1.5 years experience indicated that they dealt with audited financial reports relatively frequently in their occupation (response of four on a five point scale where one represented 'Never' and five represented 'Frequently') and that the use of audited financial reports in their occupation was important (response of four on a five point scale where one equalled 'Unimportant' and five equalled 'Very important'). This participant was not a member of a professional accounting association, but they were aged between 26 and 30 and held a bachelors degree.

Panel A: Gender

Gender	N	%
Female	7	36.8
Male	12	63.2
Total:	19	100.0

Panel B: Experience in current occupation

Experience	N	%
1.5 years to < 2 years	1	5.3
2 years to < 3 years	5	26.3
3 years to < 5 years	5	26.4
5 years to < 10 years	2	10.5
10 years to < 15 years	2	10.5
15 years to < 20 years	2	10.5
20 years to < 25 years	2	10.5
Total:	19	100.0

Table 5.3: Bank analyst research participants

5.4.2 Private shareholder research participants

The private shareholder research participants were members of the Australian Investors' Association (AIA). The AIA was formed in 1991 with the aim of representing 'the interests of private investors across the broad spectrum of investment products available in the retail market' (Australian Investors' Association, 2005). The association promotes itself as 'a strong and active fellowship of members who are committed to protecting and promoting investor interests' (Australian Investors' Association, 2006). Membership, which is restricted to individuals, numbered approximately 2,200 in October 2006.⁶

The objectives of the present research was explained, and copies of the research instrument distributed, after presentations given by the researcher at AIA monthly meetings in Brisbane, Melbourne and Perth.⁷ The research instrument was also distributed in conference materials to members at the AIA's annual conference held in Sydney.⁸ A reply-paid envelope was included with all research instruments for return postage.

Table 5.4 presents data on the shareholder research participants. Panel A presents details of the research instruments distributed, returned and used. Two hundred and eighty-five research instruments were distributed in total. One hundred and fifty-nine of these were distributed at the three AIA monthly meetings, and 60 (37.7 per cent)

⁶ The AIA's services to members include a quarterly journal, special interest group bulletins and a website archive of conference and seminar papers. The association holds an annual national conference, regular information meetings, seminars and workshops in most Australian capital cities, and a number of regional meetings and local discussions for members (Australian Investors' Association, 2006).

⁷ The presentations were on the topic of 'analysing company annual financial reports' and not on the PhD research study. The presentations were held in Melbourne on 20 October 2004, in Perth on 2 November 2004 and in Brisbane on 1 December 2004.

⁸ The Sydney annual conference was held on 13 and 14 November 2004.

were completed and returned.⁹ One hundred and twenty-six were distributed at the Sydney annual conference and six (4.8 per cent) were completed and returned. Accordingly, 66 completed research instruments were returned in total.

The difference in response rates between the monthly meetings and the annual conference is explainable as a personal presentation and request for participation was made by the researcher at the three monthly meetings (Brisbane, Melbourne and Perth) but not at the Sydney annual conference. The AIA members attending the monthly meetings were aware that the researcher was voluntarily giving the presentation in an attempt to gain research participation. In contrast, the research instruments were distributed at the Sydney annual conference in a pack with other conference materials, and the researcher was not in attendance to promote its completion.

Of the 66 completed research instruments returned, 16 were not used, for reasons discussed in the following paragraph, as the respondents indicated they only had a low level of familiarity with company financial reports. In response to a question asking the extent of their familiarity with company financial reports on a five point scale (with end points one representing 'Not familiar' and five representing 'Very familiar'), these 16 respondents provided a response of one or two, indicating low familiarity.

Houghton (1987a, 1997) found the cognitive structures within which certain accounting and auditing concepts were considered by private, non-institutional shareholders to be less complex than for sophisticated parties comprising experienced

⁹ The lowest response rate was 29.7 per cent from the Brisbane meeting. The highest was 43.9 per cent from the Perth meeting.

accountants, managers and bankers. While the latter groups were found to consider the relevant concepts within three factor structures, the private shareholders exhibited only single factor structures. It was therefore considered important, for the shareholder group of user participants, that they have a reasonable level of familiarity with company financial reports. Only those participants responding with a three, four or five on the five point scale question asking about familiarity with company financial reports were retained for the study. Data collection procedures were undertaken at a number of locations around Australia, as discussed above, to ensure a suitable sample of shareholder participants with this reasonable level of financial report familiarity to ensure a suitable total sample of financial report users.

Panel B of Table 5.4 shows a frequency distribution of the level of familiarity with financial reports self-assessed by the 50 private shareholder participants retained for the study.

Panel C of Table 5.4 indicates the gender of the 50 shareholder participants, while Panel D presents a frequency distribution of the number of years they had been involved in investing activities. The average period involved in investing was 16.4 years, with a minimum of one year and a maximum of 50 years. Only one participant had less than two year's experience, with another five having between two and up to three year's experience. The remaining 44 had at least five years experience.

Panel A: Research instrument administration

City	Number distributed	Number returned	Responses used
Monthly meetings:			
Brisbane	37	11	7
Melbourne	56	20	16
Perth	<u>66</u>	<u>29</u>	<u>22</u>
	<u>159</u>	<u>60</u>	<u>45</u>
Annual conference:			
Sydney	126	6	5
Total:	285	66	50

Panel B: Familiarity with financial reports

Familiarity	N*	%
1 (Not familiar)	0	0.0
2	0	0.0
3	17	34.0
4	23	46.0
5 (Very familiar)	10	20.0
Total:	50	100.0

Panel C: Gender

Gender	N	%
Female	8	16.0
Male	42	84.0
Total:	50	100.0

Panel D: Years involved in investing

Experience	N*	%
1 year to < 2 years	1	2.0
2 years to < 3 years	5	10.0
3 years to < 5 years	2	4.0
5 years to < 10 years	8	16.0
10 years to < 15 years	14	28.0
15 years to < 20 years	3	6.0
20 years to < 25 years	3	6.0
25 years to < 30 years	4	8.0
30 years to < 35 years	4	8.0
35 years to < 40 years	0	0.0
≥ 40 years	6	12.0
Total:	50	100.0

Table 5.4: Shareholder research participants

5.5 RESEARCH PARTICIPANT COMPARATIVE DESCRIPTIVE STATISTICS

Comparative descriptive statistics for the three participant groups are presented in Table 5.5. Panel A presents age details. The majority of auditors, 73.6 per cent, were aged in the 25 to 40 year age bracket. Preparers were generally in higher age groups in comparison to the auditors, with 75.8 per cent in the 30 to 50 year age group. The greatest proportion of the bank analysts, 89.4 per cent, were in the 25 to 45 year age group, while 82 per cent of the shareholder participants were in the 50 to over 60 year age groups. Accordingly, the auditors tended to be the youngest group of participants and shareholders the oldest.

Panel B of Table 5.5 presents a frequency distribution of educational attainment. For all groups except the shareholders, the majority of participants held bachelor or honours degrees. These percentages were 90.8 per cent for the auditors, 72.8 per cent for preparers and 68.4 per cent for bank analysts. Forty eight per cent of the shareholders held degrees at these levels. The proportion of participants with masters and PhD degrees was highest, and relatively equal, for the preparers, bank analysts and shareholders (21 to 22 per cent). The shareholder group had the highest number of participants with only secondary or TAFE qualifications (30 per cent). Hence, a general conclusion is that the auditors had the narrowest range of qualifications, mainly at bachelor and honours degree levels, while the shareholders had the greatest variation with qualifications spread across all levels.

Panel C of Table 5.5 presents details of professional accounting association membership. All auditors were members of a professional association. The majority of preparers (87.1 per cent) and analysts (52.6 per cent) were members of such an

association, but only a minority of shareholders (four per cent) held such membership.

Panel A: Age

Age	Participant group							
	Auditors		Preparers		Users			
					Analysts		Shareholders	
	N*	%	N*	%	N	%	N	%
< 25 years	6	7.9	0	0.0	1	5.3	0	0.0
25 years to < 30 years	27	35.5	5	7.1	7	36.8	1	2.0
30 years to < 35 years	17	22.3	14	20.0	5	26.3	2	4.0
35 years to < 40 years	12	15.8	10	14.3	1	5.3	2	4.0
40 years to < 45 years	4	5.3	14	20.0	4	21.0	2	4.0
45 years to < 50 years	5	6.6	15	21.5	1	5.3	2	4.0
50 years to < 55 years	4	5.3	5	7.1	0	0.00	8	16.0
55 years to < 60 years	1	1.3	4	5.7	0	0.00	12	24.0
≥ 60 years	0	0.0	3	4.3	0	0.00	21	42.0
Total:	76	100.0	70	100.0	19	100.0	50	100.0

* There were four auditor non-responses and one preparer non-response to this question.

Panel B: Education

Highest level of educational attainment	Participant group							
	Auditors		Preparers		Users			
					Analysts		Shareholders	
	N*	%	N*	%	N	%	N	%
Secondary	0	0.0	2	2.9	0	0.0	10	20.0
TAFE certificate/diploma	1	1.3	2	2.9	2	10.5	5	10.0
Bachelors degree	54	71.1	35	50.0	6	31.6	16	32.0
Honours	15	19.7	16	22.8	7	36.8	8	16.0
Masters	6	7.9	12	17.1	4	21.1	9	18.0
PhD	0	0.0	3	4.3	0	0.0	2	4.0
Total:	76	100.0	70	100.0	19	100.0	50	100.0

* There were four auditor non-responses and one preparer non-response to this question.

Panel C: Professional accounting association membership

Membership status	Participant group							
	Auditors		Preparers		Users			
					Analysts		Shareholders	
	N*	%	N*	%	N	%	N	%
Member	76	100.0	61	87.1	10	52.6	2	4.0
Non-member	0	0.0	9	12.9	9	47.4	48	96.0
Total:	76	100.0	70	100.0	19	100.0	50	100.0

* There were four auditor non-responses and one preparer non-response to this question.

Table 5.5: Research participant comparative descriptive statistics

Table 5.6 presents a frequency distribution of the alternate versions of the research instrument completed by the research participant groups. The table shows that the completed instruments were distributed across the alternate versions within the participant groups. This was the situation both for the three major versions of the instrument and each of the six variations of case order within the three versions.

Research instrument version/variation	Participant group			
	Auditors	Preparers	Users	
			Analysts	Shareholders
Version 1A	4	2	1	2
Version 1B	4	4	1	3
Version 1C	5	5	2	3
Version 1D	4	4	2	2
Version 1E	4	4	1	2
Version 1F	6	4	0	3
Total version 1:	27	23	7	15
Version 2A	4	5	1	4
Version 2B	3	5	1	4
Version 2C	5	4	1	1
Version 2D	6	4	2	4
Version 2E	4	4	0	5
Version 2F	4	3	0	3
Total version 2:	26	25	5	21
Version 3A	5	3	1	1
Version 3B	5	5	2	3
Version 3C	4	4	2	1
Version 3D	4	4	1	4
Version 3E	5	4	1	2
Version 3F	4	3	0	3
Total version 3:	27	23	7	14
Grand Total:	80	71	19	50

Table 5.6: Research instrument versions administered

5.6 SUMMARY

This chapter summarised the study's auditor, financial report preparer and financial report user research participants and administration of the research instrument with them. The participants represent the three major parties to the financial reporting communication process. The final research sample was demonstrated to satisfy sample size requirements. Comparative descriptive statistics for the three participants groups were also presented.

The discussion of research method issues in this and the previous two chapters provides the basis for development of the study's research hypotheses, presented in Chapter 6.

CHAPTER 6

DEVELOPMENT OF RESEARCH HYPOTHESES

Following the discussion of the measurement of meaning framework in Chapter 3 and the study's research method in Chapters 4 and 5, research hypotheses are developed in this chapter.

The study's general research question was stated in Chapter 3 as:

Is there shared meaning of the auditor independence concept between key parties to the financial reporting communication process?

The study's research hypotheses are developed to provide insight into alternative aspects of the above research question. The chapter proceeds as follows. Before developing the individual research hypotheses, the prior literature justifying the experimental case manipulations is presented in Section 6.1. Based on these independence threat and safeguard manipulations, hypotheses related to the cognitive structure (dimensions of meaning) within which the concept of auditor independence is considered by research participants are developed in Section 6.2. Hypotheses related to the manner in which the measured (connotative) meaning of the independence concept alters in response to the experimental cases are developed in Section 6.3. The chapter concludes with a summary in Section 6.4.

6.1 EXPERIMENTAL CASES

The nine experimental cases varied the audit engagement scenarios with respect to potential independence threats and safeguards (refer Figure 4.1 in Chapter 4). Prior to

developing the study's research hypotheses, the background to and justification for the experimental manipulations are provided in this section. As noted in Chapter 4, the potential threats to auditor independence manipulated for purposes of the study were:

- Auditor provision of non-audit services;
- Interlocking directorships among audit clients;
- Longer period of audit firm tenure;
- Former audit firm partner as a director of the auditee company.

The independence safeguards manipulated in the experimental cases were:

- Audit subject to additional oversight by the United States Public Company Accounting Oversight Board (PCAOB);
- Period of audit partner rotation;
- Local (internal) independence board within the audit firm.

As elaborated in the following sections, these experimental manipulations represent contemporary auditor independence issues. Variations in connotations of independence in response to these individual threat and safeguard situations can be examined utilising the measurement of meaning framework.

6.1.1 Independence threats

6.1.1.1 Auditor provision of non-audit services

As noted in Chapter 4, the effect on auditor independence of the joint supply of audit and non-audit services has been the subject of debate and research since at least the 1960s, and the corporate collapses earlier this decade have brought a renewed focus to the issue. Wyatt (2004) notes the beginning of the joint supply of audit and non-audit services in the 1960s, with this accelerating through the 1980s and 1990s given the focus of accounting firms on providing an ever-expanding range of services to

their client pools and the evaluation of audit partners based on the cross-selling of a range of consulting services to audit clients.

The arguments directed against auditors providing non-audit (management, management advisory or consulting) services are generally expressed in terms of economic dependence and mutuality of interest (Wines, 1994). If non-audit services become sufficiently important to the auditor, either in total or in relation to an individual client, the auditor's economic dependence on those services and clients may cause bias and a loss of impartiality and objectivity. Increased profitability due to involvement in the provision of non-audit services may act as an incentive for auditors to bear higher audit risks, thus compromising objectivity (Beck, Frecka and Solomon, 1988a). Depending on the nature of the individual non-audit services provided, their joint provision to audit clients has the potential to raise all the various threats to independence identified in APES 110 (APESB, 2006a), namely 'self-interest' threats (s. 290.28.3), 'self-review' threats (s. 290.28.4), 'advocacy' threats (s. 290.28.5), 'familiarity' threats (s. 290.28.6) and 'intimidation' threats (s. 290.28.7).

A number of commentators in the 1950s and 1960s began arguing that the provision of non-audit services to audit clients, or of certain categories of non-audit services, raised potential conflicts of interest.¹ Concerns were also raised in the United States in the 1970s by a number of inquiries, including the Metcalf Committee (United States Senate Subcommittee, 1976, 1977) and the Cohen Commission (Commission on Auditors' Responsibilities, 1978).

¹ See, for example, Cannon (1952), Cony (1961), Mautz and Sharaf (1961), Trueblood (1961), Hylton (1964), Brooker and Staunton (1966), Schulte (1966, 1967), Hoenemeyer (1967) and Kell (1968).

Models of auditor independence have been developed to foster greater understanding of the variables that potentially influence independence (Kleinman, Palmon and Anandarajan, 1998). Goldman and Barlev (1974) and Nichols and Price (1976) contend that audit clients derive considerable power over their auditor from the ability to select and dismiss them and determine their employment conditions, especially given the comparative ease with which auditors can be substituted. DeAngelo (1981a, 1981b) argued that an incumbent auditor captures client-specific quasi-rents and has incentives to lower quality to retain the client and protect those quasi-rents. Fees arising from non-audit services potentially increase these quasi-rents. A concern is that these rents might be implicitly contingent on a favourable audit report (Dopuch, King and Schwartz, 2004). In modelling the auditor as an expected utility maximiser, Antle (1982, 1984) contended that management has strong incentives to provide side payments to the auditor in exchange for a reduction in auditor effort, and these side payments could arise from non-audit services engagements.

Despite the potential for independence impairment, the models argue that factors such as potential reputation loss, litigation risk and the sanctioning powers of regulatory bodies provide positive, counteracting forces on auditors, increasing their ability to resist management pressure. Also, the provision of non-audit services has a tendency to increase the auditor's power as these services benefit the client directly (Goldman and Barlev, 1974). Arruñada (1999a, 1999b) argues that the provision of non-audit services diversifies an audit firm's revenue base and reduces dependence on individual clients, and therefore that the provision of non-audit services only adversely impacts the independence of auditors with undiversified clientele.

The earliest empirical studies into the non-audit services issue commenced in the mid-1960s. The research approach of these early studies was to survey various

financial statement user and preparer groups for their reaction (perceptions) when various non-audit services were specified as being jointly supplied by the audit (accounting) firm (Schulte, 1965; Titard, 1971; Lavin, 1977; Lavin and Libby, 1977). The major groups surveyed included investment, financial and security analysts, bank loan officers, insurance and financial institution investment officers, and employees and executives of listed public companies and financial institutions. Findings of these studies suggested that a significant number of the financial statement users and preparers, although usually not a majority, had some auditor independence concerns when the audit firm also supplied certain other services.

Further studies examined differences in perceptions between financial statement users and executives on the one hand and members of the accounting profession on the other (Briloff, 1966; Hartley and Ross, 1972; Lavin, 1976; Firth, 1980). Findings generally suggested that professional accountants did not consider non-audit services to detract from auditor independence to the same extent as financial statement users and executives.

Studies in the 1980s also attempted to provide further perspectives on a number of issues, including (a) whether respondents' knowledge and understanding of the audit function or other factors, such as cognitive style or view of compatibility of audit and non-audit services, influenced their perceptions of independence (Reckers and Stagliano, 1981; Pany and Reckers, 1984; Gul, 1987; Pany and Reckers, 1988b), (b) the extent to which different categories of non-audit services affected respondents' concerns (Pany and Reckers, 1983, 1984), (c) whether there was less concern when non-audit services were provided by a separate department within the accounting firm (Pany and Reckers, 1984), (d) whether the provision of non-audit services affected bank loan officers' lending decisions (Firth, 1981; McKinley *et al.*,

1985), and (e) the significance of the non-audit services problem in comparison to other threats to independence (Shockley, 1981; Knapp, 1985; Lindsay *et al.*, 1987; Gul, 1989; Lindsay, 1989). While these studies generally confirmed that auditor provided non-audit services were perceived to increase the risk of independence impairment, findings also indicated that many factors impacted on this association and that the provision of non-audit services was not necessarily perceived as a greater risk than some other factors.²

However, these early perception studies have been criticised for phrasing the questions asked in a biased manner and for being seriously affected by demand effects, such that the focus of the research was transparent and the researchers' expectations obvious (Pany and Reckers, 1987, 1988a; Beattie and Fearnley, 2002). Demand effects arise when participants respond to cues about the experimental hypothesis or hypotheses and provide responses according to their view of any researcher expectancies (Orne, 1962; Weber and Cook, 1972; Pany and Reckers, 1987; Shadish, Cook and Campbell, 2002; Haslam and McGarty, 2003). As noted in Chapter 4, McKinley *et al.* (1985), using a between-subjects design and in contradiction to the majority of the earlier research, did not find decreased perceptions of independence when the auditor also provided non-audit services. Pany and Reckers (1987) investigated this further, and found decreased perceptions of independence in a within-subjects (repeated measures) design but not in a between-subjects design.³

² For example, in comparison to the provision of non-audit services, findings suggested research participants perceived a higher risk of independence impairment when audit firms operated in a high competition environment or were smaller in size, when the client was in a healthy financial position, or where a conflict with a client involved an accounting issue not dealt with precisely by technical accounting standards (Shockley, 1981; Knapp, 1985; Gul, 1989; Lindsay, 1989).

³ This result was replicated, for non-audit services scenarios, by Gul and Windsor (1994).

Further perception studies were undertaken in the 1990s. Results indicated that perceptions of bankers, in comparison to professional accountants, were more adversely impacted by the auditor provision of non-audit services (Bartlett, 1993), perceptions of independence were less adversely impacted when the non-audit services were provided by a separate division within the accounting firm and when the services were of lower materiality to the audit firm (Lowe and Pany, 1995), and perceptions of finance directors, in comparison to audit partners, were more adversely impacted by the provision of non-audit services (Beattie, Brandt and Fearnley, 1999).

While the perception studies represent the earliest empirical research to examine the non-audit services issue, later research has utilised archival data sources based on audit and non-audit fee data. The earliest of the archival studies sought to examine whether *knowledge spillovers* between audit and non-audit services had an adverse impact on auditor independence. Knowledge spillovers, also referred to as *economies of scope*, occur when the performance of audit and non-audit services enables the audit firm to perform either or both services more cheaply than competitors (Simunic, 1984; Beck *et al.*, 1988a; Ikin, 2005). Independence concerns arise from knowledge spillovers if auditors retain the cost savings. Any retention would intensify the audit firm's economic bonding to the client and raise the client's relative power over the auditor, especially if the future stream of economic rents was substantial (Simunic, 1984; Beck *et al.*, 1988a, 1988b; Kleinman *et al.*, 1998; Ikin, 2005).

Simunic (1984) was the first to report evidence of a positive relationship between audit and non-audit services fees, although he was careful not to infer a causal link and posited that the excess audit fee found might represent a quasi-rent for investing in non-audit (management advisory) services resources. Other studies have replicated

this positive association between audit and non-audit services fees.⁴ However two studies, Simon and Francis (1988) and Abdel-khalik (1990), did not find any evidence of knowledge spillovers.

While Palmrose (1986b) found evidence of a positive association between audit fees and non-audit fees derived by the incumbent audit firm, a positive association was also found with non-audit fees derived by non-incumbents. This weakens any arguments of knowledge spillovers and independence concerns. Similarly, Davis *et al.* (1993) found the positive relationship between audit and non-audit fees to be also associated with increased audit hours. This suggests additional effort is required for audits of clients who also purchase non-audit services, which is inconsistent with the notion of audit production efficiencies arising from knowledge spillovers causing independence concerns. Whisenant, Sankaraguruswamy and Raghunandan (2003) also replicated the finding of Simunic (1984). However, in modelling audit and non-audit fees as being jointly determined and thereby controlling for the joint behaviour of audit and non-audit fees, they did not find the existence of economies of scope that would suggest adverse implications for auditor independence.

Ezzamel *et al.* (2002) found the relationship between the level of fees and non-audit services to vary by category of non-audit service. Of five categories of non-audit services provided by incumbent auditors, only two categories had a significant positive relationship with audit fees.⁵ Also, there was no association between audit fees and the five categories of non-audit services when supplied by a non-incumbent

⁴ These studies include Turpen (1990), Palmrose (1986b), Davis, Ricchiute and Trompeter (1993), Butterworth and Houghton (1995), Ezzamel, Gwilliam and Holland (1996), Francis, Reichelt and Wang (2005) and Antle, Gordon, Narayanamoorthy and Zhou (2006).

⁵ The five categories of non-audit services were finance advice, tax services, accounting-related services, management consultancy and others. A positive relationship with audit fees was found only for the finance advice and tax services categories.

firm. Ezzamel *et al.* (2002) interpret this as supporting explanations of any positive association being due to client specific differences or to events giving rise to the client's purchase of more audit and non-audit services, rather than of any suggestion of direct economic linkages between the cost functions for these services that cause independence concerns.

In summary, the majority of studies, with some exceptions, have identified knowledge spillovers. While Beattie and Fearnley (2002, p. 52) conclude that there is 'clearly no evidence that cost savings from joint provision are being passed on to the auditee', a number of the studies have identified circumstances which suggest that any positive relationship between audit and non-audit services fees does not raise independence concerns. Hence, as concluded by Ikin (2005), few clear implications for auditor independence can be drawn from this line of research.

Some studies have explored market responses to the auditor provision of non-audit services. Based on the view that non-audit services adversely affect the credibility and informativeness of audited accounting earnings, Gul and Tsui (1999) found, especially for companies with non-Big Six auditors, earnings explanatory power for returns to be negatively related with non-audit services.⁶ Other studies have reported a negative stock price reaction to company's with higher non-audit services (Krishnan, Sami and Zhang, 2005; Francis and Ke, 2006). Company bond ratings have also been found to be lower for companies procuring higher levels of non-audit services from their auditor (Brandon, Crabtree and Maher, 2004).

⁶ That is, the explanatory power of a regression of stock returns as the dependent variable and accounting earnings as the independent variable was found to be weaker for firms receiving non-audit services from their auditor in comparison to those that did not.

If company managers perceive that non-audit services could adversely affect earnings quality and audit quality, it would be expected that companies with higher agency costs would purchase lower levels of non-audit services, and particularly recurring non-audit services, from their auditor. This hypothesis was supported by Parkash and Venable (1993) and Firth (1997).⁷

Other archival research has attempted to investigate the relationship between non-audit services and auditor independence more directly. The major studies have examined the relationship between non-audit services and (a) auditor tenure and switching, (b) qualified audit opinions, (c) earnings management, (d) profit restatements, and (e) auditor focus (Ikin, 2005). A summary of each of these areas follows.

Auditor tenure lengths have been found to be higher for auditees purchasing high levels of certain categories of recurring non-audit services (Beck *et al.*, 1988b).⁸ This result was not found for non-recurrent non-audit services, and Barkess and Simnett (1994) found no relationship between total non-audit services fees and length of auditor tenure.

As an extension of the auditor tenure issue, auditor switching has also been examined. If the auditor provision of other services raises potential independence concerns, it might be expected that companies purchasing higher levels of non-audit services from

⁷ These studies measured the level of agency costs with variables such as ownership dispersion, manager/director share ownership and leverage. A major limitation of this research is that it is difficult to determine whether the lower levels of non-audit services detected are driven by agency theory related incentives for an independent auditor or are simply due to a lesser need by these companies for non-audit services (Ikin, 2005).

⁸ However, while being statistically significant, the average tenure length for auditees purchasing high levels of recurring non-audit services was only approximately one year longer than that for a control sample. Also, Dopuch (1988) questioned the skewed sample used in the study and the ambiguous nature of the findings.

their incumbent auditor would have a lower propensity to switch auditor than companies purchasing lower levels of non-audit services. However, DeBerg, Kaplan and Pany (1991) found no evidence to support this. They also found that the purchase of non-audit services declined significantly in the year following an auditor change, again discounting any independence concerns arising from an auditor switch. However in a contrary finding, Barkess and Simnett (1994) found a significant increase in non-audit services fees paid by companies switching auditor, suggesting that clients may change auditor to gain access to higher levels of other services.

In an early study of shareholder voting for the ratification of the external auditor, Glezen and Millar (1985) did not find any association between votes against auditor ratification and the level of non-audit services. However in later studies, Raghunandan (2003), Raghunandan and Rama (2003) and Mishra, Raghunandan and Rama (2005) did find the proportion of shareholders voting against auditor ratification to be positively associated with the level of the non-audit fee ratio, suggesting some independence concerns. However, the studies found that approximately 95 to 98 per cent of shareholders voted for the auditor's ratification, suggesting the vast majority did not perceive any potential independence problems.

Audit qualification studies have sought to explore whether there is a lower propensity for auditors to issue qualified audit opinions in the presence of higher non-audit services fees. A number of studies have found a negative association between the auditor provision of non-audit services and the incidence of qualified audit opinions (Wines, 1994; Sharma, 2001; Sharma and Sidhu, 2001; Firth, 2002; Basioudis, Geiger and Papanastasiou, 2006). However, other studies have failed to detect such a relationship (Craswell, 1999; Lennox, 1999; DeFond, Raghunandan and Subramanyam, 2002; Geiger and Rama, 2003). In modelling the total level of non-

audit services fees derived by audit firms from individual audit clients, Barkess and Simnett (1994) did not find any relationship with audit qualifications.

The findings from the audit qualification studies are difficult to reconcile due to variations in the research methods adopted. In particular, it is important that the audit opinion models should be well specified and that there are no omitted variables (Beattie and Fearnley, 2002). Further, a possible explanation for any observed negative association is that the provision of other services to an audit client may help resolve problems, and/or improve accounting systems, internal controls and operations, such that the need for a qualified opinion is substantially reduced (Firth, 2002; Ikin, 2005). Hence, any negative association cannot readily be interpreted as auditors compromising their independence to retain the non-audit services fees (Beattie and Fearnley, 2002).

As with the audit qualification research, studies examining non-audit services and earnings management⁹ have employed variations in research methods and produced inconsistent findings. Earnings management, representing a proxy for lower earnings and audit quality, has been examined mainly through the use of accruals models to detect discretionary or abnormal accruals.

Gore, Pope and Singh (2001) and Frankel, Johnson and Nelson (2002) were the first to document a positive association between earnings management and the auditor provision of non-audit services. This positive association was also found by

⁹ Earnings management, defined as 'a purposeful intervention in the financial reporting process, with the intent of obtaining some private gain', arises because of the variety of accrual options available under generally accepted accounting principles and accounting standards (Schipper, 1989). Healy and Wahlen (1999, p. 368) state that earnings management occurs 'when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.'

Ferguson, Seow and Young (2004) and Callaway-Dee, Lulseged and Nowlin (2006). Some association between high non-audit services and earnings management was found by Gul, Jaggi and Krishnan (2007), but only for audit clients of small size where auditor tenure was not more than three years.

However, in response to a number of criticisms of Frankel *et al.* (2002) raised by Kinney and Libby (2002), a number of studies utilised alternative models, additional control variables and alternative samples (Ashbaugh, LaFond and Mayhew, 2003; Chung and Kallapur, 2003; Reynolds, Deis and Francis, 2004; Huang, Mishra and Raghunandan, 2007). These studies did not find any association between non-audit services fees and earnings management. In an alternative specification of earnings management, Ruddock, Taylor and Taylor (2006) found no association between higher than expected levels of non-audit services and the extent to which earnings reflected bad news on a timely basis. Two further studies found a negative, rather than positive, association between non-audit services fees and earnings management (Larcker and Richardson, 2004; Antle *et al.*, 2006). Accordingly, it has been concluded that difficulties with this field of research arise from the measurement of the proxy variable for independence and the validity of the proxy itself (Beattie and Fearnley, 2002), and that findings are fragile and are sensitive to sample selection and model specification (Francis, 2006).

Company profit restatements have also been examined as a proxy for lower financial reporting and audit quality. Raghunandan, Read and Whisenant (2003) and Agrawal and Chadha (2005) found no association between the auditor provision of non-audit services and profit restatements. Kinney, Palmrose and Scholz (2004) sought to determine whether there was any association between profit restatements and various categories of non-audit services provided by audit firms, and found a significant

positive association only for a residual, 'unspecified' category of non-audit services. There was no relationship found between profit restatements and the 'financial information systems design and implementation' and 'internal audit' service categories, while there was a significantly negative association found for 'tax services'.

Auditor focus studies have attempted to address the issue of whether the focus of the audit can be affected by the auditor provision of non-audit services. As noted earlier, Davis *et al.* (1993) found a positive relationship between audit and non-audit fees, but also found this to be associated with increased audit effort. In analysing individual audit activity categories, Hackenbrack and Knechel (1997) found significantly higher labour hours for four of eight categories when non-audit services were jointly provided, with none of the other categories having lower labour hours.¹⁰ In contrast, O'Keefe, Simunic and Stein (1994) found no effect of the joint performance of non-audit services on total audit hours nor on hours for individual staff categories. In a study of an individual firm's initial audit engagement proposals, Johnstone and Bedard (2001) found that, for clients purchasing additional services, more audit hours and a greater use of industry experts were planned. While their results showed a relatively small fee premium for the additional services clients, analysis of the accepted bids implied that this premium was bid away by the market.

The results of the above audit focus studies do not suggest independence concerns arising from the joint provision of non-audit services. However, Felix, Gramling and Maletta (2005) found some contrary evidence. In situations where significant non-

¹⁰ The eight audit activities were planning, internal control, critical substantive, noncritical substantive, critical review, noncritical review, financial statements and client interaction. When non-audit services were also provided by the auditor, higher labour hours were found for the planning, internal control, financial statements and client interaction activities.

audit services were also provided, external auditors appeared to be more affected by client pressure and less concerned about internal audit quality and coordination when making internal audit reliance decisions.

Experimental audit focus research has also been conducted. Studies have examined the influence of the joint provision of audit and non-audit services on internal control assessments (Corless and Parker, 1987), the likelihood of unqualified audit opinions (Lord, 1992) and auditors' decisions on whether to accept a client's aggressive reporting practices (Chang and Hwang, 2003). No adverse independence implications were found by these studies based on the non-audit services manipulations. In contrast, Favere-Marchesi (2006) found some evidence of auditors assessing a lower risk of fraud when non-audit services were also provided, although the author observed that the lower risk assessments may have arisen because of perceptions of increased audit quality arising from greater client knowledge. Accordingly, it is difficult to generalise the findings of these studies beyond the individual experimental conditions.

In summary, the academic research findings generally suggest that the joint provision of audit and non-audit services does not impair independence *in fact*, but could, by reference to views of financial report users, impair independence *in appearance* (Beattie and Fearnley, 2002; Ikin, 2005). Francis (2006, p. 753) observes that 'given the inherent difficulty of empirically observing the impairment of audit quality, the failure to find smoking-gun evidence should not give ... too much comfort that NAS (non-audit services) are unproblematic for the accounting profession.'

A number of reports have been prepared, and legislation enacted, addressing the non-audit services issues in the aftermath of the corporate collapses in the earlier part of

this decade. The major development in the United States, as discussed in Chapter 2, has been enactment of the *Sarbanes-Oxley Act of 2002*. This legislation prohibits a range of non-audit services to audit clients¹¹ and requires the pre-approval, in most cases, of any other non-audit services by the company's audit committee. These provisions have also been adopted by the Securities and Exchange Commission in its rules (SEC, 2003).

The International Federation of Accountants (IFAC) issued a considerably revised version of its *Code of Ethics for Professional Accountants* in 2001 (IFAC, 2001). The code specified the conceptual framework approach to independence, requiring auditors to take into account threats to independence, accepted safeguards and the public interest (IFAC, 2001, para. 8.11). This conceptual framework approach continues to be the basis for the latest version of the IFAC Code (IFAC, 2005). With respect to the provision of non-audit services to assurance engagement clients, the Code prohibits auditors undertaking non-audit services that effectively involve them performing management (executive) functions or making management decisions for the client (IFAC, 2005, s. 290.159). The Code also specifies nine categories of non-audit services that pose a high risk to independence, (IFAC, 2005, ss 290.166 to 290.203), these being similar to the categories prohibited in the United States by the *Sarbanes-Oxley Act*.¹² However, the IFAC Code does not specify a blanket

¹¹ As noted in Chapter 2, the prohibited categories of non-audit services are (a) bookkeeping or other services related to the accounting records or financial statements of the audit client, (b) financial information systems design and implementation, (c) appraisal or valuation services, fairness opinions or contribution-in-kind reports, (d) actuarial services, (e) internal audit outsourcing services, (f) management functions or human resources, (g) broker or dealer, investment adviser or investment banking services, (h) legal services and expert services unrelated to the audit, and (i) any other service that the Public Company Accounting Oversight Board (PCAOB) determines, by regulation, to be impermissible.

¹² The non-audit services categories are (a) preparing accounting records and financial statements, (b) valuation services, (c) internal audit services, (d) information technology systems services, (e) temporary staff assignments, (f) litigation support services, (g) legal services, (h) recruiting senior management, and (i) corporate finance and similar activities.

prohibition for these services, but indicates they should be undertaken only if appropriate safeguards are introduced to ensure independence threats are reduced to an acceptable level.

In Australia, the major reports where the auditor provision of non-audit services has been commented on have been the Ramsay Report (Ramsay, 2001), the report of the federal government's Joint Committee of Public Accounts and Audit (2002b) and the report of the HIH Insurance Royal Commission (HIH Royal Commission, 2003). The major recommendations were for (a) updated professional ethics rules,¹³ (b) greater responsibility for the audit committee and board of directors to determine that auditor-provided non-audit services do not compromise auditor independence,¹⁴ (c) strengthened disclosure requirements, with disclosure of non-audit services dissected by category of service together with appropriate discussion of those services (Ramsay, 2001, pp. 11, 62), and (d) establishing an Auditor Independence Supervisory Board with the power to monitor the adequacy of non-audit services disclosures (Ramsay, 2001, pp. 10, 62).

Following the various reports and the CLERP 9 discussion paper (Commonwealth of Australia, 2002), the CLERP 9 legislation (Commonwealth of Australia, 2004) resulted in amendments to the *Australian Corporations Act 2001*. Major amendments prescribed disclosure, in the directors' report of listed companies, of the amounts paid or payable to the auditors for non-audit services, and a statement by the directors on whether they are satisfied that the provision of non-audit services by the auditor are compatible with, and do not compromise, the auditor independence requirements imposed by the Act (s. 300(11B)). With the Australian adoption of international

¹³ Ramsay (2001, pp. 11, 62), Joint Committee of Public Accounts and Audit (2002, pp. xxv, 98).

¹⁴ Ramsay (2001, pp. 11, 62), HIH Royal Commission (2003, Vol. 1, pp. lxvii, 175).

financial reporting standards, accounting standard AASB 101 *Presentation of Financial Statements* specified requirements consistent with the Ramsay Report for the disclosure of non-audit services dissected by category (Australian Accounting Standards Board, 2004, para. 126).

The experimental scenarios in the study's Cases 5, 6 and 7 specified the auditor provision of non-audit services in the form of taxation services. Despite the potential independence concerns raised by the joint provision of audit and non-audit services, the provision of taxation services to audit clients has not generally been seen to represent a high independence risk. Francis (2006, p. 748) highlights that tax services are now the largest non-audit service activity on most audit engagements, and that they are 'generally viewed positively as a logical add-on to the audit ...' Subject to pre-approval by the company's audit committee, tax services are specifically allowed in the United States, with some exceptions, under the *Sarbanes-Oxley Act* and the SEC's rules (SEC, 2003). Tax services are also generally allowed in Australia pursuant to the Code of Ethics for Professional Accountants (APESB, 2006a, s. 290.180), as they are in Canada, the European Union and the United Kingdom (Department of the Treasury, 2006).

However, there have been some independence concerns raised recently regarding taxation services. The United States PCAOB in 2004 proposed rules prohibiting an audit firm providing tax planning and advice on 'certain types of potentially abusive tax transactions' (PCAOB, 2004b). These rules were adopted in July 2005 (PCAOB, 2005), but did not change the position with respect to normal tax compliance and tax

advice services.¹⁵ The rules are similar in the United Kingdom, with some prohibitions specified in relation to the promotion of tax structures or products.¹⁶

IFAC, through its International Ethics Standards Board for Accountants (IESBA), also released an exposure draft in December 2006 with updated provisions in its *Code of Ethics for Professional Accountants* on taxation services (IESBA, 2006). Major revisions contained in the exposure draft prohibit (a) tax advice where the effectiveness of that advice depends on a particular accounting treatment or financial statement presentation and there is reasonable doubt as to the appropriateness of the related treatment or presentation (s. 290.182), and (b) acting as an advocate for an audit client before a public tribunal or court in the resolution of a material tax matter (s. 290.184).

The experimental scenarios contained in the study's Cases 5, 6 and 7 indicated that the audit firm's taxation division had provided, with the pre-approval of the audit committee, additional non-audit services to the auditee over the four year audit tenure period. These services were specified to comprise tax compliance services and tax planning advice, with fees from each of these categories being approximately equal. As explained in Chapter 4, Cases 5 and 6 indicated annual taxation services over the four year period of three to four times the audit fee, while Case 7 indicated annual tax services of approximately one-half the audit fee.

¹⁵ The major revisions in relation to tax services (PCAOB, 2005) were (a) to ban the auditor from providing any services (i) to audit clients related to the 'marketing, planning, or opining in favour of the tax treatment of ... aggressive tax position transactions' (Rule 3522(b)) or (ii) for persons 'in financial reporting oversight roles' at the audit client (Rule 3523), and (b) to require audit firms to provide the audit committee of the audit client with, for allowable tax services, a description of the scope of service and the fee structure for the engagement (Rules 3522 to 3524).

¹⁶ The United Kingdom's relevant ethical standard prohibits the audit firm promoting tax structures or products, or providing tax advice to an audit client, if there is reasonable doubt as to 'the appropriateness of the related accounting treatment involved' (Auditing Practices Board, 2004d, para. 66).

6.1.1.2 Interlocking directorships among audit clients

Company boards of directors include directors who may, and often do, sit on the boards of other companies, creating networks of inter-company ties (Mizruchi, 1996; Jubb, 2000; Houghton and Jubb, 2003a). These networks of ties, forming bonds between the respective organisations, are referred to as *interlocking directorates* or *interlocking directorships* (Dooley, 1969; Pennings, 1980; Davison, Stening and Wai, 1984; Scott and Griff, 1984; Jubb, 2000). It tends to be non-executive or external directors who create these ties, as these directors have more time to devote to multiple directorships (Mizruchi, 1996; Jubb, 2000). In contrast to non-executive directors, executive directors are more likely to be employed only by a single entity or group.

Legislative provisions have been enacted in Australia to ensure that, at least to some extent, interlocking directorships are transparent. The CLERP 9 legislation of 2004 (Commonwealth of Australia, 2004) amended the *Corporations Act 2001* (s. 300(11)) to require companies to disclose, for its directors, all directorships of other listed companies held at any time in the three years immediately prior to the end of the financial year and the period for which each directorship had been held.

There has been considerable research into interlocking directorships generally,¹⁷ and prior research has documented their presence in Australia.¹⁸ Major reasons for interlocks include monitoring of sources of environmental uncertainty, cooptation, collusion, legitimacy, career advancement and social cohesion (Allen, 1974; Schoorman *et al.*, 1981; Mizruchi, 1996).

¹⁷ See, for example, Dooley (1969), Allen (1974), Koenig, Gogel and Sonquist (1979), Pennings (1980), Koenig and Gogel (1981), Schoorman, Bazerman and Atkin (1981), Palmer (1983), Ornstein (1984), Scott and Griff (1984), Mizruchi and Stearns (1988) and Mizruchi (1996).

¹⁸ See, for example, Rolfe (1967), Hall (1983), Carroll, Stening and Stening (1990), Alexander and Murray (1992), Alexander, Murray and Houghton (1994) and Jubb (2000).

While there has been much general research into interlocking directorships, there has been a lack of research focusing on the relationship between these interlocks and the selection and retention of auditors (Jubb, 2000; Courtney and Jubb, 2005). Davison *et al.* (1984) were the first to document a link between interlocking directorates and the company's auditor choice. They found a significant relationship between the number of director interlocks of Australian companies and the probability of the interlocked companies being audited by the same audit firm. In a more robust Australian study, Jubb (2000) found that the existence of these multiple board directorships had a systematic and significant effect on auditor choice and that these interlocks incrementally explained auditor choice when controlling for various institutional variables. These director-auditor links have also been found to be positively associated with length of auditor tenure (Courtney and Jubb, 2005).

Auditing involves interpersonal relationships between directors and auditors. Houghton and Jubb (2003a) point out that, despite it being the role of shareholders under the *Corporations Act 2001* to appoint the auditor at a meeting of members, the choice of an auditor in practice represents a choice of people (auditors) by other people (directors). Further, ongoing audit engagements involve interactions between auditors and directors of auditee entities. An audit engagement can be considered in the context of a relationship between 'exchange partners', with attachments or commitments developed between the exchange partners serving to prolong the exchange and limit the mobility of those partners (Cook, 1977). Attachments between auditor and auditee occur mainly at the individual level (Seabright, Levinthal and Fichman, 1992; Courtney and Jubb, 2005), and research has found that the choice of continuing with business relationships depends on the trust that emerges between organisations arising from repeated personal attachments and ties (Cook, 1977;

Levinthal and Fichman, 1988). De Ruyter and Wetzels (1999) found affective commitment, arising from trust and pleasant business partnerships in the course of an audit relationship, to be positively associated with 'continuance commitment'. This reduced the probability of a client switching auditors.

Relationships generated in the presence of director-auditor links allow the development of mutual dependence due to the stability of the alliances established (Courtney and Jubb, 2005). Public accounting firms are known to tap into these networks, which often include former employees, to promote practice growth and firm survival (Jubb, 2000). It is therefore not surprising that the limited research in this area (Davison *et al.*, 1984; Jubb, 2000; Courtney and Jubb, 2005) has found interlocking directorships to be positively associated with company auditor choice and length of tenure.

There are no statutory provisions in Australia precluding an audit firm auditing companies with interlocking directorships, but independence issues potentially arise. Seabright *et al.* (1992, p. 155) note that audit firms become enmeshed in a complex of ties in the course of professional engagements and that, while this embeddedness 'is a natural result of the relationship between a client and an audit firm ... it is clearly at variance with normative expectations about professional detachment and avoidance of personal ties to clients.' The presence of interlocking directorships among audit clients increases the possibilities for these personal ties, therefore potentially raising independence concerns (Jubb, 2000; Houghton and Jubb, 2003a; Courtney and Jubb, 2005).

One category of threats to independence specified in APES 110 is that of 'self-interest' (APESB, 2006a, s. 290.28.3). When interlocking directorships exist among

audit clients, additional self-interest threats could arise as the audit firm is dealing not only with a single entity but with a 'family' of companies linked by shared directors (Houghton and Jubb, 2003a). Examples of self-interest threats specified in APES 110 that could be heightened when interlocking directorships exist include undue dependence on total fees from assurance clients, concern about the possibility of losing an engagement and having a close business relationship with assurance clients (s. 290.28.3).

Another category of independence threats specified in APES 110 is that arising from 'familiarity' (s. 290.28.6). These threats arise when, because of a close relationship with an assurance client, the audit firm or a member of the audit team becomes too sympathetic to the client's interests. It was highlighted earlier that auditing involves interpersonal relationships, at the individual level, between directors (and managers) and auditors. These interpersonal relationships are potentially greater, and may occur more frequently, when interlocking directorships exist among audit clients due to the networks of ties between the audited entities and the audit firm.

The final example of independence threats specified in APES 110 that could potentially be greater in the presence of interlocking directorships is that of 'intimidation' (s. 290.28.7). Examples of these include the threat of the auditor's replacement over a disagreement with the application of an accounting principle or pressure to inappropriately reduce the extent of audit work in order to reduce fees (s. 290.28.7). These threats could potentially be greater when a number of entities, related by interlocking directorships, are being audited, as the auditor stands to lose multiple audits.

Courtney and Jubb (2005, p. 133) summarise the potential self-interest, familiarity and intimidation threats arising from interlocking directorships by stating that '[t]he objectivity of the auditor may be compromised if the relationship is too cosy, and/or if the loss of several rather than a single audit client is the feared consequence of the auditor remaining non-compliant with the auditee's preferred reporting.'

The potential threats, though, may be more perceived than real (Houghton and Jubb, 2003a). It is most likely non-executive directors who will be involved in any interlocking directorships. The interests of non-executive directors, in comparison to executive directors, are likely to be more closely aligned with the interests of shareholders, and hence the presence of these pre-existing relationships may be less threatening to independence as a result (Houghton and Jubb, 2003a). Also, relationships arising from these interlocks may benefit audit quality (Houghton and Jubb, 2003a). DeAngelo (1981b) argues that auditors with a larger number of clients have more to lose by performing a low quality audit and failing to report a discovered breach in a particular client's records, and that this increases the audit quality supplied by larger audit firms. Using the same reasoning, an auditor conducting a low quality audit of a company for which interlocks exist could potentially lose the audit of all companies in the network. Accordingly, Houghton and Jubb (2003a) argue that there is an economic incentive for the auditor to perform high quality work where substantial interlocking relationships are present.

Nevertheless, the presence of interlocking directorates among an audit firm's clients has the potential to negatively affect auditor independence. No prior research, though, has examined perceptions of auditor independence where interlocking directorships exist. The experimental scenario contained in the study's Case 2 indicated that three non-executive directors of the auditee were also non-executive directors of other

companies audited by the incumbent audit firm. This created interlocks between the auditee company and two other companies, with the presence of a common audit engagement partner.

6.1.1.3 Period of audit firm tenure

It has long been suggested that lengthy periods of auditor tenure may pose potential threats to auditor independence (see for example, Mautz and Sharaf, 1961; United States Senate Subcommittee, 1976, 1977; Commission on Auditors' Responsibilities, 1978; Shockley, 1982). The potential independence problems have also been raised recently in Australia in the Ramsay Report (Ramsay, 2001) and by the Joint Committee of Public Accounts and Audit (2002). The HIH Royal Commission (2003) also stated that a lengthy relationship presented clear risks with respect to independence.¹⁹ A longer period of audit tenure increases the relationships and personal ties existing between auditor and client. The threats identified by APES 110 (APESB, 2006a) that this could particularly affect are 'self-interest' threats (s. 290.28.3), 'familiarity' threats (s. 290.28.6) and 'intimidation' threats (s. 290.28.7).

Because of a long association with a client, a behavioural bond can develop between the auditor and auditee as they become more familiar with each other (Latham, Jacobs and Roush, 1998). The auditor may become less likely to use innovative audit procedures, may fail to maintain an attitude of professional scepticism and/or may lose the objectivity necessary for independence (Shockley, 1982; Raghunathan, Lewis and Evans, 1994; Catanach and Walker, 1999). Further, an incumbent auditor

¹⁹ The Commission highlighted that HIH Insurance's auditor, Andersen, had been the incumbent auditor since 1971 (the major companies in the HIH group were placed in provisional liquidation in March 2001), and that HIH had become one of the most significant clients of Andersen's Sydney practice (HIH Royal Commission, 2003, Vol. 1, p. 179).

captures client-specific quasi-rents and has incentives to lower quality in future periods to retain the client and protect those quasi-rents (DeAngelo, 1981b). Because considerable learning costs are associated with a new client, the later periods of auditor tenure tend to be periods of relative stability and positive cash flows, which could motivate the auditor to not report misrepresentations in the client's financial report (Raghunathan *et al.*, 1994).

In an early study, Firth (1980) examined the effect on perceptions of auditor independence of a situation where an audit partner had been in sole charge of a large audit for a period of ten years. Only a minority of respondents considered this to adversely affect independence, although this percentage was greater for financial analysts (22 per cent) and loan officers (21 per cent) than for chartered accountants in Big Eight firms (11 per cent) or chartered accountants in other public practice firms (six per cent). Also, this longer tenure situation did not significantly affect hypothetical lending decisions of bank loan officers based on the audited financial statements (Firth, 1981).

Two further studies, though, reported a negative association between perceptions of independence or audit quality and auditor tenure length. Audit committee members have been found to perceive that longer auditor tenure length is associated with lower audit quality, as indicated by their assessment of the conditional likelihood of the auditor reporting a discovered material error (Knapp, 1991). Sainy, Taylor and Williams (2002) reported some evidence of investor dissatisfaction with the incumbent auditor, as measured by the proportion of votes against renewing the auditor's contract, when the auditor had been incumbent for at least five years.

While the above studies examined perceptions of independence or audit quality, other research has examined proxies for actual audit quality and found a negative association with auditor tenure length.²⁰ In studies of lawsuits against auditors, St. Pierre and Anderson (1984) found only 23 percent of lawsuits to be associated with auditor tenure periods of three years or less, which could be interpreted to suggest the majority of those lawsuits to be associated with longer tenure periods.²¹ However, Lys and Watts (1994) and Stice (1991) found no relationship between auditor lawsuits and tenure length, while the findings of Latham *et al.* (1998) suggest that inappropriate audit opinions in audits that are subsequently subject to litigation are more likely to be associated with shorter auditor tenure.

As noted earlier in Section 6.1.1.1, there is some evidence of longer auditor tenure lengths for auditees purchasing high levels of recurring non-audit services (Beck *et al.*, 1988b). Also, as noted in the previous sub-section, interlocking directorates have been found to be positively associated with tenure length (Courtney and Jubb, 2005).

Other empirical studies have provided further evidence of a possible negative relationship between audit quality and tenure length. Palmrose (1989) reported that audit quality, as proxied by audit engagement hours, declined with length of audit firm tenure. For audits of school districts conducted by Texan CPA firms, Deis and Giroux (1992) and Giroux, Deis and Bryan (1995) found decreased assessments of audit quality, in quality control reviews by the relevant education agency, as auditor tenure increased. Copley and Doucet (1993) found that the probability of a sub-

²⁰ As noted in Chapter 2, audit quality comprises both auditor competence and independence (DeAngelo, 1981a; Watts and Zimmerman, 1981). These two auditor qualities, though, are likely to be related in individual circumstances. For example, if an auditor is not independent and therefore does not expect to report a misrepresentation even if detected, they may find it cost efficient to put less than adequate effort (competence) into the audit (Raghunathan *et al.*, 1994).

²¹ Although this has also been interpreted as suggesting that litigation risks increase with newer audit clients (St. Pierre and Anderson, 1984; Latham *et al.*, 1998).

standard audit increased with auditor tenure length.²² O'Keefe, King and Gaver (1994), although not specifically a test of tenure, reported fewer violations of generally accepted accounting standards in the audited financial reports of California school districts in initial audit engagements in comparison to repeat engagements. Raghunathan *et al.* (1994) found that audit failures, where the SEC ruled that audited financial statements filed with it contained misrepresentations, were more likely to occur in the first year or after the fifth year of audit firm tenure. Vanstraelen (2000) reported that a longer period of audit tenure significantly reduced the likelihood of a qualified audit opinion for large Belgian companies. Chi and Huang (2005) found evidence consistent with lower earnings quality, by reference to abnormal accruals, in the later years of audit firm tenure. Some evidence has also been found of earnings 'surprises' to meet or beat earnings forecasts in the later years of audit firm tenure, with the negative impact of longer firm tenure becoming apparent after tenure periods of at least 18 years (Azizkhani, Monroe and Shailer, 2007b).

Choi and Doogar (2005) found longer auditor tenure to be negatively associated with the likelihood of a going concern qualification, particularly for non-Big Five auditors. Longer periods of audit partner tenure have also been found to be associated with a lower propensity to issue going-concern audit opinions for distressed companies and with companies just beating or missing earnings benchmarks, the latter suggesting earnings management (Carey and Simnett, 2006). In contrast though, Craswell, Stokes and Laughton (2002) and Knechel and Vanstraelen (2007) did not detect any relationship between auditor tenure length and the propensity of auditors to issue unqualified audit opinions.

²² Whether an audit was considered sub-standard was based on conclusions of formal reports of the United States Office of Regional Inspector General into audits of federal financial assistance recipients.

While a number of the above studies suggest longer auditor tenure impacting adversely on independence and audit quality, there is an alternative argument that longer tenure may have positive effects. The deeper familiarity and insight into the client's operations gained by a longer audit relationship can allow more efficient and less costly audit services, this increasing the dependency of the client on the auditor and increasing the auditor's ability to withstand client pressure (Shockley, 1982).

A number of recent studies provide some evidence of a positive relationship between audit quality and tenure length. For a sample of companies entering bankruptcy, Geiger and Raghunandan (2002) examined the association between the type of audit opinion issued immediately prior to bankruptcy and the length of auditor tenure. They found there were significantly more audit reporting failures in the earlier years of audit tenure than in later years. In examining audit deficiencies documented in PCAOB inspection reports, Gunny, Krishnan and Zhang (2007) found that longer auditor tenure periods mitigated deficiencies for non-Big Four auditors.

Evidence has also been advanced that companies with long-tenured auditors receive higher bond ratings and incur lower debt costs (Mansi, Maxwell and Miller, 2004; Crabtree, Brandon and Maher, 2006). Using earnings response coefficients from returns-earnings regressions as a proxy for investor perceptions of earnings quality, Ghosh and Moon (2005) document a positive association between earnings response coefficients and length of auditor tenure. Azizkhani *et al.* (2007b) report audit firm and engagement partner tenure to be associated with lower ex-ante cost of equity capital, calculated by reference to analysts' earnings per share forecasts, for non-Big Four audit firms. These four studies suggest that longer auditor tenure is valued by capital market participants.

Finally, a further four major published studies have used accruals models to gain an insight into earnings management, audit quality and the impact of longer tenure periods. Johnson, Khurana and Reynolds (2002) found absolute unexpected accruals to be associated with shorter (two to three year) tenure periods but to be unrelated to longer (greater than eight year) tenure periods. This supports lower earnings and audit quality for only the shorter tenure periods. Frankel *et al.* (2002) and Myers, Myers and Omer (2003) found the level of company absolute accruals to be negatively associated with auditor tenure length, suggesting lower accruals and higher earnings quality when the auditor had been incumbent for longer periods. However in a replication of Frankel *et al.* (2002) that included an additional control variable for company asset growth, Reynolds *et al.* (2004) did not find any significant relationship between absolute discretionary accruals and tenure length. Also, Carcello and Nagy (2004) failed to find any significant relationship between lengthy auditor tenure and fraudulent financial reporting. A recent working paper, though, has documented a positive association between longer periods of auditor tenure and the likelihood of companies reporting levels of discretionary accruals that allow them to meet or beat earnings forecasts (Davis, Soo and Trompeter, (2007).

The respondents to a survey of audit firms and company directors conducted by the General Accounting Office (2003) did not believe that auditor tenure affected the manner in which auditors dealt with material financial reporting issues. However, the discussion in this sub-section highlights the contradictory and inconclusive nature of the research findings. A major problem is that it is difficult, if not impossible, to disentangle competence and independence effects arising from longer periods of auditor tenure. Also, by necessity, the prior research has examined various alternative proxies for audit quality and independence. It is therefore not unexpected that mixed

results have been found. Nevertheless, the prior literature does make it clear that there is the potential for independence impairment, both in fact and in appearance, when audit firms are incumbent for longer periods. This particularly arises from the interpersonal attachments and commitments that arise in the course of auditor-client relationships (Cook, 1977; Levinthal and Fichman, 1988; Seabright *et al.*, 1992; De Ruyter and Wetzels, 1999; Jubb, 2000). APES 110 specifically states that familiarity threats can arise as a result of a long association between senior audit personnel and assurance clients (APESB, 2006a, ss. 290.153 and 290.154).

The experimental scenarios contained in the study's Cases 3 and 4 manipulated audit firm tenure length.²³ These cases indicated the audit firm had been retained for the previous nine years, while all other cases indicated a four year tenure period. The four year tenure period was selected for all except Cases 3 and 4 to indicate a shorter tenure period, but not an engagement that could be considered an initial or early one. The nine year tenure period, being over twice the four years of tenure indicated in the other experimental cases, was selected for Cases 3 and 4 to clearly differentiate auditor tenure length. Sainty *et al.* (2002) and Raghunathan *et al.* (1994) classified audit tenure periods exceeding four and five years respectively as long, while Johnson *et al.* (2002) classified a tenure period exceeding eight years as long. Also, a nine year tenure period exceeds the average tenure length reported in most of the prior studies.²⁴

²³ The difference between Cases 3 and 4 was in the period of audit partner rotation specified. This aspect will be discussed in Section 6.1.2.2.

²⁴ The average auditor tenure lengths for sample companies, where reported in the prior studies, were 3.6 years in Copley and Doucet (1993), 8.2 years in Frankel *et al.* (2002), 6.0 years in Geiger and Raghunandan (2002), 8.8 years in Mansi *et al.* (2004), 7.2 years in Reynolds *et al.* (2004), 8.5 years in Ghosh and Moon (2005) and 13.3 in Crabtree *et al.* (2006).

6.1.1.4 Former audit firm partner as a director of the auditee

It is not unusual for audit staff to be recruited for employment with audit clients, and audit partners and experienced staff have often moved to senior positions, including directorships, with former audit clients (Wines, 2004). This practice is often referred to as the *revolving door* (see, for example, Clikeman, 1998; Menon and Williams, 2004; Geiger, North and O'Connell, 2005). The Australian and international codes of ethics consider that this circumstance can create 'self interest', 'familiarity' and 'intimidation' threats (IFAC, 2005, s. 290.143; APESB, 2006a, s. 290.28.6). The specific concerns arise from (a) the question of the ability of audit staff to be independent and exercise due diligence when dealing with an ex-colleague, (b) a reticence for audit staff to query the former colleague, (c) the former auditor potentially being able to exercise undue influence over the audit team, (d) the inside knowledge of the audit firm's practices possessed by the former auditor, and (e) the possibility of an auditor taking a more lenient audit approach in the period prior to employment with the client (Imhoff, 1978; Beasley, Carcello and Hermanson, 2000; Panel on Audit Effectiveness, 2000; Ramsay, 2001).

Prior research indicates that financial report users' perceptions of independence tend to be diminished when an auditor accepts employment with a client (Imhoff, 1978; Firth, 1980; Koh and Mahathevan, 1993). Independence concerns have been found to increase as the time lapse between working as an auditor of the audit client and accepting employment with the client decreases (Imhoff, 1978; Koh and Mahathevan, 1993), and the independence concerns have been found to be greater for financial report users than for CPAs (Imhoff, 1978; Firth, 1980)

Evidence from two experimental studies also found client employment effects to influence auditor decisions. Parlin and Bartlett (1994) reported higher preliminary assessments of materiality in cases where the client's controller had been the audit manager in charge of the prior year's audit, suggesting the auditors were influenced by knowledge of the prior employment. Kaplan and Whitecotton (2001) examined the reporting intentions of audit seniors who discovered an audit manager to be considering employment with an audit client but to be failing to comply with the relevant ethical ruling. The relevant ruling required the managers to remove themselves from the engagement until their offers were rejected or until employment was no longer sought. The study found evidence that the audit seniors would not always report this non-compliance to the audit engagement partner. This suggested weaknesses in the ethical ruling, resulting in independence concerns remaining in that situation.

Beasley *et al.* (1999, 2000) reported that, in a sample of 44 fraudulently reporting companies, five had chief financial officers who had worked for the incumbent audit firm immediately prior to joining the employer. Two later earnings management studies, though, report conflicting results. Menon and Williams (2004) found evidence of earnings management in companies where a former audit partner was an officer or director. In contrast, Geiger *et al.* (2005) did not detect evidence of earnings management in situations where companies had hired a senior financial reporting executive directly from the external audit firm.

In summary, the prior research generally suggests that potential independence concerns can arise from client employment effects. The corporate collapses earlier this decade have also drawn attention to the issue. For example, in the United States, former senior audit partners and staff of the incumbent audit firm were directors,

officers or in senior positions at Enron, Global Crossing and Waste Management (SEC, 2001; Menon and Williams, 2004; Geiger *et al.*, 2005). In Australia, three of the directors of HIH Insurance, including the chairman, were formerly partners of the incumbent audit firm (Ramsay, 2001; HIH Royal Commission, 2003).

To reduce the threat of independence impairment in these situations, various regimes have enacted *cooling-off* periods. These place limitations on the circumstances under which a former audit partner or staff member can undertake employment with an audit client. For example, IFAC (2003) recommended a two year cooling-off period for an individual who had a key role on an audit, or in the chain of command, within the audit firm before they could take on a key role at the audit client.

The relevant ethical standard in the United Kingdom applies to a former audit firm partner appointed as a director or to a key management position with an audit client. If such a partner had previously acted as an audit engagement partner (or as an independent partner, key audit partner or partner in the chain of command), the audit firm is required to resign as auditor and not accept reappointment until either a two year period has elapsed or the former partner ceases employment with the former client, whichever is the earlier (Auditing Practices Board, 2004b, para. 44).

In the United States, s. 206 of the *Sarbanes-Oxley Act* makes it unlawful for an accounting firm to perform an audit if the audit client's chief executive officer, controller, chief financial officer, chief accounting officer or any person serving in an equivalent position has previously been employed by the accounting firm and participated in the audit in any capacity during the one year period preceding the date of initiation of the audit.

The various independence reports in Australia earlier this decade advocated cooling-off period safeguards. The Ramsay Report recommended a two year cooling-off period during which a former audit firm partner directly involved in the audit of the client could not become a director of that client (Ramsay, 2001, p. 9). The CLERP 9 discussion paper endorsed this proposal, but extended its application to preclude a former partner from taking 'a position with the client involving responsibility for fundamental management decisions' (Commonwealth of Australia, 2002, p. 49). The HIH Royal Commission (2003, Vol. 1, pp. lxvii, 177) advocated a further strengthening by recommending (a) a four year cooling-off period before a former partner or key senior audit staff member who was involved in the audit of a client could become a director of, or take a senior management position with, the client, and (b) a two year cooling-off period for a former partner who was not directly involved in the audit of the client. The CLERP 9 legislation of 2004 (Commonwealth of Australia, 2004) ultimately amended the *Corporations Act 2001* (ss. 324CI and 324CJ) to specify a two year cooling-off period for lead or review auditors and professional members of the audit team. The proposal for a two year cooling-off period for a former partner not directly involved in the audit was not enacted.

The experimental scenarios contained in the study's Cases 8 and 9 indicated a former audit firm partner being a director of the audit client.²⁵ These cases stated that the director resigned from the audit firm 12 months earlier after 17 years with the firm, becoming director of the auditee eight months earlier. The director had not previously been involved in the audit of the auditee, and hence was not subject to the cooling-off period specified in the *Corporations Act 2001*. However, these cases did specify that the current audit engagement partner had worked closely with this director when

²⁵ The difference between Cases 8 and 9 was whether a local independence board within the audit firm was specified. This aspect will be discussed in Section 6.1.2.3.

previously with the audit firm, including as an audit supervisor and manager on several audits for which the director had previously been the manager or engagement partner.

6.1.2 Independence safeguards

6.1.2.1 Audit subject to additional external oversight

The effective oversight of the accounting profession and of independent audits is critical to the integrity of financial reporting (IOSCO, 2002a). There has been a recent growth in the establishment of external public oversight boards comprising 'government or professional committees to review the work of auditors and take an active part in setting and enforcing standards' (Hayes, Dassen, Schilder and Wallage, 2005, p. 48). Simnett and Smith (2005, p. 45) state that the instigation of public oversight 'has become a popular mechanism for reforming all of the recent ills attributed to the auditing standard-setting process', and the European Commission (2004b) argues that independence of public oversight systems from the profession is important for the restoration of public trust in statutory audits. In theory, oversight by an independent body should restore confidence through the introduction of neutrality and transparency (Simnett and Smith, 2005).

It is generally considered that the setting of auditing standards requires the significant practical and technical expertise of practicing auditors but, if auditors are given a free rein, the concern is that they will produce standards that reflect the interests of the profession rather than the public (Simnett and Smith, 2005). This provides the rationale for the additional oversight of auditors and auditing by some form of external public oversight board. Auditor oversight can occur in a number of ways, including within audit firms, by professional organisations and public or private

sector oversight bodies, and through government oversight (IOSCO, 2002a). While the accounting profession in many countries has typically operated on a self-regulatory basis, there has been a growing recognition that ‘the impact, or potential impact, of the profession on industry and commerce is so great that some supervision of the profession is needed to ensure its self-regulatory mechanisms are both adequate and appropriate’ (Ramsay, 2001, p. 63). Similarly, IOSCO (2002a) believes there is growing international consensus on the benefits of an audit oversight system that is not based exclusively or predominantly on self-regulation. Accordingly, recent developments in public oversight have tended to represent a move away from self-regulation to varying extents.

The former Public Oversight Board (POB) in the United States, established in 1977 and operating until 2002, is an example of an oversight approach. The board was established as an independent private sector body charged with overseeing and reporting on the programs of the SEC Practice Section (SECPS) of the AICPA, with the aim of providing assurance that the SECPS was serving the public interest (POB, 1979, 2002; Meigs, Whittington and Meigs, 1982). It was intended that this would provide the pressure of public scrutiny on audit firms to ensure their continued participation and compliance with the SECPS’s requirements (Olson, 1982). The POB comprised five members drawn from outside the accounting profession, with experience in such areas as business, education, banking, law, economics and government (Cook and Winkle, 1980; Hermanson, Strawser and Strawser, 1993; POB, 2002). It operated until May 2002.²⁶

²⁶ The Board wound itself up on 1 May 2002 (POB, 2002). This was mainly the result of an SEC proposal for a new private sector regulatory structure, but was also due to a decrease in support from the SECPS and the AICPA (POB, 2002, pp. 2–3).

As explained in Chapter 2, a new US public oversight body, the Public Company Accounting Oversight Board (PCAOB), was established with the enactment of the *Sarbanes-Oxley Act of 2002* on 30 July 2002 (ss. 101–109). The underlying mission of the board is to restore the confidence of investors and society in independent auditors following ‘the repeated revelations of accounting scandals and audit failures’ (Carmichael, 2004, p. 128). The PCAOB’s specified role is to ‘oversee the audit of public companies ... in order to protect the interests of investors and further the public interest in the preparation of informative, accurate, and independent audit reports ...’ (s. 101(a)). Major oversight functions of the board include a continuing program of inspections to assess the degree of compliance of registered firms and associated persons with applicable rules and standards (s. 104) and the conduct of investigations and disciplinary proceedings (s. 105).²⁷ The board consists of five financially literate members appointed from ‘prominent individuals of integrity and reputation who have a demonstrated commitment to the interests of investors and the public’ (s. 101(e)(1)). Only two members may be, or may have been, certified public accountants, and the chairperson cannot have been a practicing certified public accountant within the five year period prior to their appointment to the board (s. 101(e)(2)).

In Canada, two auditor oversight bodies have been established in recent times. The Canadian Public Accountability Board (CPAB) was announced in July 2002 and

²⁷ Specific duties of the board are to (a) register public accounting firms that prepare audit reports for issuers, (b) establish or adopt auditing, quality control, independence and other standards relating to the preparation of audit reports, (c) conduct inspections of registered accounting firms and associates, (d) conduct investigations and disciplinary proceedings, (e) perform other duties or functions as the board or SEC determines to be necessary or appropriate, (f) enforce compliance with the rules and standards relating to the preparation and issuance of audit reports, and (g) manage the board’s operations (s. 101(c)).

incorporated in April 2003 (CPAB, 2003).²⁸ The role of the CPAB is to provide independent oversight for auditors of entities that report to the Canadian securities commissions (CPAB, 2003). In particular, the CPAB conducts inspections and investigations of participating audit firms to assess their compliance with the board's rules, professional standards and the firms' own quality control standards, and can require remedial actions and impose sanctions where appropriate (CPAB, 2003, 2005).

The Auditing and Assurance Standards Oversight Council (AASOC) was also established in Canada, in October 2002, as an independent body to serve the public interest by overseeing the activities of the Canadian auditing standard-setting body, the Auditing and Assurance Standards Board (AASOC, 2005).²⁹ Members of the AASOC comprise prominent members of the community, together with senior representatives from public interest bodies, including the Canadian Securities Administrators, the Office of the Superintendent of Financial Institutions and the CPAB (AASOC, 2005).

The government in the United Kingdom, following a number of reviews and reports,³⁰ legislated for a strengthening of the regulatory framework for corporate

²⁸ The CPAB was established by the Canadian Institute of Chartered Accountants (CICA), the Federal Superintendent of Financial Institutions and the Canadian provincial securities commissions (CPAB, 2003).

²⁹ More specifically, the responsibilities of the AASOC include appointing members to, and providing input into the strategic direction and priorities of, the Auditing and Assurance Standards Board, working with that board to ensure appropriate consideration is given to the views of relevant stakeholders, ensuring the standard-setting process is effective and responsive to the public interest, and monitoring the Auditing and Assurance Standards Board's activities (AASOC, 2005).

³⁰ See, for example, Co-ordinating Group on Audit and Accounting Issues (2002, 2003) and the Department of Trade and Industry (2002, 2003a, 2003b, 2004).

governance, auditing and financial reporting.³¹ This resulted in a significant widening of the responsibilities of the United Kingdom's Financial Reporting Council (FRC (UK)),³² with the council becoming, from April 2004, a unified and authoritative regulator responsible for setting accounting and audit standards, monitoring and enforcing those standards, and overseeing auditors and the self-regulatory activities of the major professional accounting bodies (Department of Trade and Industry, 2004; FRC (UK), 2004, 2005). Also, the Professional Oversight Board³³ was established as a board of the FRC (UK) to undertake the oversight function (FRC (UK), 2004, 2007a, 2007c), and an Audit Inspection Unit was set up, as part of the board, with specific responsibility for monitoring the audits of all listed and other major public interest entities (FRC (UK), 2007b).

In the European Union, a proposal for more robust oversight of the audit profession was announced in March 2004 (European Commission, 2004a). Pursuant to revisions to the 8th Company Law Directive, the European Group of Auditors' Oversight Bodies (EGAOB) was established in December 2005 to ensure effective coordination of public oversight systems within the European Union (European Commission, 2005a, 2005b, 2006). The specific tasks of the body are to (a) facilitate cooperation between public oversight systems of member states and bring about an exchange of good practice concerning the establishment and ongoing cooperation of such systems, (b) contribute to the technical assessment of public oversight systems, and (c) contribute to the technical examination of international auditing standards with a view to their adoption at the community level (European Commission, 2005a). The

³¹ The reforms were legislated in the *Companies (Audit, Investigations and Community Enterprise) Act 2004* (October 2004) and *The Companies Act 1989 (Delegation) Order 2005* (August 2005).

³² The abbreviation FRC (UK) is used here to differentiate the Financial Reporting Council in the United Kingdom from Australia's Financial Reporting Council.

³³ Formerly the Professional Oversight Board for Accountancy prior to a name change in May 2006 (FRC (UK), 2007d).

EGAOB is composed of high-level, non-practitioner representatives from the entities responsible for public oversight of statutory auditors and audit firms in member states or, in their absence, of representatives from the competent National Ministries (European Commission, 2005a, 2005b).

In the international arena, the Public Interest Oversight Board (PIOB) was jointly created, in February 2005, by a number of international and related organisations in collaboration with IFAC (PIOB, 2006, 2007a).³⁴ The objective of the PIOB is to ‘increase the confidence of investors and others that the public interest activities of IFAC (including the setting of standards by IFAC boards and committees) are properly responsive to the public interest’ (PIOB, 2006, p. 3). The PIOB exercises oversight over IFAC’s three standard-setting boards,³⁵ their respective Consultative Advisory Groups and IFAC’s Compliance Advisory Panel.³⁶ The board comprises eight members nominated by IOSCO, the Basel Committee on Banking Supervision, the International Association of Insurance Supervisors and the World Bank, together with two observers nominated by the European Commission (PIOB, 2007b).

Developments have also occurred in Australia, with the Ramsay Report recommending the establishment of an Auditor Independence Supervisory Board (Ramsay, 2001, pp. 12–14). The report considered an independent supervisory board to be ‘an essential instrument in addressing the challenge of implementing new auditor independence requirements in Australia’ and that it would ‘play a vital role in

³⁴ These organisations were IOSCO, the Basel Committee on Banking Supervision, the International Association of Insurance Supervisors, The World Bank and the European Commission.

³⁵ These boards are the International Auditing and Assurance Standards Board, the International Ethics Standards Board for Accountants and the International Accounting Education Standards Board (PIOB, 2006, 2007a).

³⁶ The Compliance Advisory Panel evaluates the compliance of member bodies with IFAC’s membership rules, including their commitment to implement IFAC audit, ethics and education standards (PIOB, 2006, 2007a).

ensuring public confidence in the independence of auditors by monitoring implementation of the new regime, compliance with it, and important international developments in the area of auditor independence' (Ramsay, 2001, p. 12).

Rather than establishing a new Australian body, the audit oversight function was assigned to the existing Financial Reporting Council (FRC) with the passage of the *CLERP 9* legislation (Commonwealth of Australia, 2004). This resulted in the *Australian Securities and Investments Commission Act 2001* being amended to significantly expand the FRC's functions to include, from 1 July 2004, oversight of Australia's auditing standard-setting process and the monitoring of the effectiveness of Australia's auditor independence requirements (FRC, 2004).

With respect to auditor independence, s. 225(2B)(a) was inserted into the *Australian Securities and Investments Commission Act 2001* to extend the FRC's functions to monitor and assess the nature and overall adequacy of (a) the systems and processes used by Australian auditors to ensure compliance with auditor independence requirements, (b) the systems and processes used by professional accounting bodies for planning and performing quality assurance reviews of audit work undertaken by Australian auditors to the extent to which those reviews relate to auditor independence requirements, (c) the action that Australian auditors who have been subject to such quality assurance reviews have taken in response to the reports prepared, (d) the action taken by professional accounting bodies to ensure that Australian auditors who have been subject to such quality assurance reviews respond appropriately to the reports prepared, and (e) the investigation and disciplinary procedures of professional accounting bodies as those procedures apply to Australian

auditors.³⁷ In addition, the FRC's functions were expanded to include the monitoring of international auditor independence developments and assessing the adequacy of Australia's independence requirements (s. 225(2B)(e)).

The increased development of external public oversight bodies internationally, as highlighted in the discussion in this sub-section, emphasises that increased public oversight has been central to the strengthening of the audit function following the corporate collapses and perceptions of auditor independence impairment of earlier this decade. The experimental scenarios contained in the study's Cases 5 and 6 indicated a high level of non-audit (taxation) services. Case 5, but not Case 6, indicated that the company had raised debt and equity in the United States and therefore that the audit of the company, and the Australian auditor and audit firm, were subject to additional oversight by the PCAOB. The aim of the experimental manipulation was to convey the notion of an additional layer of rigorous external public oversight. In particular, the *Sarbanes-Oxley Act* provides the PCAOB with extensive powers to inspect registered public accounting firms (s. 104) and conduct investigations and disciplinary proceedings (s. 105), with detailed sanctions specified in s. 105(4).³⁸ Also, the study's research instrument was administered between 23 March 2004 and 5 May 2005, a period spanning that in which the Australian FRC's

³⁷ ASIC conducts inspections of Australian audit firms on behalf of the FRC (Department of the Treasury, 2005; Jubb and Houghton, 2007). Two reports to the FRC on the audit inspection program have been prepared by ASIC to date (ASIC, 2005, 2006). The PCAOB has also recently, on 16 July 2007, entered into a *Statement of Protocol* with ASIC 'to enhance cooperation in the supervisory oversight of auditors and public accounting firms that practice in the two regulators' respective jurisdictions' (PCAOB, 2007). This has been enabled in Australia by amendments to the *Australian Securities and Investments Commission Act 2001* and the *Corporations Act 2001* enacted in the *Australian Securities and Investments Commission Amendment (Audit Inspection) Act 2007*.

³⁸ These sanctions include (a) temporary suspension or permanent revocation of registration, (b) temporary or permanent suspension or barring of a person from further association with any registered public accounting firm, (c) temporary or permanent limitation on the activities, functions or operations of firms or persons, (d) civil monetary penalties, (e) censure, (f) required additional professional education or training, or (g) any other appropriate sanction provided for in the PCAOB's rules (s. 105(4)).

audit oversight function became operational from 1 July 2004 but after the *Sarbanes-Oxley Act* establishing the PCAOB was enacted on 30 July 2002.³⁹ Accordingly, at the time of administering the research instrument, Australia's public auditor oversight function was not as developed as that operating in the United States with the established PCAOB. Also, in contrast to the PCAOB, the FRC in Australia has been criticised for having no specific disciplinary powers (Simnett and Smith, 2005).⁴⁰

6.1.2.2 Auditor rotation

The potential independence threats posed by a lengthy period of auditor tenure were discussed in Section 6.1.1.3. The major safeguard that has been recommended to deal with these threats involves some form of auditor rotation. This requires an audited entity to change its audit firm, or the audit firm to change the partner(s) and/or audit personnel on the audit engagement, after some prescribed period of time.

While the corporate collapses earlier this decade gave impetus to recommendations for auditor rotation, the issue of mandatory rotation has been debated for many years (SEC, 2003). For example, it was raised by regulators in the United States *McKesson & Robbins* case at SEC hearings in 1939 (Hoyle, 1978; Ng, 2003) and by various commissions, regulators and professional organisations prior to the turn of this

³⁹ The first members of the PCAOB were named on 25 October 2002, the board's first public meeting was held on 9 January 2003, and the final determination required by the *Sarbanes-Oxley Act* to establish the PCAOB was made by the SEC on 25 April 2003 (PCAOB, 2004a).

⁴⁰ Simnett and Smith (2005, pp. 51–2) observe that disciplinary procedures have been left in the hands of the professional bodies, that the highest powers the FRC possess are to advise government if improvements are required and to refer matters to the Companies Auditors and Liquidators Disciplinary Board (CALDB) and ASIC, and that this could be viewed as 'a mere veil of oversight established to induce perceptions of an efficient oversight regime.'

century.⁴¹ Some companies had adopted audit firm rotation policies voluntarily as early as the beginning of the twentieth century, and the US company Du Pont rotated its audit firm every year, and later every several years, from 1910 until 1954 (Ng, 2003; Zeff, 2003).

Auditor rotation is primarily designed to mitigate familiarity threats between the auditor and the audit client's management (IFAC, 2005; APESB, 2006a). The general arguments in support of rotation are that pressures faced by the incumbent auditor to retain the audit client, together with the auditor's comfort level and close personal relationship with management developed over time, can adversely affect the auditor's actions in appropriately dealing with audit and financial reporting issues (Subcommittee on Reports, Accounting and Management, 1977; Hoyle, 1978; Catanach and Walker, 1999; General Accounting Office, 2003). A major claimed benefit of rotation is that it can break the relationship between the auditor and the audit client's management and enable a 'fresh' approach to the audit (Commission on Auditors' Responsibilities, 1978; Hoyle, 1978; Shanahan, 2002; General Accounting Office, 2003).

Audit firm rotation may be perceived as having the effect of reducing the economic bond between the auditor and client and lessening certain judgmental biases (Smith and Kida, 1991; Tan, 1995; Gates, Lowe and Reckers, 2007). Some proponents of audit firm rotation also contend that increased competition between firms will positively impact on the quality of audit services (Hoyle, 1978; Petty and Cuganesan, 1996; Catanach and Walker, 1999; Shanahan, 2002; Healey and Kim, 2003) and that

⁴¹ See, for example, Subcommittee on Reports, Accounting and Management (1977), Commission on Auditors' Responsibilities (1978), AICPA SECPS (1992); Auditing Practices Board (1992), Cadbury Committee (1992), Australian Society of Certified Practising Accountants and ICAA (1993), Office of the Chief Accountant of the SEC (1994), Public Oversight Board (1994) and the General Accounting Office (1996).

audit firm rotation provides effective external review of work done by previous auditors (Subcommittee on Reports, Accounting and Management, 1977; Catanach and Walker, 1999; Healey and Kim, 2003; Imhoff, 2003).

The general criticism of rotation is that it could be counterproductive by impacting negatively on audit quality (Arruñada and Paz-Ares, 1997; Catanach and Walker, 1999; Culvenor and Stokes, 2002, 2003; Houghton, 2002b, 2002c). It was highlighted in Chapter 2 that audit quality depends on both the auditor's competence and independence (DeAngelo, 1981a; Watts and Zimmerman, 1981). Critics contend that, after rotation, the new auditor's lack of knowledge of the company's operations, information systems and financial reporting practices, and the time needed to gain that knowledge, increase the risk of lowered audit quality and audit failure (Catanach and Walker, 1999; General Accounting Office, 2003).

Increased costs for audit firms and increased costs and disruption for audited entities are a further disadvantage of rotation requirements (Commission on Auditors' Responsibilities, 1978; Hoyle, 1978; Catanach and Walker, 1999; General Accounting Office, 2003). This will particularly be a problem in the early years of an audit engagement. A substantial amount of auditors' specific knowledge and *assets* connected to initial audits are destroyed with firm rotation, and client-specific information must be rebuilt after each rotation (Arruñada and Paz-Ares, 1997; Nelson, 2006). Arruñada and Paz-Ares (1997) also contend that rotation can simultaneously damage both competence and independence. The auditor's ability to detect irregularities is hampered by a greater number of initial audits and a lesser degree of specialisation, and the willingness of the auditor to report detected irregularities is reduced as rotation diminishes the expected cost of not reporting because of the lessened audit tenure period. Houghton (2002b, 2002c) argues that

audit firm rotation provides an incentive for auditors to do a minimal job for the limited tenure period to maximise profitability until the audit is lost to the next profit-maximising firm. Also, Hoyle (1978) argues that the complexity and size of most modern businesses are not conducive to short audit engagements. A further problem is that the limited number of audit partners and audit firms will make rotation more difficult to achieve (Petty and Cuganesan, 1996; Houghton and Jubb, 2003c).

While there has been a paucity of academic research into auditor rotation, a small number of perception and experimental studies have been conducted. The perception studies found that non-rotation of audit firms was not a dominant factor leading to perceptions of independence impairment (Teoh and Lim, 1996), and that audit partner rotation was not perceived to have any impact on the auditor's ability to resist management pressure (Goodwin and Seow, 2002). Hence, these studies do not suggest improved perceptions of independence arising from audit firm or partner rotation.

In an experimental study, Dopuch *et al.* (2001) found that a requirement for audit firm rotation decreased auditors' willingness to issue biased and misstated audit reports. In a further experimental study specifying an impasse between an auditor and their client on the treatment of a possible material misstatement, Arel, Brody and Pany (2006) found that auditor participants, where audit firm rotation was stipulated, were more likely to modify their audit report than were participants where a continuing relationship was expected. Gates *et al.* (2007) found that audit firm rotation, but not audit partner rotation, improved the confidence of participants in a company's reported earnings. Accordingly, the results of these experimental studies suggest a positive impact on independence arising from audit firm rotation.

In an empirical study, Azizkhani *et al.* (2007a) find some evidence of benefits arising from audit partner rotation. Partner rotation was found by the study to reduce the ability of companies to beat analyst earnings forecasts.

The major recent legislative and professional developments, though, have largely involved the prescription of audit partner, rather than audit firm, rotation. For example, none of Australia, Canada, the European Union, the United Kingdom or the United States require audit firm rotation (Department of the Treasury, 2006).

In Australia, the Ramsay Report proposed mandatory rotation of audit partners for audits of listed entities after a maximum of seven years (Ramsay, 2001, p. 16). The CLERP 9 discussion paper (Commonwealth of Australia, 2002, p. 4) recommended compulsory rotation of the lead engagement and review partners for listed entity audits after five years. The HIH Royal Commission broadly supported the CLERP 9 recommendation, including the five year period, but recommended that the proposal be extended to also require the rotation of 'key senior audit personnel' (HIH Royal Commission, 2003, Vol. 1, pp. lxviii, 180). The final CLERP 9 legislation amended the *Corporations Act 2001* (ss. 324DA to 324DD) to require the lead and review auditors to rotate after five successive years and not audit an individual audit client for more than five out of seven successive financial years. ASIC has the power to extend the rotation period to up to seven years on application from the auditor where the rotation obligations would impose an unreasonable burden (s. 342A).⁴²

Australia's APES 110 (APESB, 2006a), consistent with the IFAC code (IFAC, 2005), states that using the same lead engagement partner, audit review partner (if any) or

⁴² In making such a determination, ASIC is to have regard to (a) the nature of the audited body or bodies, including whether specialist knowledge is necessary to carry out the activity properly, (b) the availability of other registered company auditors capable of providing satisfactory audit services, and (c) any other matters which ASIC considers relevant (s. 342A(7)).

engagement quality control reviewer on an audit over a prolonged period may create a familiarity threat (APESB, 2006a, s. 290.154). Consistent with the *Corporations Act 2001*, the code prescribes that the relevant partners or quality control reviewer should be rotated after serving in any of these capacities for a period no longer than five financial years within a seven year period, and should not again participate in the audit engagement for at least two years (APESB, 2006a, s. 290.154).

In the United States, the *Sarbanes-Oxley Act of 2002* (s. 203) makes it unlawful for a firm to provide audit services to an issuing entity if the lead or coordinating partner, or the partner responsible for reviewing the audit, has performed audit services for that issuer in each of the previous five years. Consistent provisions are specified in the SEC's rules (SEC, 2003). Also, while the *Sarbanes-Oxley Act* is silent with regard to any *time-out* period before a partner can return to the audit client engagement, the SEC specifies a five year time out period (SEC, 2003).⁴³

Five year partner rotation and time out periods are also applicable for audits of listed companies in the United Kingdom, with this applying to personnel who have acted as the audit engagement partner or the independent partner (Auditing Practices Board, 2004c). The five year rotation and time out periods for partners also apply in Canada, while the European Union rules specify a rotation period of seven years and a time out period of two years (Canadian Institute of Chartered Accountants, 2003; Department of the Treasury, 2006; European Commission, 2006; FRC, 2006).

⁴³ The Commission's rules also extend rotation to (a) other partners on the audit engagement team who have responsibility for decision-making on significant auditing, accounting and reporting matters or who maintain regular contact with management and the audit committee, and (b) the lead partner on any subsidiaries whose assets or revenues are at least 20 per cent of consolidated assets or revenue (SEC, 2003). For these partners, rotation is required after no more than seven years and the time out period is two years.

As detailed in the discussion above, current independence developments have seen the specification of requirements for audit partner rotation. The experimental scenarios contained in the study's Cases 3 and 4 manipulated audit firm tenure length. These cases specified the audit firm had been retained for the previous nine years, while all other cases indicated a four year tenure period. The difference between Cases 3 and 4 was in the period of audit partner rotation. Case 3 specified a four year rotation period, while Case 4 specified a seven year rotation period. The aim of the experimental manipulation was to determine whether these differences in rotation period impacted on connotations of independence.

The seven year period was chosen for the longer rotation period scenario (Case 4) as this represents the longest of the various audit partner rotation periods specified in the regimes discussed above. A seven year rotation period is specified in the European Union's rules (European Commission, 2006). The Ramsay Report in Australia, prior to the CLERP 9 legislation, proposed rotation of audit partners for audits of listed entities after a maximum of seven years (Ramsay, 2001). Also, as noted previously, ASIC has the power under the *Corporations Act 2001* (s. 342A) to extend the rotation period to seven years where the five year period would impose an unreasonable burden.

The four year rotation period was chosen for the shorter rotation period scenario (Case 3) to signify a period of slightly lesser length than the five years stipulated in most of the regimes discussed in this sub-section, including Australia's. In being approximately 57 per cent of the seven year period specified in Case 4, a four year rotation period is of considerably lesser length. If audit partner rotation impacts favourably on perceptions of auditor independence, the expectation is that

connotations of auditor independence would be more favourable for the four year partner rotation period than for the seven year rotation period.

6.1.2.3 *Local independence board within the audit firm*

Auditor oversight can occur in a number of ways, including within audit firms, by professional organisations and public or private sector oversight bodies, and through government oversight (IOSCO, 2002a). It was observed in Section 6.1.2.1 that recent developments in auditor independence have represented a move toward greater external oversight. However, arguments have been advanced for additional internal oversight within audit firms themselves.

International and Australian auditing pronouncements specify quality control standards for audit firms. The International Auditing and Assurance Standards Board (IAASB) has issued its *International Standard on Quality Control ISQC 1* (IAASB, 2006b), while APES 320 *Quality Control for Firms* (APESB, 2006b) represents the parallel Australian pronouncement. These pronouncements, which reinforce the requirements specified in the *Code of Ethics for Professional Accountants* of IFAC and the APESB (IFAC, 2005; APESB, 2006a), require audit firms to establish quality control policies and procedures designed to provide reasonable assurance that independence requirements are complied with (APESB, 2006b, s. 18; IAASB, 2006, s. 18).

A relatively recent proposal that has been raised for additional quality control over auditor independence is the establishment of local independence oversight boards within individual audit firms. This was proposed in Australia in a submission to the Joint Committee of Public Accounts and Audit by Houghton (2002a), and further

espoused by Houghton and Jubb (2002, 2003b, 2003c, 2005). The following discussion draws from those references.

The proposal is based on the notion that local (internal) independence boards would represent an additional and observable quality control for independence. The proposal argues for audit firms having a critical mass of audits of publicly traded companies to establish their own independence board and for audit firms not having such a critical mass to have access to an independence board established under the auspices of an accounting professional body. The independence board would have the authority to define, review and decide on all threats and potential threats to independence within the audit firm. The board would also have responsibility for quality control and education programs in respect of an audit firm's decision making. The creation of these local independence boards would represent a market-observable independence quality control process developed under the scrutiny of market competition.

These boards would involve a panel of expert persons not associated with the audit firm and who would not benefit commercially from any decisions made. Remuneration of the board members would not be linked to the profitability of the firm, and structures could be set up to ensure some distance between the audit firm and the members' remuneration. For example, a trust fund could be set up by the accounting firm and independence board members could be remunerated from interest or other revenue generated within the fund.

The proposal is for independence boards to comprise between three and seven persons. The board would comprise experts from fields such as auditing, commercial law, professional services, accounting and auditing standard setting and accounting policy making. Current or former audit partners, and employees of the firm or similar

organisations, would be ineligible. The independence board would, in whole or with a minimum of three members, consider each threat to independence that exists within the firm. The outcome of these deliberations would be a decision on whether to proceed with individual audit engagements, and whether to put in place controls and procedures that would ensure the attainment of an adequate level of independence for individual engagements. The board would have, in effect, a power of veto over independence issues and ultimate control of acceptance and retention of audit engagements.

The names and qualifications of board members would be made public for transparency purposes. Membership of individuals on the board would be subject to some maximum period within the one firm, such as five years. To ensure continuity, no more than one-third of the board would retire in any one year. Members would not be allowed to move from one board to another for some stipulated period to protect an audit firm's confidentiality.

The rationale for the proposal for local independence boards is that there is currently little or no observable information on the processes and outcomes in respect of an audit firm's independence. While audit firms operate in a highly competitive environment and are active rivals with respect to audit pricing and audit competency, there is little evidence that they compete with respect to independence. Independence issues and independence threats are often subtle, and it is possible that auditors and auditees are sometimes not even conscious of them. Accordingly, actual and potential threats to independence are difficult to observe and measure. However, controlling independence decisions cannot rely on crude definitions and imprecise measures. The formal legislative and regulatory processes for ensuring independence are unlikely to succeed in establishing the presence of an independence threat except where the

threat is gross, extreme or easily measured. Hence, the more usual subtle independence threats are not susceptible to effective legalistic or regulatory intervention. Such intervention will also be incomplete if, over time, threats to independence change or new threats emerge. A market-based model can respond to these changes on a timely basis as the market itself changes. In comparison, legislated requirements are subject to delay and lobbying by vested interests.

Independence is rarely tested rigourously, and the market tends to accept an auditor's independence as a matter of trust rather than on the basis of any substantive underlying evidence. If the market has reason to question independence, the auditor rarely has convincing defences for the objectivity of their decision making or the independence of their audit. Decisions relating to independence are made entirely within the audit firm and final judgments are routinely made by persons within the firm who, either directly or indirectly, have some commercial interest in the outcome of the decision. If the market's trust in an auditor's independence is eroded in any way, the outcome is likely to involve scepticism and, as a consequence, the depleted value attributed to the audit by the market will be more exaggerated than would be the case if independence were more directly observable.

The objective of local internal independence boards is therefore to (a) enhance independence decisions within audit firms, (b) make more transparent to the users of audit reports the characteristics of the audit process, both in terms of competence and independence, and (c) remove independence decision making from those who have a commercial or vested interest in the outcome of independence decisions. The major arguments for a local internal independence board, rather than an arrangement imposed externally, are expressed in the proposal as follows:

- Independence issues, threats and potential threats can be dealt with swiftly and contemporaneously with the audit. A decision *ex ante* in any critical matter can be made and enforced by the board. This is preferable to dealing with an independence threat *ex post*, where a compromise or a greater economic cost may result;
- The board can deal with commercially sensitive issues without them becoming public or accessible to competitors;
- The quality control processes of the board can be observed by the market. Accounting firms could therefore compete in the market on the basis of their quality control procedures for independence rather than only on competence and price;
- Issues that are extremely subtle or difficult to assess and measure can be dealt with sympathetically but conclusively, and matters subject to conflicting arguments can be addressed without reference to crude measures;
- Reward structures within audit firms can take into account decisions made by the independence board to achieve equity across partners responsible for firm growth.

The model proposed represents a market-based solution comprising strong competitive processes to enhance the quality and transparency of independence decision making. However, an appropriate legislative and regulatory framework would also be required. This would necessitate a regime for the approval or registration of independence boards. Ideally, boards would be registered with a corporate regulator, minimum standards of membership and procedures would be specified and board decisions would be enforceable.

In enabling firms to compete with respect to their quality control over independence, the establishment of local independence boards would allow firms to focus not on short term revenue gains from a particular audit or non-audit engagement but on long term gains to their firm and the profession, and ultimately on the auditee and their shareholders. The establishment of such boards would represent an additional quality

control process that could infiltrate and subsume all the processes in the audit firm and affect the culture and ethos of the audit processes.

The Australian firm of PricewaterhouseCoopers (PwC) announced, in May 2002, an application of the local independence board proposal with the formation of an Audit Standards Oversight Board to oversee the firm's audit quality and independence processes (PwC, 2002; Houghton, 2003; Houghton and Jubb, 2003b). The board reported directly to the firm's Board of Partners, with all members appointed from outside the firm for a maximum, non-renewable term of five years (PwC, 2002). The board, though, published only two reports; in August 2003 (PwC Audit Standards Oversight Board, 2003) and September 2004 (PwC, 2004).

The Australian firm of KPMG established a variation on the local independence board concept with the establishment of an expert review panel, comprising Australian university professors Keith Houghton and Ken Trotman, to comprehensively review the firm's independence, conflict resolution and quality control procedures (KPMG Australia, 2002; Houghton, 2003; Houghton and Jubb, 2003b). Reports were prepared for 2002, 2003 and 2004 (Houghton and Trotman, 2002, 2003, 2005).

The establishment of these local independence oversight processes was affected by the expanded FRC responsibilities for the oversight of Australian auditors and the formation, as noted in Chapter 2, of the Audit Quality Review Board.⁴⁴ KPMG and PwC no longer continued with their local independence oversight initiatives after their reports for the 2004 year.

⁴⁴ With the release of its third report for the 2004 year, KPMG specifically stated that '[w]ith the introduction of the Audit Quality Review Board (AQRB) there will not be a need for any future reports to be undertaken by Professors Houghton and Trotman' (KPMG Australia, 2005).

The experimental scenarios contained in the study's Cases 8 and 9 indicated a former audit firm partner being a director of the audit client. Case 8, but not Case 9, specified the presence of a local independence board within the audit firm. The case specified that the firm, to emphasise and make visible quality controls for independence, had established a separate independence board eighteen months earlier. The board was specified to comprise a panel of four expert persons not otherwise commercially associated with the audit firm. These members were a commercial lawyer, a retired former partner of another 'Big Four' accounting firm, a university auditing professor and a former chairperson of the Australian Accounting Standards Board. The independence board was specified to have specific authority to define, review and decide upon all threats and potential threats to auditor independence, with the aim of removing decision making in respect of such independence matters from those within the firm who had a commercial or vested interest in the outcome. The aim of the experimental manipulation was to convey the notion of an additional quality control process comprising an additional layer of oversight, in this case from an independence board within the audit firm.

6.1.3 Summary: Potential independence threats and safeguards

The chapter to this point has summarised the prior literature on the independence threats and safeguards forming the basis for the study's experimental manipulations. To reiterate, the potential threats forming the basis for the study's experimental cases are (a) the auditor provision of non-audit (taxation) services, (b) interlocking directorships among audit clients, (c) a longer period of audit firm tenure, and (d) the presence of a former audit firm partner as a director of the auditee company. The safeguards included in the experimental cases to mitigate potential independence threats are (a) the audit being subject to additional external oversight by the PCAOB,

(b) alternate periods of audit partner rotation, and (c) the establishment of a local (internal) independence board within the audit firm. The discussion of the prior academic research and recent developments indicates that the experimental manipulations represent contemporary auditor independence issues. The experimental cases comprise potential independence threats highlighted in the literature that can presently arise, independence safeguards introduced to mitigate potential independence threats, or proposals for additional independence safeguards.

6.2 HYPOTHESES: COGNITIVE STRUCTURE

The study's general research question was stated as:

Is there shared meaning of the auditor independence concept between key parties to the financial reporting communication process?

The study's general research question seeks to determine whether there is shared meaning of the auditor independence concept between alternative groups of key parties to the financial reporting communication process. The measurement of meaning framework is employed to facilitate investigation of the general research question by identifying the cognitive structure within which the concept of auditor independence is considered. The experimental cases provide a wide variety of independence threat and safeguard scenarios over which, given the prior literature summarised in the previous sections, connotations (interpretations) of auditor independence would be expected to vary. Analysis of the study's semantic differential scale data will enable the dimensions of meaning underlying the auditor independence concept to be identified.

As emphasised in Chapter 3, Osgood *et al.* (1957) proposed the three factor *E-P-A* (Evaluative, Potency, Activity) structure for meaning generally. These three

dimensions have been supported for general concepts in many prior studies, and have been investigated in the prior accounting and auditing studies referred to in Chapter 4.

Accordingly, the first research hypothesis is stated as:

H1: Research participants interpret the connotative meaning of the auditor independence concept within a three factor E-P-A cognitive structure.

The measurement of meaning research method can provide insight into whether there is *shared meaning* of the concept of auditor independence for the research participants. As a minimum, this would require the three groups to interpret the independence concept within the same general cognitive (factor) structure. Hypothesis 1 above suggests an *E-P-A* structure for the independence concept. However, shared meaning does not require such a three factor structure. Irrespective of the number of factors the cognitive structure is found to comprise, shared meaning requires the identified structure to be shared both between and within the research participant groups. That is, the cognitive structure must be the same for each of the research participant groups and must be shared within each of the individual groups.

The second research hypothesis is therefore stated as:

H2: Research participants interpret the connotative meaning of the auditor independence concept within a shared cognitive structure.

6.3 HYPOTHESES: EXPERIMENTAL CASES AND MEASURED MEANING

Following identification of the cognitive structure within which the concept of auditor independence is considered, the measurement of meaning framework can be used to determine how research participants interpret the individual audit engagement independence threat and safeguard experimental scenarios. The framework can be

used to determine whether there are any (a) between-group differences for each of the individual experimental cases, and (b) within-group differences, for each participant group, between various alternative experimental cases.

6.3.1 Between-group differences

Semantic differential analysis can examine whether there are any differences between the three participant groups in measured meanings of auditor independence (connotations of independence) for each of the alternative experimental cases. That is, factor placements can be compared for identical scenarios between the three groups, providing insight into whether between-group differences exist in connotations of independence for each of the individual experimental cases. Shared meaning of the concept in individual situations would be absent if significant between-group differences exist. Any such differences would be of practical significance as they would signify a lack of agreement between the alternative parties in response to the specified threat and safeguard circumstances. The third research hypothesis is therefore stated as:

H3: There are no significant differences between research participant groups in the measured meaning of auditor independence for each of the alternative experimental cases.

6.3.2 Within-group differences

The hypotheses developed in this sub-section seek to establish whether within-group differences, for each participant group, exist between the various alternative experimental cases. That is, they aim to determine the manner and extent to which the specified independence threats and safeguards affect the measured meaning of independence.

6.3.2.1 *Non-audit services and additional external oversight*

The independence threats posed by the auditor provision of non-audit services were discussed in Section 6.1.1.1. It was concluded that the academic research findings generally suggest that the joint provision of audit and non-audit services do not impair independence in fact but could impair perceptions of auditor independence (independence in appearance).

While studies have examined many categories of non-audit services, the discussion in Section 6.1.1.1 highlighted that there is some current debate on the auditor provision of taxation services. Some categories of auditor provided taxation services have been banned, or must be considered carefully, pursuant to legislation and professional rules in various regimes. Taxation advice centred on higher risk tax structures and potentially abusive and aggressive tax transactions have been effectively prohibited in countries such as the United Kingdom and the United States (Auditing Practices Board, 2004d; PCAOB, 2005). In addition, an international exposure draft issued by the IESBA in December 2006 proposes the prohibition of tax advice where the effectiveness of that advice depends on a particular accounting treatment or financial statement presentation and there is reasonable doubt as to the appropriateness of the related treatment or presentation (IESBA, 2006, s. 290.182). However, at the date of writing, changes of this nature have not been implemented or formally foreshadowed in Australia. Consistent with earlier versions of *Professional Statement F.1* (ICAA and CPA Australia, 2002a, 2004), the current APES 110 states that taxation services comprise a broad range of services, including compliance, planning, provision of formal taxation opinions and assistance in the resolution of tax disputes, and that such assignments 'are generally not seen to create threats to independence' (APESB, 2006a, s. 290.180).

There are, therefore, no specific prohibitions on accounting firms providing general tax compliance and tax planning services to audit clients in Australia. Further, there has been a lack of prior research examining perceptions of independence when general tax compliance and tax planning services are provided by accounting firms to audit clients. However, the joint provision of audit and taxation services has the potential to raise the self-interest, self review, advocacy, familiarity and intimidation threats specified in APES 110 (APESB, 2006a, s. 200.3). The potential for adverse impacts on perceptions of independence would also be expected to increase as the level of taxation services increase, and especially when the fees derived from those services are relatively high in relation to the audit fee.

The experimental scenarios contained in the study's Cases 5 and 6 indicated that the audit firm's taxation division had provided, with the pre-approval of the audit committee, additional tax compliance and tax planning services to the auditee. These services were specified to amount to approximately three to four times the audit fee over the four year audit tenure period, and hence would be considered to be at a high level in both absolute and proportional terms.⁴⁵

Hence, the study's fourth hypothesis considers that connotations of auditor independence will be adversely impacted by the joint provision of audit services and a high level of taxation services. The hypothesis is therefore stated as:

***H4:** The measured meaning of auditor independence within individual research participant groups is affected by the presence of a high level of auditor provided taxation services.*

⁴⁵ To reiterate, the audit fee was specified to have increased from \$178 500 to \$192 500 per annum over the four year tenure period, while the taxation services fees had increased from 328% of the audit fee (\$584 800) to 399% (\$767 500) over the same period.

Hypothesis 4 can be tested by comparing, for each research participant group, the measured meanings of independence (factor placements) in Cases 5 and 6 with those in Case 1. It was specified in Case 1 that the audit firm had not derived any additional remuneration from the provision of non-audit services over the period of the audit engagement.

Hypothesis 4 is based on the expectation that the potential for negative perceptions of independence increases as the level of audit firm provided taxation services increases. It would therefore also be expected that, in comparison to a high level of taxation services, perceptions of independence would be less adversely affected by a lower level of audit firm provided taxation services.

The experimental scenario in Case 7 indicated that the audit firm's taxation division had provided to the auditee, with the pre-approval of the audit committee, additional tax compliance and tax planning services amounting to approximately one-half the audit fee over the four year audit tenure period.⁴⁶ Accordingly, the taxation services were at a considerably lower level than specified in Cases 5 and 6, and connotations of independence would be expected to be more adversely affected in those latter cases than in Case 7.

The fifth research hypothesis is therefore stated as:

H5: The measured meaning of auditor independence within individual research participant groups is affected by the extent of auditor provided taxation services.

⁴⁶ To reiterate, the taxation services fees specified in Case 7 had increased from 47% of the audit fee (\$83 500) to 49% (\$94 300) over the four year audit tenure period.

Hypothesis 5 can be tested by comparing, for each research participant group, the measured meanings of independence (factor placements) in Cases 5 and 6 (high taxation services) with those in Case 7.

The prior literature on the independence safeguard of additional auditor oversight by a public oversight board was discussed in Section 6.1.2.1. It was concluded that there have been further developments internationally in recent years in the establishment of additional public oversight bodies. These bodies provide additional public oversight of the audit function and auditor independence, and this increased oversight has been designed to strengthen the audit function following the corporate collapses and perceptions of independence impairment of earlier this decade.

The likelihood for negative perceptions of auditor independence arising in response to potential independence threat conditions would be expected to be lower in circumstances where there is an additional safeguard in the form of additional public oversight of the audit function and auditor independence. The experimental scenarios contained in the study's Cases 5 and 6 specified the potential threat of a high level of audit firm provided taxation services. However Case 5, but not Case 6, indicated the company had raised debt and equity in the United States and therefore that the audit of the company, and the Australian auditor and audit firm, were subject to additional oversight by the PCAOB. The expectation, the basis for *H6*, would therefore be for connotations of the audit firm's independence to be positively impacted by the existence of this additional auditor oversight by the PCAOB.

The sixth research hypothesis is therefore stated as:

H6: *The measured meaning of auditor independence within individual research participant groups is affected by the existence of additional auditor oversight.*

Hypothesis 6 can be tested by comparing, for each research participant group, the measured meanings of independence (factor placements) in Case 5 (high taxation services with additional PCAOB oversight) with those in Case 6 (high taxation services without additional PCAOB oversight).

6.3.2.2 *Interlocking directorships among audit clients*

The independence threats posed by interlocking directorships among audit clients were discussed in Section 6.1.1.2. The findings of the small number of empirical studies to have examined interlocking directorships suggest that these interlocks are positively associated with company auditor choice and length of audit tenure (Davison *et al.*, 1984; Jubb, 2000; Courtney and Jubb, 2005). The discussion in Section 6.1.1.2 also highlighted that the presence of interlocking directorships among audit clients increases the possibility for personal ties arising between the audit firm and the audit client, thereby raising potential independence concerns. The discussion also highlighted that interlocking directorships potentially raised various categories of threats specified in APES 110 (APESB, 2006a, s. 200.3), and particularly those of self interest, familiarity and intimidation.

No prior research has examined perceptions of auditor independence in the presence of interlocking directorships. The experimental scenario contained in the study's Case 2 indicated that three non-executive directors of the auditee were also non-executive directors of other companies audited by the incumbent audit firm. This created

interlocks between the auditee company and two other companies, with the presence of a common audit engagement partner. The expectation, the basis for *H7*, would therefore be for connotations of the audit firm's independence to be adversely affected by the presence of these interlocking directorships.

The seventh research hypothesis is therefore stated as:

H7: The measured meaning of auditor independence within individual research participant groups is affected by the presence of interlocking directorships among audit clients.

Hypothesis 7 can be tested by comparing, for each research participant group, the measured meanings of independence (factor placements) in Case 2, where the interlocking directorships were specified, with those in Case 1 where no major potential threats to independence were indicated.

6.3.2.3 Longer period of audit firm tenure and audit partner rotation

The independence threats posed by lengthy periods of audit firm tenure were discussed in Section 6.1.1.3. It was concluded that, while the prior research is inconsistent, it does make clear that there is the potential for independence impairment, both in fact and in appearance, when audit firms are incumbent for longer periods. This particularly arises from the interpersonal attachments, commitments and behavioural bonds that arise in the course of the auditor-client relationship. The threat categories identified by APES 110 (APESB, 2006a) that this could particularly affect are those of self-interest, familiarity and intimidation.

The experimental scenarios specified in Cases 3 and 4 indicated the audit firm had been retained for a period of nine years. All other cases specified a four year tenure period. While four and seven year audit partner rotation periods respectively were

indicated in Cases 3 and 4, the basic threat arising from a longer period of audit firm tenure still remains. Audit partner rotation represents only a partial solution, as rotation addresses only one aspect of the threat, being that arising from any interpersonal relationships between that specific partner and the audited company's directors and other personnel. The threat arising from the relationship between the audit firm and the audited entity, built up over a lengthy period of tenure, still remains. Client-specific quasi-rents, as identified by DeAngelo (1981b), will still be captured by the audit firm, and the firm therefore still has incentives to lower quality over future periods to retain the client and protect those quasi-rents. The later periods of the audit firm's tenure, as highlighted by Raghunathan *et al.* (1994), tend to be periods of relative stability and positive cash flows after the considerable learning costs associates with a new client, and this could lessen the audit firm's motivation to report financial statement misrepresentations in the audit report.

The expectation, the basis for *H8*, would therefore be for the audit firm's independence to be considered to be adversely impacted by the longer period of audit firm tenure.

The eighth research hypothesis is therefore stated as:

H8: The measured meaning of auditor independence within individual research participant groups is affected by the length of audit firm tenure, even in the presence of audit partner rotation policies.

Hypothesis 8 can be tested by comparing, for each research participant group, the measured meanings of independence (factor placements) in Cases 3 and 4, where audit firm tenure length was nine years, with those in Case 1, where audit firm tenure length was four years.

The prior literature on the independence safeguard of audit partner rotation was discussed in Section 6.1.2.2. That discussion noted that recent independence developments in many regimes, including Australia, have specified requirements for audit partner rotation as a major independence safeguard. If audit partner rotation is perceived to have a positive impact on auditor independence, the expectation is that connotations of auditor independence in the scenarios where the audit firm had been incumbent for a period of nine years would be more favourable where partner rotation occurs after four years rather than after seven years.

The ninth research hypothesis is therefore stated as:

H9: The measured meaning of auditor independence within individual research participant groups is affected by the period of audit partner rotation.

Hypothesis 9 can be tested by comparing, for each research participant group, the measured meanings of independence (factor placements) in Case 3 (nine year audit firm tenure with partner rotation after four years) with those in Case 4 (nine year audit firm tenure with partner rotation after seven years).

6.3.2.4 Former audit firm partner as a director of the auditee and local independence board

The independence threats posed by audit firm partners and staff moving to employment or directorships with audit clients were discussed in Section 6.1.1.4. The findings of perception studies indicate that financial report users' perceptions of auditor independence tend to be diminished when an auditor accepts employment with a client. Experimental studies have found client employment effects to influence auditor decisions in a manner that could pose independence perception concerns.

Research has also found some evidence of instances of fraudulent reporting and earnings management where company officers or directors were formerly partners with, or had worked for, the incumbent audit firm.

Experimental Cases 8 and 9 indicated that one of the auditee company's directors had previously been employed in the incumbent audit firm for a total period of over 17 years, with 11 of these as a partner. The scenario indicated that the current audit engagement partner had been with the audit firm for the entire period in which the director had been with the firm. In addition, the current audit engagement partner had worked as an audit supervisor and manager on several audits for which the director had previously been the manager or audit engagement partner, hence indicating a previous close working relationship between the two. The director had not previously been involved in the audit of the auditee, and hence was not subject to the *cooling-off* period specified in the *Corporations Act 2001*.

This situation, though, would not have been allowed pursuant to the proposal of the HIH Royal Commission for a two year cooling-off period for a former partner not directly involved in the audit (HIH Royal Commission, 2003, Vol. 1, pp. lxvii, 177). However, this proposal was not enacted in the final CLERP 9 legislation (Commonwealth of Australia, 2004). Given the prior literature and the HIH Royal Commission's proposal, the expectation that forms the basis for *H10* is that connotations of the audit firm's independence will be adversely affected by the presence of a director of the audit client who was formerly an audit partner of the audit firm. This expectation arises from the previous close working relationship between the current audit partner and the director, irrespective of the fact that the director had not formerly been involved specifically in the audit of the auditee company.

The tenth research hypothesis is therefore stated as:

H10: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a director of the audit client who was formerly an audit partner of the audit firm.

The proposal for an additional auditor independence safeguard comprising local independence boards established within audit firms, as presented in Houghton (2002a) and Houghton and Jubb (2002, 2003b, 2003c, 2005) was discussed in Section 6.1.2.3. The rationale for these local independence boards is that they would represent an observable quality control for independence and would represent additional oversight of auditor independence by a panel of external experts.

Accordingly, if research participants consider these local independence boards to represent an effective quality control safeguarding independence, the likelihood for negative perceptions of auditor independence arising in response to potential independence threat conditions would be expected to be lower in circumstances where such a board existed. Accordingly, the expectation is that, *ceteris paribus*, connotations of auditor independence would be more favourable in scenarios where a local independence board was specified. As noted above, the experimental scenarios contained in the study's Cases 8 and 9 specified that one of the auditee company's directors had previously been employed by, and been a partner with, the incumbent audit firm. However Case 8, but not Case 9, indicated the presence of a local internal independence board. The expectation, the basis for *H11*, is therefore that connotations of the audit firm's independence will be positively impacted by the existence of the local independence board specified in Case 8.

The eleventh research hypothesis is therefore stated as:

H11: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a local independence board within the audit firm.

Hypothesis 11 can be tested by comparing, for each research participant group, the measured meanings of independence (factor placements) in Case 8 (existence of ex-partner as director of auditee with local independence board) with those in Case 9 (existence of ex-partner as director of auditee without local independence board).

6.4 SUMMARY

Research hypotheses were developed in this chapter for the purpose of investigating the study's general research question of whether shared meaning of the auditor independence concept exists between alternative groups of key parties to the financial reporting communication process. These hypotheses are designed to identify the cognitive structure within which the concept of auditor independence is considered by research participants, establish whether differences exist between participant groups in the measured meaning (connotations) of independence for each of the individual experimental cases, and determine the manner and extent to which the relevant independence threats and safeguards affect connotations of independence for each participant group. The study's 11 research hypotheses are restated in Table 6.1.

Research hypotheses	
H1:	Research participants interpret the connotative meaning of the auditor independence concept within a three factor E-P-A cognitive structure.
H2:	Research participants interpret the connotative meaning of the auditor independence concept within a shared cognitive structure.
H3:	There are no significant differences between research participant groups in the measured meaning of auditor independence for each of the alternative experimental cases.
H4:	The measured meaning of auditor independence within individual research participant groups is affected by the presence of a high level of auditor provided taxation services.
H5:	The measured meaning of auditor independence within individual research participant groups is affected by the extent of auditor provided taxation services.
H6:	The measured meaning of auditor independence within individual research participant groups is affected by the existence of additional auditor oversight.
H7:	The measured meaning of auditor independence within individual research participant groups is affected by the presence of interlocking directorships among audit clients.
H8:	The measured meaning of auditor independence within individual research participant groups is affected by the length of audit firm tenure, even in the presence of audit partner rotation policies.
H9:	The measured meaning of auditor independence within individual research participant groups is affected by the period of audit partner rotation.
H10:	The measured meaning of auditor independence within individual research participant groups is affected by the presence of a director of the audit client who was formerly an audit partner of the audit firm.
H11:	The measured meaning of auditor independence within individual research participant groups is affected by the presence of a local independence board within the audit firm.

Table 6.1: Research hypotheses

Following the development of research hypotheses in this chapter, the study's research findings are presented in the following four chapters. An initial analysis of the research data is presented in Chapter 7. An evaluation of the cognitive structure for the concept of auditor independence, addressing *H1* and *H2*, is presented in Chapter 8. Research findings examining between-group differences in measured meaning for the experimental cases, addressing *H3*, are presented in Chapter 9, while findings examining within-group differences, addressing *H4* to *H11*, are presented in Chapter 10.

CHAPTER 7

INITIAL DATA ANALYSIS

Prior to analysing the semantic differential scale data in accordance with the measurement of meaning framework, a preliminary understanding of the research data can be gained by undertaking a number of initial data analysis procedures. This also ensures the research data is appropriate for subsequent statistical analysis.

The initial data analysis procedures presented in this chapter are (a) a summary of the research sample size across the participant groups and experimental cases, (b) an analysis of manipulation check responses, (c) descriptive statistics for the semantic differential scale variables, (d) correlation matrix for the study's variables, (e) multivariate analysis of variance (MANOVA) of the semantic scale data by case and participant category, and (f) overview analysis of auditor independence perceptions by experimental case and participant category.

7.1 SAMPLE SIZE ACROSS PARTICIPANT GROUPS AND EXPERIMENTAL CASES

Information on the alternate versions of the research instrument and on the research participants was presented in Chapters 4 and 5. To complement that information in relation to the research sample, a summary of the research sample size by experimental case and participant group is shown in Table 7.1. As explained in Chapter 4, Cases 2, 3 and 5 were contained in Version 1 of the research instrument, Cases 4, 6 and 8 in Version 2 and Cases 1, 7 and 9 in Version 3.

Experimental Case	Participant group		
	Auditors	Preparers	Users
Case 1	27	23	21
Case 2	27	23	21 ¹
Case 3	27	23	22
Case 4	26	25	26
Case 5	27	23	22
Case 6	26	25	26
Case 7	27	23	21
Case 8	26	25	26
Case 9	26 ²	23	21

¹ One user participant did not complete Case 2 (Version 1 of the research instrument).

² One auditor participant did not complete Case 9 (Version 3 of the research instrument).

Table 7.1: Summary of research sample size by experimental case and participant group

Discussion of sample size considerations in Section 5.1 of Chapter 5 demonstrated that a sample of 20 responses to each of the nine experimental cases by each of the three participant groups would satisfy sample size requirements. The figures in Table 7.1 show that this requirement has been exceeded for all experimental cases and research groups.

7.2 MANIPULATION CHECKS

As noted in Chapter 4, manipulation checks were included in the research instrument after each experimental case. Manipulation checks assess how participants perceive and interpret the particular experimental manipulation (Gravetter and Forzano, 2006). In the present study, this allows a conclusion to be drawn on whether participants understood the manipulations in each of the case scenarios.

A summary of the results of the manipulation checks for each case for each participant group is presented in Table 7.2. The table shows that all participants in all three groups correctly answered the manipulation check questions for Case 2 and Case 6. All other cases had at least one manipulation check incorrectly answered for at least one participant group.

For the ten case and participant group cells in Table 7.2 where manipulation checks were failed (refer shaded cells), four involved only one participant incorrectly responding to the manipulation check questions (Cases 3 and 7 for auditors and Cases 1 and 9 for preparers). One involved two participants responding incorrectly (Case 5 for auditors), one involved three incorrect responses (Case 8 for preparers) and one involved four incorrect responses (Case 8 for auditors). Case 4 had the highest incorrect manipulation check response rate, with the manipulation check being failed by ten of the 26 auditors, five of the 25 preparers and six of the 26 users.

		Auditors		Preparers		Users	
		N	%	N	%	N	%
CASE 1	Passed	27	100.0	22	95.7	21	100.0
	Failed	0	0.0	1	4.3	0	0.0
	Total	27	100.0	23	100.0	21	100.0
CASE 2	Passed	27	100.0	23	100.0	21	100.0
	Failed	0	0.0	0	0.0	0	0.0
	Total	27	100.0	23	100.0	21	100.0
CASE 3	Passed	26	96.3	23	100.0	22	100.0
	Failed	1	3.7	0	0.0	0	0.0
	Total	27	100.0	23	100.0	22	100.0
CASE 4	Passed	16	61.5	20	80.0	20	76.9
	Failed	10	38.5	5	20.0	6	23.1
	Total	26	100.0	25	100.0	26	100.0
CASE 5	Passed	25	92.6	23	100.0	22	100.0
	Failed	2	7.4	0	0.0	0	0.0
	Total	27	100.0	23	100.0	22	100.0
CASE 6	Passed	26	100.0	25	100.0	26	100.0
	Failed	0	0.0	0	0.0	0	0.0
	Total	26	100.0	25	100.0	26	100.0
CASE 7	Passed	26	96.3	23	100.0	21	100.0
	Failed	1	3.7	0	0.0	0	0.0
	Total	27	100.0	23	100.0	21	100.0
CASE 8	Passed	22	84.6	22	88.0	26	100.0
	Failed	4	15.4	3	12.0	0	0.0
	Total	26	100.0	25	100.0	26	100.0
CASE 9	Passed	26	100.0	22	95.7	21	100.0
	Failed	0	0.0	1	4.3	0	0.0
	Total	26	100.0	23	100.0	21	100.0

Table 7.2: Summary of manipulation checks

The incorrect manipulation check response rate for Case 4, the case with the highest number and rate of manipulation check failures, was 38.5 per cent for auditors, 23.1 per cent for users and 20 per cent for preparers. The case specified a nine year period of audit firm tenure with partner rotation every seven years. Under this scenario, rotation of the audit engagement partner had occurred two years earlier. The manipulation check question where incorrect responses occurred asked for a 'Yes/No' response to the question 'The company's current audit engagement partner has been in this position for over eight years.' The correct response was 'No', as the current audit engagement partner had only been in the position for two years.

Given that the case clearly stated that 'the engagement was most recently rotated two years ago to a new audit engagement partner from the firm', the likely reason for the high rate of incorrect responses to this Case 4 manipulation check was that the participants interpreted the question as asking about the period of audit firm, rather than audit engagement partner, tenure. The audit firm was specified to have had a nine year period of audit tenure in Case 4, in comparison to a four year period in the other cases (Cases 6 and 8) to which these participants responded.

Case 8 had the second highest incorrect manipulation check response rate. The incorrect manipulation check response rate was 15.4 per cent for auditors and 12 per cent for preparers. There were no manipulation check failures for the users. Case 8 specified a former audit firm partner being a director of the auditee, with the audit firm having a local independence board. Unlike the manipulation check failures for Case 4, the incorrect Case 8 manipulation check responses were not for a single manipulation check question. Two auditors and two preparers failed the manipulation check question relating to presence of a former audit firm partner as an auditee company director, two auditors responded incorrectly to the question relating to the

existence of a local (internal) independence board, and one preparer responded incorrectly to the question on the period for which the current audit engagement partner had been in that position.

Cases 4 and 8 were the only cases for which incorrect manipulation responses were made by more than one participant group. The manipulation check failures for Cases 1, 3, 5, 7 and 9 were only for single participant groups. Also, with the exception of case 5 which had two manipulation check failures for auditors, the other four cases had only one incorrect manipulation check response.

Given the importance of having as large a sample size as possible, it is crucial not to discard participant responses without further analysis. To assess the manipulation check failures, the significance of differences in each of the 22 semantic scales for each relevant case was assessed between (a) the sub-group of participant responses for which manipulation checks were correctly answered and (b) all participants, including those for whom the manipulation checks were not correctly answered.¹ This analysis indicates whether the responses to the semantic scales are significantly affected by the inclusion of those from participants who had failed the relevant manipulation check. The non-parametric *Mann Whitney U* test was used for this purpose.

Importantly, no significant differences in any of the semantic scale responses, at $p \leq .05$, were found by the *Mann Whitney* testing when the manipulation check failure responses were included. Table 7.3 presents, for each case and group where there was a manipulation check failure, a summary of the *Mann Whitney* analysis by presenting

¹ This procedure was adopted as sample size considerations meant it was not appropriate to compare the small number of responses with manipulation failures directly with the responses where manipulation check failures were not present.

data on the individual scale that exhibited the difference of the greatest significance when the manipulation check failure responses were included. Hence, for example, for the preparer group for Case 1, the individual semantic scale of the 22 that exhibited the difference of greatest statistical significance was the bad–good scale, where the difference was at a significance level of $p = .763$. The case with the difference in an individual scale that was of greatest significance was for the auditor group for Case 4. The significance of the difference in that case was at $p = .163$ for the indirect–direct scale. The next greatest difference was at $p = .298$ (in the weak–strong scale for users for Case 4).

Given that the testing indicates no significant difference in semantic differential scales by including responses where manipulation check questions were not answered correctly, all responses were retained for purposes of the research. However, given that Cases 4 and 8 were the cases for which there were incorrect manipulation responses for more than one participant group and where the total number of incorrect responses across all groups was greater than two, additional sensitivity analysis is conducted in the analysis of individual cases presented in Chapters 9 and 10 for these cases. This additional analysis allows a conclusion to be drawn on whether the study's results in relation to these cases are significantly affected by the inclusion of manipulation check failure observations.

Case	Participant group	Highest significance		Semantic differential scale
		Mann Whitney <i>U</i>	<i>p</i>	
Case 1	Preparers	242.0	.763	Bad–Good
Case 3	Auditors	338.0	.790	Incomplete–Complete
Case 4	Auditors	156.5	.163	Indirect–Direct
Case 4	Preparers	225.5	.564	Estimated–Exact
Case 4	Users	219.0	.298	Weak–Strong
Case 5	Auditors	317.5	.674	Unnecessary–Necessary
Case 7	Auditors	339.0	.821	Unnecessary–Necessary
Case 8	Auditors	247.0	.408	Adverse–Beneficial
Case 8	Preparers	248.0	.553	Unexpected–Expected
Case 9	Preparers	245.0	.848	Estimated–Exact

Table 7.3: Analysis of manipulation checks

7.3 SEMANTIC DIFFERENTIAL SCALE DESCRIPTIVE STATISTICS

Based on the pilot study's results, for statistical analysis purposes the participant semantic scale responses were coded with the 'positive' end point of the scale given a value of '7' and the 'negative' end point coded as '1'. Hence, for example, if a participant responded by ticking the 'good' end point of the bad–good scale or the 'safe' end point of the risky–safe, those responses were coded as '7'. Similarly, if a participant responded by ticking the 'bad' or 'risky' end points, those responses were coded '1'.²

Descriptive statistics of the semantic scale data, presented in descending order of variance, are shown in Table 7.4. These indicate that the 22 scales had variances of between 3.83 and 2.05 (for the seven point scale), and all scales had a range from the lowest to highest possible values. The ten scales exhibiting the highest variances comprised five evaluative and five potency scales. The next five scales in descending order of variance comprised four activity scales and one evaluative scale.

² Given this coding system, all factor placements in any subsequent factor analysis will be positive if research participants, as a whole, respond to the semantic scales in the same way as the pilot study participants.

Semantic scale (E-P-A)	Variance	Standard Deviation	Mean	Minimum	Maximum
Risky-Safe (E)	3.83	1.96	4.52	1	7
Incomplete-Complete (P)	3.68	1.92	4.66	1	7
Bad-Good (E)	3.56	1.89	4.83	1	7
Subjective-Objective (E)	3.52	1.88	4.39	1	7
Weak-Strong (P)	3.43	1.85	4.60	1	7
Imaginary-Real (P)	3.07	1.75	4.89	1	7
Adverse-Beneficial (E)	3.05	1.75	4.96	1	7
Intangible-Tangible (P)	2.96	1.72	4.60	1	7
Estimated-Exact (P)	2.93	1.71	4.42	1	7
Discretionary-Required (E)	2.91	1.71	5.39	1	7
Unplanned-Planned (A)	2.85	1.69	5.10	1	7
Uncontrollable-Controllable (E)	2.83	1.68	5.03	1	7
Inflexible-Flexible (A)	2.75	1.66	4.12	1	7
Passive-Active (A)	2.67	1.63	4.52	1	7
Short-term-Long-term (A)	2.66	1.63	4.62	1	7
Unmeasurable-Measurable (P)	2.65	1.63	4.93	1	7
Unexpected-Expected (E)	2.60	1.61	5.33	1	7
Temporary-Permanent (A)	2.49	1.58	4.56	1	7
Variable-Constant (A)	2.49	1.58	4.41	1	7
Static-Dynamic (A)	2.25	1.50	4.27	1	7
Indirect-Direct (P)	2.24	1.50	4.45	1	7
Unnecessary-Necessary (E)	2.05	1.43	5.76	1	7

N = 658

(E) = Evaluative scales

(P) = Potency scales

(A) = Activity scales

Table 7.4: Semantic differential scale descriptive statistics

7.4 CORRELATION MATRICES

Correlations between the study's variables are presented in this section. The correlations are presented and discussed in separate sub-sections for each of the evaluative, potency and activity scales.

7.4.1 Evaluative scales

Correlations for the eight evaluative scales with all scales are presented in Table 7.5. The matrix shows that the evaluative scales are generally highly correlated with each other. Correlations range from a high of 0.841 (bad–good with risky–safe) to a low of 0.196 (subjective–objective with unnecessary–necessary). Fourteen of the 28 correlations between the eight evaluative scales exceed 0.5 and all are significant at $p < .001$.

The evaluative scales are also generally highly correlated with the seven potency scales. Correlations range from a high of 0.839 (bad–good with weak–strong) to a low of 0.162 (unnecessary–necessary with indirect–direct). Thirty-one of the 56 correlations between the evaluative and potency scales exceed 0.5 and all are significant at $p < .001$.

The evaluative scales are less highly correlated with the seven activity scales than with the potency scales. Correlations between the evaluative and activity scales range from a high of 0.654 (risky–safe with unplanned–planned) to a low of -0.016 (discretionary–required with inflexible–flexible). Seven of the 56 correlations between the evaluative and activity scales exceed 0.5. Forty-five of these 56 correlations are significant at $p < .001$, with another one significant at $p < .01$ and one

at $p < .05$. The inflexible–flexible scale is the only activity scale that is not significantly correlated with any of the evaluative scales.

In addition to seeking responses on the 22 semantic differential scales, the research instrument response sheet also contained two questions relating to participants' *perceptions* of the audit firm's independence for each case. The first question sought a response to a seven point scale question 'To what extent do you agree with the statement that the audit firm in this case would have maintained its independence', with end points 'Strongly Agree' and 'Strongly Disagree'. The final question on the response sheet sought a 'Yes/No' dichotomous response to the question 'If you were a non-executive director of the company in this case, would you regard the audit appointment to be satisfactory with respect to the independence of the audit firm?'

Correlations between the evaluative scales and the participant's perception score responses are also presented in Table 7.5. Correlations between the evaluative scales and the seven point perception scores range from a high of 0.838 (bad–good) to a low of 0.299 (unnecessary–necessary). Six of the eight correlations exceed 0.5 and all are significant at $p < .001$.

Correlations between the evaluative scales and the dichotomous perception scores range from a high of 0.746 (bad–good) to a low of 0.222 (unnecessary–necessary). Four of the eight correlations exceed 0.5 and all are significant at $p < .001$.

Variables	Adverse-Beneficial	Bad-Good	Discretionary-Required	Risky-Safe	Subjective-Objective	Uncontrollable-Controllable	Unexpected-Expected	Unnecessary-Necessary
Evaluative scales:								
Adverse-Beneficial	1.000							
Bad-Good	.789 ***	1.000						
Discretionary-Required	.446 ***	.392 ***	1.000					
Risky-Safe	.763 ***	.841 ***	.355 ***	1.000				
Subjective-Objective	.484 ***	.549 ***	.206 ***	.520 ***	1.000			
Uncontrollable-Controllable	.608 ***	.596 ***	.422 ***	.621 ***	.417 ***	1.000		
Unexpected-Expected	.582 ***	.560 ***	.529 ***	.559 ***	.424 ***	.578 ***	1.000	
Unnecessary-Necessary	.402 ***	.322 ***	.551 ***	.318 ***	.196 ***	.336 ***	.472 ***	1.000
Potency scales:								
Estimated-Exact	.499 ***	.554 ***	.246 ***	.569 ***	.540 ***	.499 ***	.432 ***	.182 ***
Imaginary-Real	.770 ***	.797 ***	.411 ***	.773 ***	.562 ***	.616 ***	.563 ***	.337 ***
Incomplete-Complete	.778 ***	.826 ***	.366 ***	.811 ***	.504 ***	.597 ***	.549 ***	.281 ***
Indirect-Direct	.468 ***	.537 ***	.227 ***	.532 ***	.529 ***	.436 ***	.396 ***	.162 ***
Intangible-Tangible	.477 ***	.532 ***	.279 ***	.548 ***	.633 ***	.482 ***	.467 ***	.250 ***
Unmeasurable-Measurable	.534 ***	.552 ***	.273 ***	.558 ***	.491 ***	.574 ***	.471 ***	.268 ***
Weak-Strong	.740 ***	.839 ***	.358 ***	.820 ***	.601 ***	.575 ***	.549 ***	.327 ***
Activity scales:								
Inflexible-Flexible	.026	.016	-.016	.028	-.001	.003	-.015	.011
Passive-Active	.484 ***	.488 ***	.224 ***	.491 ***	.511 ***	.382 ***	.433 ***	.209 ***
Short-term-Long-term	.347 ***	.359 ***	.185 ***	.395 ***	.334 ***	.316 ***	.243 ***	.101 **
Static-Dynamic	.270 ***	.289 ***	.145 ***	.310 ***	.288 ***	.238 ***	.237 ***	.140 ***
Temporary-Permanent	.385 ***	.409 ***	.139 ***	.427 ***	.369 ***	.334 ***	.291 ***	.048
Unplanned-Planned	.614 ***	.632 ***	.356 ***	.654 ***	.532 ***	.536 ***	.572 ***	.409 ***
Variable-Constant	.326 ***	.387 ***	.161 ***	.406 ***	.408 ***	.336 ***	.297 ***	.077 *
Perception scores:								
Perception: 7 point scale	.736 ***	.838 ***	.350 ***	.800 ***	.515 ***	.567 ***	.515 ***	.299 ***
Perception: Dichotomous scale	.686 ***	.746 ***	.269 ***	.720 ***	.476 ***	.511 ***	.440 ***	.222 ***

*** Significant at $p < .001$ (Spearman correlation, two-tailed test)

** Significant at $p < .01$ (Spearman correlation, two-tailed test)

* Significant at $p < .05$ (Spearman correlation, two-tailed test)

Table 7.5: Correlation matrix — Evaluative scales

In summary, the eight evaluative scales are significantly correlated with each other and also with the seven potency scales. With the exception of the inflexible–flexible scale, the evaluative scales are generally correlated with the activity scales, although not at as high a level as with the potency scales. The evaluative scales also show generally high correlations with participant’s responses to the two independence *perception* scale questions.

7.4.2 Potency scales

Correlations for the seven potency scales are presented in Table 7.6. The matrix shows that the potency scales are generally highly correlated with each other. Correlations range from a high of 0.801 (incomplete–complete with weak–strong) to a low of 0.443 (indirect–direct with unmeasurable–measurable). Nineteen of the 21 correlations between the seven potency scales exceed 0.5 and all are significant at $p < .001$.

As noted in the previous sub-section, the potency scales are highly correlated with the evaluative scales. They are also generally highly correlated with the seven activity scales, with correlations ranging from a high of 0.645 (weak–strong with unplanned–planned) to a low of -0.029 (estimated–exact with inflexible–flexible). Ten of the 49 correlations between the potency and activity scales exceed 0.5. As with the correlations with the evaluative scales, the inflexible–flexible scale is the only activity scale that is not significantly correlated with any of the potency scales. Of the other correlations between the potency and activity scales, all are significant at $p < .001$.

Correlations between the potency scales and the seven point perception scores range from a high of 0.832 (incomplete–complete) to a low of 0.489 (intangible–tangible). Five of the seven correlations exceed 0.5 and all are significant at $p < .001$.

Correlations between the potency scales and the dichotomous perception scores range from a high of 0.736 (incomplete–complete) to a low of 0.412 (intangible–tangible). Three of the seven correlations exceed 0.5 and all are significant at $p < .001$.

In summary, the seven potency scales are significantly correlated with each other and, as discussed in the prior sub-section, with the eight evaluative scales. With the exception of the inflexible–flexible scale, the potency scales are correlated with the activity scales, although not generally at as high a level as with the evaluative scales. The potency scales also show generally high correlations with participant’s responses to the two independence perception scale questions.

Variables	Estimated-Exact	Imaginary-Real	Incomplete-Complete	Indirect-Direct	Intangible-Tangible	Unmeasurable-Measurable	Weak-Strong
Potency scales:							
Estimated-Exact	1.000						
Imaginary-Real	.580 ***	1.000					
Incomplete-Complete	.546 ***	.788 ***	1.000				
Indirect-Direct	.458 ***	.562 ***	.524 ***	1.000			
Intangible-Tangible	.524 ***	.574 ***	.522 ***	.539 ***	1.000		
Unmeasurable-Measurable	.618 ***	.566 ***	.546 ***	.443 ***	.586 ***	1.000	
Weak-Strong	.570 ***	.771 ***	.801 ***	.585 ***	.586 ***	.550 ***	1.000
Activity scales:							
Inflexible-Flexible	-.029	-.021	.032	-.005	.051	-.001	.052
Passive-Active	.449 ***	.518 ***	.479 ***	.572 ***	.474 ***	.415 ***	.538 ***
Short-term-Long-term	.332 ***	.408 ***	.371 ***	.463 ***	.327 ***	.300 ***	.416 ***
Static-Dynamic	.264 ***	.317 ***	.295 ***	.307 ***	.282 ***	.254 ***	.324 ***
Temporary-Permanent	.390 ***	.455 ***	.461 ***	.506 ***	.362 ***	.347 ***	.470 ***
Unplanned-Planned	.498 ***	.624 ***	.619 ***	.483 ***	.588 ***	.529 ***	.645 ***
Variable-Constant	.445 ***	.432 ***	.362 ***	.624 ***	.427 ***	.345 ***	.460 ***
Perception scores:							
Perception: 7 point scale	.530 ***	.752 ***	.832 ***	.491 ***	.489 ***	.544 ***	.783 ***
Perception: Dichotomous scale	.429 ***	.667 ***	.736 ***	.483 ***	.412 ***	.419 ***	.734 ***

*** Significant at $p < .001$ (Spearman correlation, two-tailed test)
 ** Significant at $p < .01$ (Spearman correlation, two-tailed test)
 * Significant at $p < .05$ (Spearman correlation, two-tailed test)

Table 7.6: Correlation matrix — Potency scales

7.4.3 Activity scales

Correlations for the seven activity scales are presented in Table 7.7. The matrix shows that all activity scales, with the exception of the inflexible–flexible scale, are highly correlated with each other. The inflexible–flexible scale is significantly positively correlated with two of the other activity scales, significantly negatively correlated with three of the activity scales, and not significantly correlated with the remaining activity scale. Excluding the inflexible–flexible scale, correlations between the other six activity scales range from a high of 0.597 (short-term–long-term with temporary–permanent) to a low of 0.096 (short-term–long-term with static–dynamic). Of the correlations between the activity scales excluding the inflexible–flexible scale, four of the 15 correlations exceed 0.5. Of these 15 correlations, 14 are significant at $p < .001$ and the other at $p < .05$.

In summary, the seven activity scales, with the exception of the inflexible–flexible scale, are consistently significantly positively correlated with each other. As discussed in the prior sub-sections, and again with the exception of the inflexible–flexible scale, the activity scales are generally significantly correlated with the evaluative and potency scales. The activity scales, with the exception of the inflexible–flexible scale, are also significantly correlated with the two independence perception scale scores.

The inflexible–flexible scale is the scale that differs the most from the others, with a range of positive and negative correlations with the other activity scales and a lack of correlation with the evaluative and potency scales and with the two perception scale scores.

Variables	Inflexible -Flexible	Passive- Active	Short-term -Long-term	Static- Dynamic	Temporary -Permanent	Unplanned -Planned	Variable- Constant
Activity scales:							
Inflexible-Flexible	1.000						
Passive-Active	.079 **	1.000					
Short-term-Long-term	-.183 ***	.358 ***	1.000				
Static-Dynamic	.222 ***	.511 ***	.096 **	1.000			
Temporary-Permanent	-.145 ***	.397 ***	.597 ***	.189 ***	1.000		
Unplanned-Planned	-.009	.473 ***	.308 ***	.348 ***	.329 ***	1.000	
Variable-Constant	-.140 ***	.417 ***	.521 ***	.179 ***	.543 ***	.353 ***	1.000
Perception scores:							
Perception: 7 point scale	.022	.480 ***	.343 ***	.272 ***	.396 ***	.592 ***	.356 ***
Perception: Dichotomous scale	.043	.454 ***	.290 ***	.276 ***	.361 ***	.509 ***	.300 ***

*** Significant at $p < .001$ (Spearman correlation, two-tailed test)
 ** Significant at $p < .01$ (Spearman correlation, two-tailed test)
 * Significant at $p < .05$ (Spearman correlation, two-tailed test)

Table 7.7: Correlation matrix — Activity scales

As an overall summary, the correlations show a high level of association between the various evaluative, potency and activity scales, with the inflexible–flexible scale being the exception. However, it must be borne in mind that this analysis is for all three participant groups pooled, which may disguise differences within individual groups.

7.5 MANOVA OF SEMANTIC DIFFERENTIAL SCALE DATA

Analysis of the semantic scale data was conducted using MANOVA to compare the raw responses to the 22 scales for the nine cases across the three research participant groups. Analysis of the raw scores is not a measure of difference in meaning within the Osgood *et al.* (1957) framework, but does provide an initial indication of whether there are differences in scale responses between the three participant groups and the alternative experimental cases.

Care, though, should be exercised in interpreting these results due to sample size considerations. A minimum sample size in each cell of 20 is recommended for MANOVA (Hair *et al.*, 1998; Tabachnick and Fidell, 2001). With three participant groups and nine experimental cases, there are 27 cells in the current study. Observation of Table 7.1 shows that all cell sizes exceed 20 observations. However, an additional sample size requirement for MANOVA is that the number of observations in each cell should exceed the number of dependent variables (Hair *et al.*, 1998; Tabachnick and Fidell, 2001). With 22 semantic differential scales as dependent variables in the study's MANOVA, the minimum sample size in each cell should be 23. Observation of Table 7.1 reveals that six of the nine cells for users have cell sizes of slightly less than this. Four cells for the users have 21 observations (Cases 1, 2, 7 and 9) and a further two cells have 22 observations (Cases 3 and 5).

Accordingly, while the MANOVA results reported in this section provide an initial indication of whether there are differences in scale responses between the three participant groups and the alternative experimental cases, the above sample size limitation should be kept in mind.

The MANOVA results, presented in Table 7.8, indicate highly significant differences between the three groups of research participants, between the alternative experimental cases, and in the interaction term. These differences are generally of consistent significance under the four alternative test statistics (Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root).³ As an overall test, this provides evidence that differences in semantic scale responses exist between the three participant groups and between the nine experimental cases.

³ Of these four multivariate statistics, Pillai's Trace is generally considered to be the most robust against assumption violations (Coakes, 2005). Nevertheless, the statistics for all four methods are reported for completeness and to show that the results are not sensitive to the method adopted.

Effect	Test	Value	<i>F</i>	Hypothesis df	Error df	<i>p</i>
Intercept	Pillai's Trace	0.98	1296.92	22	610	< .001
	Wilks' Lambda	0.02	1296.92	22	610	< .001
	Hotelling's Trace	46.77	1296.92	22	610	< .001
	Roy's Largest Root	46.77	1296.92	22	610	< .001
Group	Pillai's Trace	0.27	4.41	44	1222	< .001
	Wilks' Lambda	0.74	4.51	44	1220	< .001
	Hotelling's Trace	0.33	4.60	44	1218	< .001
	Roy's Largest Root	0.26	7.19	22	611	< .001
Case	Pillai's Trace	0.65	2.50	176	4936	< .001
	Wilks' Lambda	0.47	2.79	176	4622	< .001
	Hotelling's Trace	0.91	3.15	176	4866	< .001
	Roy's Largest Root	0.63	17.65	22	617	< .001
Group * Case Interaction	Pillai's Trace	0.64	1.18	352	10000	.012
	Wilks' Lambda	0.51	1.19	352	7972	.009
	Hotelling's Trace	0.70	1.20	352	9730	.006
	Roy's Largest Root	0.16	4.66	22	625	< .001

Table 7.8: MANOVA results for semantic differential scale data

The MANOVA results presented in Table 7.8 show a significant interaction term. An interaction effect means that the difference on one treatment variable depends on the level of a second treatment variable (Hair *et al.*, 1998). In the present analysis, the treatment variables are the three participant groups and the nine experimental cases. The significant interaction effect indicates that the relationship between the semantic scales and the experimental cases is not consistent across the three participant groups. Accordingly, the MANOVA of semantic scale data was also conducted separately for each group. Results are presented in Table 7.9.

The MANOVA results for auditors, preparers and users presented in Table 7.9 show highly significant differences in the semantic scale data between the alternate experimental cases for all three groups.⁴ Under all tests, the results show differences between the experimental cases in the scale responses for all groups at a significance of at least $p = .001$.

⁴ As noted previously, the results for the user participants should be interpreted with caution due to the sample size limitation for six of the nine cells (cases).

Panel A: MANOVA results for auditors

Effect	Test	Value	<i>F</i>	Hypothesis df	Error df	<i>p</i>
Intercept	Pillai's Trace	0.98	537.28	22	209	<.001
	Wilks' Lambda	0.02	537.28	22	209	<.001
	Hotelling's Trace	56.56	537.28	22	209	<.001
	Roy's Largest Root	56.56	537.28	22	209	<.001
Case	Pillai's Trace	0.99	1.39	176	1728	.001
	Wilks' Lambda	0.32	1.46	176	1593	<.001
	Hotelling's Trace	1.31	1.54	176	1658	<.001
	Roy's Largest Root	0.58	5.71	22	216	<.001

Panel B: MANOVA results for preparers

Effect	Test	Value	<i>F</i>	Hypothesis df	Error df	<i>p</i>
Intercept	Pillai's Trace	0.98	414.29	22	183	<.001
	Wilks' Lambda	0.02	414.29	22	183	<.001
	Hotelling's Trace	49.81	414.29	22	183	<.001
	Roy's Largest Root	49.81	414.29	22	183	<.001
Case	Pillai's Trace	1.29	1.66	176	1520	<.001
	Wilks' Lambda	0.22	1.78	176	1397	<.001
	Hotelling's Trace	1.86	1.91	176	1450	<.001
	Roy's Largest Root	0.87	7.55	22	190	<.001

Panel C: MANOVA results for users

Effect	Test	Value	<i>F</i>	Hypothesis df	Error df	<i>p</i>
Intercept	Pillai's Trace	0.98	415.48	22	176	<.001
	Wilks' Lambda	0.02	415.48	22	176	<.001
	Hotelling's Trace	51.94	415.48	22	176	<.001
	Roy's Largest Root	51.94	415.48	22	176	<.001
Case	Pillai's Trace	1.27	1.56	176	1464	<.001
	Wilks' Lambda	0.21	1.77	176	1344	<.001
	Hotelling's Trace	2.05	2.03	176	1394	<.001
	Roy's Largest Root	1.20	10.01	22	183	<.001

Table 7.9: MANOVA results by research participant group

Further MANOVA results, not reported in Table 7.9, allow identification of the individual semantic scales that differ between the experimental cases for each participant group. Of the 22 semantic scales, significant differences at $p < .05$ existed for 16 of the scales for auditors, 20 scales for preparers and 20 scales for users.

The only scale that did not differ significantly between the experimental cases for all three participant groups was the inflexible–flexible scale. For both the preparers and users, the unnecessary–necessary scale did not differ significantly between the alternate cases. The only other scales that did not exhibit significant between-case differences were for the auditor group with respect to the short-term–long-term, static–dynamic, subjective–objective, temporary–permanent and variable–constant scales.

The results in this section provide evidence that significant differences in a majority of the semantic scales exist between the nine experimental cases for each of the research participant groups. This also suggests that there are likely to be differences, between the participant groups and the experimental cases, in any factors comprising these scales extracted by applying the measurement of meaning method.

7.6 PERCEPTIONS OF AUDITOR INDEPENDENCE

As noted earlier, the research instrument response sheet contained, in addition to the 22 semantic scales, two questions relating to participants' *perceptions* of the audit firm's independence for each case.

The first perception question, requiring a response on a seven-point scale with end points 'Strongly Disagree' and 'Strongly Agree', asked 'To what extent do you agree with the statement that the audit firm in this case would have maintained its

independence'. Univariate ANOVA was conducted to model the responses as a function of the three groups of research participants and the nine experimental cases. Results are presented in Panel Table 7.10. The results show highly significant differences in the perception scores between the three groups of research participants, between the nine cases and in the interaction term.

Given the significant interaction effect, the univariate ANOVA of the perception responses was also conducted separately for each group. Results, reported in Table 7.11, show the experimental case variable to be significant for all groups at $p < .001$. These results indicate highly significant differences in the perception scores between the alternate cases for each of the research participant groups.

Source	Sum of squares	df	Mean square	F	p
Corrected Model	959.26	26	36.90	16.72	<.001
Intercept	14604.46	1	14604.46	6619.31	<.001
Group	90.90	2	45.45	20.60	<.001
Case	770.42	8	96.30	43.65	<.001
Group * Case interaction	106.76	16	6.67	3.02	<.001
Error	1352.49	613	2.21		
Total	17221.00	640			
Corrected total	2311.75	639			

Adjusted R squared = .39

N (Auditors) = 234 (6 non-responses)

N (Preparers) = 204 (9 non-responses)

N (Users) = 202 (5 non-responses)

Table 7.10: Univariate ANOVA of seven point scale perception responses

Panel A: Univariate ANOVA for auditors

Source	Sum of squares	df	Mean square	F	p
Corrected Model	178.14	8	22.27	9.48	<.001
Intercept	6592.16	1	6592.16	2806.74	<.001
Case	178.14	8	22.27	9.48	<.001
Error	528.46	225	2.35		
Total	7320.00	234			
Corrected total	706.60	233			

Adjusted R squared = .23

Panel B: Univariate ANOVA for preparers

Source	Sum of squares	df	Mean square	F	p
Corrected Model	273.68	8	34.21	15.80	<.001
Intercept	4363.59	1	4363.59	2015.12	<.001
Case	273.68	8	34.21	15.80	<.001
Error	422.26	195	2.17		
Total	5055.00	204			
Corrected total	695.94	203			

Adjusted R squared = .37

Panel C: Univariate ANOVA for users

Source	Sum of squares	df	Mean square	F	p
Corrected Model	416.48	8	52.06	25.01	<.001
Intercept	3969.49	1	3969.49	1906.82	<.001
Case	416.48	8	52.06	25.01	<.001
Error	401.78	193	2.08		
Total	4846.00	202			
Corrected total	818.26	201			

Adjusted R squared = .49

Table 7.11: Univariate ANOVA of seven point scale perception responses by group

The second perception question, requiring a dichotomous Yes/No response, asked 'If you were a non-executive director of the company in this case, would you regard the appointment to be satisfactory with respect to the independence of the audit firm?' Results from a logistic regression of the responses, reported in Table 7.12, show moderately significant differences in the dichotomous perception scores between the three groups of research participants ($p = .064$) and between the nine cases (at $p = .098$). The interaction term is not significant in the logistic regression.

As the measurement of meaning framework is the principal method used in this study, further analysis of the differences in the perception scores between the participant groups and the experimental cases is not undertaken. However, the finding of generally significant differences in the perception responses, especially for the seven point scale question, supports the results from the MANOVA of the semantic scale data indicating that there are significant differences in interpretations of auditor independence across the participant groups and experimental cases.

	Beta	Std error	Wald	df	<i>p</i>
Constant	3.00	0.62	23.73	1	< .001
Group	-0.50	0.27	3.44	1	.064
Case	-0.17	0.10	2.73	1	.098
Group * Case interaction	-0.04	0.05	0.85	1	.355

Cox and Snell R squared = .137

Nagelkerke R squared = .190

Percentage correctly classified = 71.1%

N (Auditors) = 237 (3 non-responses)

N (Preparers) = 210 (3 non-responses)

N (Users) = 201 (6 non-responses)

Table 7.12: Logistic regression of dichotomous scale perception responses

7.7 SUMMARY

Results from initial data analysis procedures were reported in this chapter. The chapter commenced with a dissection of the sample size across the participant groups and experimental cases, followed by an analysis of responses to manipulation check questions and presentation of descriptive statistics for the semantic scale data. This was followed by presentation of correlation matrices of correlations between the study variables, these indicating a high level of association between the various evaluative, potency and activity scales. Analyses of the individual semantic scale responses and the responses to the two auditor independence perception questions indicated significant differences in interpretations of auditor independence between the three participant groups and the nine experimental cases. These initial data analysis procedures form the background for the measurement of meaning framework analysis presented in the following three chapters.

CHAPTER 8

RESEARCH FINDINGS: COGNITIVE STRUCTURE

The previous chapter presented results from an initial examination of the research data. The major research findings of the study are now presented. The two major components of the study entail (a) determining the *cognitive structure* within which the concept of auditor independence is considered by research participants, and (b) examining the *measured meaning* of auditor independence in the nine alternative experimental cases across the three participant groups. Results of the first component of the study are presented in this chapter, allowing conclusions to be drawn on the study's *H1* and *H2*. Results of the second component are presented in Chapters 9 and 10.

The chapter proceeds as follows. Issues related to the form of factor analysis to be used to investigate cognitive structure are discussed in Section 8.1. Introductory factor analysis results are presented in Section 8.2, including factor eigenvalues and a scree plot of eigenvalues. The results of four, three, two and single factor analytic models are presented in Sections 8.3 to 8.6. A discussion of the findings relating to the cognitive structure within which the meaning of the auditor independence concept is considered by research participants is contained in Section 8.7, and a summary in Section 8.8 completes the chapter.

8.1 FACTOR ANALYSIS: COMPONENT ANALYSIS VERSUS COMMON FACTOR ANALYSIS

Before examining the cognitive structure within which the concept of auditor independence is interpreted by research participants, important issues related to the appropriate form of factor analysis are discussed in this section.

Factor analysis is a method used to determine whether or not a set of observed variables can be more parsimoniously expressed by a smaller set of variables while preserving the basic information provided by the original variable set (Velicer, Peacock and Jackson, 1982). It was noted in Chapter 3 that factor analysis is a generic name given to a class of multivariate statistical methods, and that there are many variants (Hair *et al.*, 1998). The two major subsets are *component* (or *principal component*) analysis and *common factor* analysis (Kim and Mueller, 1978b; Nunnally, 1978; Gorsuch, 1983; Velicer and Jackson, 1990a, 1990b). The choice between the two is primarily dependent on the research objective and on prior knowledge of the variance in the variables (Kim and Mueller, 1978b; Hair *et al.*, 1998; Tabachnick and Fidell, 2001).

There are three types of variance for the purpose of factor analysis generally: (a) common (shared) variance, (b) specific (unique) variance and (c) error variance (Nunnally, 1978; Bryant and Yarnold, 1995; Hair *et al.*, 1998; Tabachnick and Fidell, 2001). Common variance is the variance in a variable that is shared with all other variables in the analysis. Specific (unique) variance is the variance associated with only a specific variable. Error variance is that variance due to unreliability in the data-gathering process, measurement error, or a random component in the measured phenomenon.

Component analysis considers total variance, and therefore derives factors (components) comprising common variance in addition to any specific and error variance. Components derived by component analysis represent a ‘mathematically determined, empirical solution with common, unique and error variance mixed into components’ (Tabachnick and Fidell, 2001, p. 610).

In contrast, factors resulting from common factor analysis are based only on common variance. Common factor analysis attempts to eliminate unique and error variance to derive factors based only on shared variance. Exclusion of unique and error variance is based on the belief that such variance only confuses the ‘picture of underlying processes’ (Tabachnick and Fidell, 2001, p. 610).

Some references distinguish between component and common factor analysis by referring to the former as a *manifest* variable procedure and the latter as a *latent* variable procedure (Mulaik, 1990; Velicer and Jackson, 1990a; Costello and Osborne, 2005).¹ In representing a manifest variable procedure, component analysis can be described as simply deriving a weighted linear composite of the observed variables (Kim and Mueller, 1978b; Mulaik, 1990; Velicer and Jackson, 1990a).

A latent variable is an unobserved, underlying variable or construct that, with the addition of sampling error, accounts for the observed (manifest) variables (Velicer and Jackson, 1990a). Common factor analysis is designed to identify underlying, latent dimensions or constructs that reflect what the variables share in common. It is most appropriate when the objective is to identify latent constructs and when the researcher has little knowledge about the specific and error variance and therefore

¹ Similarly, Nunnally (1978) refers to component analysis as being concerned with *real* or *actual* factors and common factor analysis as pertaining to *hypothetical* factors.

wishes to eliminate it (Cattell, 1978; Gorsuch, 1983; Bentler and Kano, 1990; Hair *et al.*, 1998; Fabrigar, Wegener, MacCallum and Strahan, 1999). The aim of common factor analysis is to represent the observed variables as functions of other, latent variables. The common factors are responsible for the covariation among the observed variables, with the remaining variation being unique to each of the variables (Mulaik, 1990).

In summary, component analysis is used when the objective is to summarise most of the original information in a minimum number of factors (components) for prediction purposes, while common factor analysis is used primarily to identify underlying factors or dimensions that reflect what the variables share in common (Hair *et al.*, 1998).

The aim of the present study is to identify the dimensions of meaning underlying the concept of auditor independence, the latent construct. Accordingly, common factor analysis, rather than component analysis, is the appropriate method consistent with the objective of identifying the source of common variance underlying the *meaning* of the auditor independence construct.

Following extensive simulation studies, it has been concluded by a number of writers that, in practice, the distinction between the results of component analysis and common factor analysis is likely to be minimal (see, for example, Velicer, 1974, 1976, 1977; Velicer *et al.*, 1982; Velicer and Jackson, 1990a, 1990b). Some studies, though, have concluded that component loadings produced by component analysis are significantly inflated in comparison to those produced by common factor analysis, and that these are generally large enough to affect interpretations (see, for example, Borgatta, Kercher and Stull, 1986; Hubbard and Allen, 1987; Snook and Gorsuch,

1989; Dziuban and Harris, 1973). Snook and Gorsuch (1989, p. 152) argue that 'common factor analysis includes error explicitly in the model and thereby reflects the statistical paradigm used in the social sciences.' Gorsuch (1990, p. 39) believes that common factor analysis 'should be routinely applied as the standard analysis because it recognizes we have error in our variables, gives unbiased instead of inflated loadings, and is more elegant as a part of the standard model used in univariate and multivariate analysis.' This provides further support for the use of common factor analysis, rather than component analysis, in the current study.

8.2 INITIAL FACTOR ANALYSIS RESULTS

Consistent with the prior measurement of meaning literature, the data reduction process used for the semantic differential scale data was common factor analysis with varimax (orthogonal) rotation.²

Principal axis factoring was used for the initial extraction of factors.³ While there are several different factor extraction methods available, information on their strengths and weaknesses is scarce and often only available in obscure references (Costello and Osborne, 2005). Nevertheless, the two major extraction methods are principal axis factoring and maximum likelihood factoring (Fabrigar *et al.*, 1999; Costello and Osborne, 2005), and these are the two methods generally recommended in normal

² See, for example, Osgood *et al.* (1957), Houghton (1987a, 1987b, 1988), Houghton and Messier (1990), Houghton and Hronsky (1993), McNamara and Moores (1995) and Hronsky and Houghton (2001). Varimax is an orthogonal rotation method, where factors are constrained to be orthogonal to, or uncorrelated with, each other (Kim and Mueller, 1978a; Hair *et al.*, 1998; Fabrigar *et al.*, 1999; Tabachnick and Fidell, 2001). Varimax rotation maximises the sum of variances of squared loadings in the columns of the factor matrix (Mulaik, 1972; Nunally, 1978). Varimax is generally regarded as the preferred orthogonal rotation method, and is overwhelmingly the most widely used (Kim and Mueller, 1978a; Nunally, 1978; Comrey and Lee, 1992; Fabrigar *et al.*, 1999; Costello and Osborne, 2005; Tabachnick and Fidell, 2001).

³ The various methods of factor extraction obtain the unrotated factor matrix by satisfying certain mathematical criteria, such as extracting the maximum amount of variance in one factor or minimising the sum of squares of residuals (Comrey, 1978).

circumstances (Kim and Mueller, 1978a). The principal axis factoring method has the advantage of entailing no distributional assumptions and is less likely than the maximum likelihood method to produce improper solutions (Fabrigar *et al.*, 1999; Costello and Osborne, 2005). Also, efficiency and other mathematical properties of principal axis factoring have caused this common factor method to be preferred by mathematicians (Cattell, 1978). Accordingly, this was the basic extraction method used in the study.⁴

The Kaiser-Meyer-Olkin measure of sampling adequacy for the study data was 0.956, and Bartlett's test of sphericity was significant at $p < .001$.⁵ These statistics indicate that factor analysis is appropriate for the data.

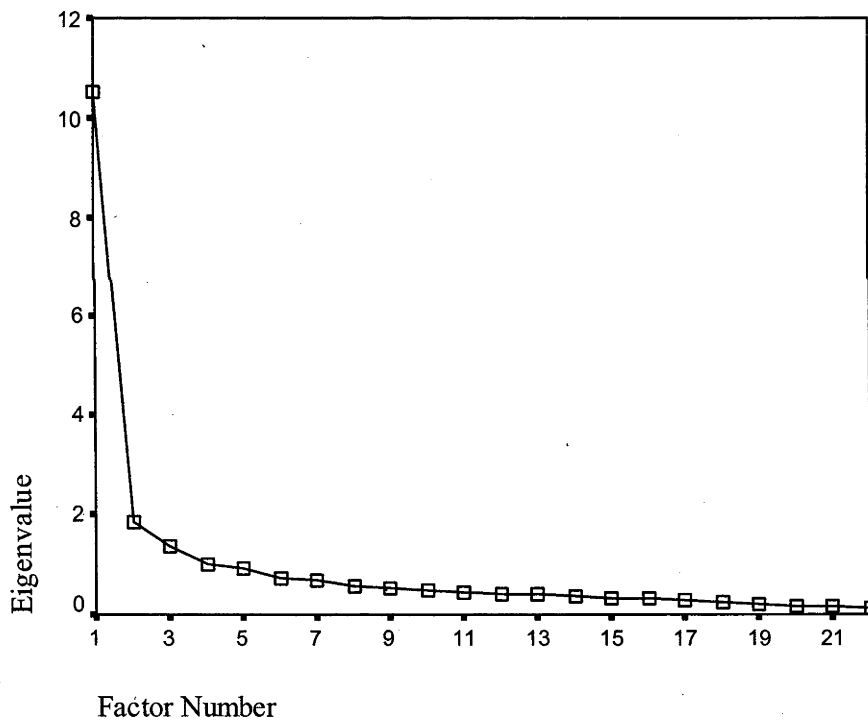
Eigenvalues, proportion of variance explained and the scree plot resulting from the initial factor analysis are presented in Table 8.1.

⁴ Representing a least squares approach, the principal axis method extracts factors from the correlation matrix by placing squared multiple correlation coefficients in the diagonal as initial estimates of the communalities. The communality for a variable represents the variance it shares with all other variables in the analysis, being the variance accounted for by the common factors (Kim and Mueller, 1978a, 1978b; Bryant and Yarnold, 1995; Hair *et al.*, 1998; Tabachnick and Fidell, 2001). Iterations continue by using the factor loadings as estimates of new communalities. The principle is to minimise the residual correlation after extracting a given number of factors, and to assess the degree of fit between the reproduced correlations under the model and the observed correlations (Cattell, 1978; Kim and Mueller, 1978b; SPSS Inc, 2005).

⁵ Bartlett's test statistic equals 10,135.4 (231 degrees of freedom).

Panel A: Eigenvalues and proportion of variance explained

Factor	Eigenvalue	% of variance	Cumulative %
1	10.51	47.79	47.79
2	1.85	8.40	56.19
3	1.38	6.26	62.45
4	1.00	4.57	67.02
5	0.93	4.24	71.26
6	0.71	3.24	74.50
7	0.66	3.02	77.52
8	0.56	2.56	80.08
9	0.51	2.30	82.38
10	0.49	2.21	84.59

Panel B: Scree plot**Table 8.1: Eigenvalues and scree plot**

Application of the scree test suggests anywhere between a one and five factor solution. Another frequently used criterion in deciding how many factors to retain in a factor solution is to accept all those with eigenvalues exceeding one (Kaiser, 1960), although it is generally agreed that this tends to result in the acceptance of too many factors.⁶ Three factors have eigenvalues exceeding one, and a fourth factor has an eigenvalue equal to one. It can be highlighted, though, that the first factor is particularly dominant, with an eigenvalue over five times as large as the second factor.

Given that the fourth factor has an eigenvalue equal to one, the approach adopted in the study was to commence with a four factor solution, utilising factor comparability analysis to assess the robustness and stability of the structure.

8.3 FOUR FACTOR MODEL

The varimax rotated factor matrix for the four factor solution is presented in Table 8.2. The table shows that 18 of the 22 scales have factor loadings exceeding 0.5.

Factor 1 comprises a mix of three evaluative and three potency scales. Factor 2 consists of one evaluative, three potency and two activity scales. The third factor comprises three evaluative scales and Factor 4 comprises three activity scales.

⁶ See, for example, Cattell and Jaspers (1967), Browne (1968), Linn (1968), Comrey (1978), Lee and Comrey (1979) and Everett (1983).

Scales	Factors			
	1	2	3	4
Bad–Good	.824 E	.315	.267	.150
Incomplete–Complete	.798 P	.315	.249	.163
Risky–Safe	.778 E	.343	.270	.180
Weak–Strong	.748 P	.406	.294	.182
Adverse–Beneficial	.729 E	.269	.389	.136
Imaginary–Real	.693 P	.379	.306	.219
Passive–Active	.277	.653 A	.138	.139
Intangible–Tangible	.280	.598 P	.292	.184
Subjective–Objective	.319	.583 E	.164	.201
Indirect–Direct	.337	.569 P	.128	.396
Static–Dynamic	.175	.530 A	.047	-.120
Estimated–Exact	.350	.502 P	.179	.260
Unnecessary–Necessary	.193	.091	.676 E	-.057
Discretionary–Required	.219	.072	.640 E	.108
Unexpected–Expected	.378	.310	.610 E	.095
Short-term–Long-term	.218	.209	.075	.661 A
Temporary–Permanent	.307	.286	.003	.620 A
Variable–Constant	.181	.431	.034	.607 A
Uncontrollable–Controllable	.461	.340	.403	.181
Unplanned–Planned	.438	.457	.431	.105
Unmeasurable–Measurable	.361	.487	.291	.178
Inflexible–Flexible	.045	.192	-.045	-.389

(Extraction Method: Principal Axis Factoring)
(Rotation Method: Varimax)

Table 8.2: Rotated factor matrix — Four factor model

Factor comparability analysis was used to test the four factor solution for both between-group and within-group stability. Results are shown in Table 8.3.

Panel A of Table 8.3 shows comparability for Factor 1, at the required correlation threshold of at least 0.894 (80 per cent shared variance), between the auditor and preparer groups and between the preparers and users. With a correlation of 0.864, Factor 1 is approaching comparability between the auditors and users.

Panel B of Table 8.3 shows that the highest comparability for Factor 2 is between auditors and users (correlation of 0.819). The other two between-group correlations are less than 0.8.

Panel C of Table 8.3 shows a correlation of 0.846 for Factor 3 between the preparer and user groups. However, the correlation for Factor 3 is very low between auditors and users, and is slightly negative between auditors and preparers.

As shown in Panel D of Table 8.3, there is a lack of between-group comparability at the required level for Factor 4, with correlations ranging between 0.807 and 0.774.

Results of testing for within-group comparability are presented in Panel E of Table 8.3.⁷ The only within-group correlation of at least 0.894 is for Factor 1 for the preparer group. The four factor structure appears to be approaching comparability for the preparers, with correlations for each of the four factors of at least 0.802. Within-group comparability is lowest for the auditor group, especially for Factors 3 and 4.

⁷ To enable within-group factor comparability testing, the participants in each group were randomly split into two halves, with each half balanced by the experimental cases.

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.896	0.864
Preparers		0.928

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.688	0.819
Preparers		0.794

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	-0.074	0.211
Preparers		0.846

Panel D: Between-group correlations for Factor 4

	Preparers	Users
Auditors	0.794	0.774
Preparers		0.807

Panel E: Within-group correlations

	Split-half correlation coefficients			
	Factor 1	Factor 2	Factor 3	Factor 4
Auditors	0.829	0.819	0.103	0.207
Preparers	0.897	0.802	0.864	0.824
Users	0.839	0.722	0.640	0.455

Table 8.3: Factor comparability analysis — Four factor model

To test the sensitivity of the basic factor analytic model (principal axis factoring with varimax rotation) to alternate specifications, the following four factor model variations were also performed, with factor comparability analysis results presented in Appendix 3:

- Maximum likelihood factoring⁸ with varimax rotation (Appendix 3.1);
- Principal axis factoring with direct oblimin rotation⁹ (Appendix 3.2); and
- Maximum likelihood factoring with direct oblimin rotation (Appendix 3.3).

These alternative models support the conclusion drawn from the basic four factor model. While there is a mixture of increased and decreased individual within-group and between-group correlations in the three alternative models in comparison to the basic model, only a minimum of within- and between-group correlations meet the threshold of 0.894 under all four factor models.¹⁰

In summary, the results of factor comparability analysis indicate that the four factor solution is not robust and stable, either between-groups or within-groups. Accordingly, a three factor solution is assessed in the following section.

⁸ Based on maximising the determinants of a residual partial correlation matrix, the objective of the maximum likelihood extraction method is to find the underlying population parameters that would have the greatest likelihood of producing the observed correlation matrix (Kim and Mueller, 1978a; 1978b). The method produces parameter estimates that are most likely to have produced the observed correlation matrix if the sample was from a multivariate normal distribution (SPSS Inc, 2005).

⁹ Direct oblimin is an oblique rotation method, where rotation is not limited by the orthogonality condition and where the factors are, in general, correlated to some extent (Kim and Mueller, 1978a). Rather than arbitrarily constraining the factor rotation to an orthogonal solution, an oblique rotation identifies the extent to which the factors are correlated (Hair *et al.*, 1998). Direct oblimin rotation is performed without resorting to reference axes (Kim and Mueller, 1978a). The method seeks a factor solution directly by minimising a function of the primary factor pattern coefficients (Harman, 1976), and is generally regarded as the starting point if oblique rotation is sought (Kim and Mueller, 1978a).

¹⁰ Under the basic (principal axis/varimax) four factor model, three of the correlations, out of a total of 24 possible between- and within-group correlations, exceed 0.894. Under the maximum likelihood/varimax and principal axis/direct oblimin models, five and six of the possible 24 correlations respectively exceed 0.894. Under the maximum likelihood/direct oblimin model, seven correlations exceed 0.894 and another equals 0.893.

8.4 THREE FACTOR MODEL

The first hypothesis for the study was stated as:

H1: Research participants interpret the connotative meaning of the auditor independence concept within a three factor E-P-A cognitive structure.

The varimax rotated factor matrix for the three factor solution is presented in Table 8.4. The table shows that 19 of the 22 scales have factor loadings exceeding 0.5.

The first factor in the three factor model encompasses all six evaluative and potency scales which comprised Factor 1 in the four factor model plus all three evaluative scales comprising Factor 3 in the four factor model. In addition, Factor 1 in the three factor model comprises one activity scale (unplanned–planned) and one evaluative scale (uncontrollable–controllable). These did not load on any factor, at a loading of at least 0.5, in the four factor model.

The second factor in the three factor model comprises the same scales as Factor 2 in the four factor model, with the exception of the estimated–exact scale.

The third factor in the three factor model consists of the same three activity scales comprising Factor 4 in the four factor model.

In summary, the first factor in the three factor model is generally a combination of Factors 1 and 3 from the four factor model, while Factors 2 and 3 in the three factor model are essentially the same as Factors 2 and 4 respectively from the four factor model.

Scales	Factor		
	1	2	3
Adverse–Beneficial	.802 E	.263	.230
Bad–Good	.778 E	.327	.287
Risky–Safe	.750 E	.345	.309
Incomplete–Complete	.748 P	.324	.297
Weak–Strong	.747 P	.401	.307
Imaginary–Real	.716 P	.366	.326
Unexpected–Expected	.679 E	.276	.089
Unplanned–Planned	.615 A	.430	.150
Uncontrollable–Controllable	.613 E	.309	.222
Unnecessary–Necessary	.566 E	.078	-.104
Discretionary–Required	.557 E	.057	.045
Passive–Active	.289	.650 A	.214
Subjective–Objective	.343	.559 E	.275
Static–Dynamic	.161	.556 A	-.051
Intangible–Tangible	.404	.555 P	.231
Indirect–Direct	.319	.536 P	.471
Temporary–Permanent	.204	.238	.685 A
Short-term–Long-term	.186	.151	.677 A
Variable–Constant	.134	.375	.644 A
Unmeasurable–Measurable	.464	.455	.231
Estimated–Exact	.375	.473	.328
Inflexible–Flexible	.017	.232	-.335

(Extraction Method: Principal Axis Factoring)
(Rotation Method: Varimax)

Table 8.4: Rotated factor matrix — Three factor model

The three factors, and particularly Factors 1 and 3, appear partially consistent with the standard *E-P-A* structure. Factor 1 is dominated by seven evaluative scales, but also comprises three potency and one activity scale. Factor 2 consists of two activity scales, two potency scales and one evaluative scale. The third factor comprises three activity scales, all of which have temporal connotations.

Results of factor comparability analysis, shown in Table 8.5, indicate that the three factor solution is not robust and stable. Panels A to C of Table 8.5 show a general lack of between-group comparability at the required level. Factor 1 exhibits comparability between preparers and users and some comparability between auditors and users, although not at the threshold of 0.894 for the latter. There is a lack of between-group stability for Factor 1 between the auditor and preparer groups. Factors 2 and 3 do not exhibit between-group stability at the required level for any participant group.

The within-group correlations presented in Panel D of Table 8.5 indicate a general lack of within-group comparability at the required threshold when considering all three factors for each of the three participant groups. Factor 1 for auditors and Factor 3 for preparers are the only within-group correlations of at least 0.894.

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.707	0.858
Preparers		0.918

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.663	0.684
Preparers		0.719

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	-0.410	0.419
Preparers		-0.594

Panel D: Within-group correlations

	Split-half correlation coefficients		
	Factor 1	Factor 2	Factor 3
Auditors	0.985	0.792	0.636
Preparers	0.826	0.696	0.926
Users	0.714	0.665	0.537

Table 8.5: Factor comparability analysis — Three factor model

To test the sensitivity of the basic factor analytic model (principal axis factoring with varimax rotation), and as with the four factor model, the following three factor model variations were also performed, with factor comparability results presented in Appendix 4:

- Maximum likelihood factoring with varimax rotation (Appendix 4.1);
- Principal axis factoring with direct oblimin rotation (Appendix 4.2); and
- Maximum likelihood factoring with direct oblimin rotation (Appendix 4.3).

Under the basic three factor model, only three of the correlations, out of a total of 18 possible between- and within-group correlations, exceed 0.894. Under the maximum likelihood/varimax model, five of the possible 18 correlations exceed 0.894. Under both the principal axis/direct oblimin and maximum likelihood/direct oblimin models, seven of the possible 18 correlations exceed 0.894. Under all three alternative models, Factor 1 exhibits between-group comparability for all groups, but this is not the case for any of the models for the second and third factors. Factor 1 exhibits within-group comparability for all groups under the alternative models, with the exception of auditors under the maximum likelihood/varimax model.

Given the results of factor comparability analysis, the three factor model cannot be considered to be robust and stable. Accordingly, Hypothesis 1 (*H1*) is not supported. The three research participant groups, representing key parties to the financial reporting communication process, did not interpret the connotative meaning of the auditor independence concept within a shared, three factor *E-P-A* structure.

8.5 TWO FACTOR MODEL

The rotated factor matrix for the two factor solution is presented in Panel A of Table 8.6. The first factor in the two factor solution comprises all scales that loaded on

Factor 1 in the three factor model, with all except one of these (discretionary–required) having higher factor loadings. Factor 1 also comprises two scales that did not load on the first factor in the three factor solution. These were the unmeasurable–measurable (potency) scale which did not load on any factor in the three factor model, and the intangible–tangible (potency) scale which loaded on the second factor in the three factor model. Factor 2 comprises the three activity scales which formed the third factor in the three factor model and the indirect–direct (potency) scale which loaded on Factor 2 in the three factor model.

Panels B and C of Table 8.6 present the between-group factor comparability results. Panel B shows that the between-group correlation for Factor 1 between the auditors and preparers of 0.890 indicates a high level of comparability. However, the correlations for Factor 1 between the auditor and user groups and between the preparer and user groups are less than the comparability threshold of 0.894. The between-group correlations for Factor 2 (Panel C) are well below the required threshold, and therefore the two factor model cannot be considered to have between-group stability.

Panel D of Table 8.6 presents the within-group factor comparability results. While the first factor exhibits within-group stability for all three participant groups, Factor 2 does not. Accordingly, a lack of overall between- and within-group stability is evident.

Panel A: Rotated factor matrix – Two factor model

Scales	Factors		
	1		2
Adverse–Beneficial	.819	E	.263
Bad–Good	.812	E	.347
Weak–Strong	.806	P	.402
Risky–Safe	.790	E	.376
Incomplete–Complete	.782	P	.356
Imaginary–Real	.763	P	.403
Unexpected–Expected	.724	E	.152
Unplanned–Planned	.704	A	.289
Uncontrollable–Controllable	.658	E	.292
Unnecessary–Necessary	.573	E	-.106
Unmeasurable–Measurable	.560	P	.385
Discretionary–Required	.542	E	.018
Intangible–Tangible	.534	P	.437
Variable–Constant	.185		.741 A
Temporary–Permanent	.217		.679 A
Indirect–Direct	.428		.648 P
Short-term–Long-term	.179		.620 A
Subjective–Objective	.475		.480
Estimated–Exact	.473		.488
Passive–Active	.458		.466
Static–Dynamic	.323		.212
Inflexible–Flexible	.106		-.163

(Extraction Method: Principal Axis Factoring)
(Rotation Method: Varimax)

Panel B: Between-group correlations for Factor 1 – 2 factor model

	Preparers	Users
Auditors	0.890	0.819
Preparers		0.809

Panel C: Between-group correlations for Factor 2 – 2 factor model

	Preparers	Users
Auditors	0.814	0.515
Preparers		0.038

Panel D: Within-group correlations – 2 factor model

	Split-half correlation coefficients	
	Factor 1	Factor 2
Auditors	0.981	0.805
Preparers	0.918	0.774
Users	0.952	-0.446

Table 8.6: Two factor model

To test the sensitivity of the basic two factor analytic model to alternate specifications, the factor model variations conducted for the four and three factor models were also performed, with factor comparability results presented in Appendix 5:

- Maximum likelihood factoring with varimax rotation (Appendix 5.1);
- Principal axis factoring with direct oblimin rotation (Appendix 5.2); and
- Maximum likelihood factoring with direct oblimin rotation (Appendix 5.3).

Under the basic two factor model, none of the between-group correlations for either factor exceed 0.894, although the Factor 1 correlation between the auditor and preparer groups equals 0.890. Under the three alternate models, Factor 1 exhibits comparability between all groups at the required threshold. However, this is not the case for the second factor. Factor 1 exhibits within-group comparability at the required threshold under the basic model and all three alternative models, with the exception of within-group comparability for users under the principal axis/direct oblimin model. Factor 2 does not exhibit within-group comparability for any group under any of the factor analysis models.

Given these factor comparability results, the two factor model cannot be considered to be robust and stable.

8.6 SINGLE FACTOR MODEL

The single factor solution is presented in Panel A of Table 8.7. The factor comparability analysis results presented in Panels B and C indicate this single factor model to be robust and stable, both between the three research participant groups and within each of the individual groups.

Panel A: Factor matrix – Single factor model

Scales	Factor	
Weak–Strong	.897	P
Bad–Good	.871	E
Risky–Safe	.869	E
Imaginary–Real	.862	P
Incomplete–Complete	.851	P
Adverse–Beneficial	.829	E
Unplanned–Planned	.749	A
Uncontrollable–Controllable	.713	E
Indirect–Direct	.704	P
Unexpected–Expected	.688	E
Intangible–Tangible	.687	P
Unmeasurable–Measurable	.681	P
Estimated–Exact	.662	P
Subjective–Objective	.659	E
Passive–Active	.637	A
Variable–Constant	.542	A
Temporary–Permanent	.538	A
Short-term–Long-term	.477	
Discretionary–Required	.463	
Unnecessary–Necessary	.419	
Static–Dynamic	.387	
Inflexible–Flexible	.001	

(Extraction Method: Principal Axis Factoring)

Panel B: Between-group correlations – Single factor model

	Preparers	Users
Auditors	0.978	0.983
Preparers		0.997

Panel C: Within-group correlations – Single factor model

	Split-half correlation coefficients
	Factor 1
Auditors	0.973
Preparers	0.991
Users	0.997

Table 8.7: Single factor model

Further within-group factor comparability analysis also indicated the single factor structure to be comparable within (a) the auditor group of participants when dissected between Big Four and Second Tier auditors,¹¹ (b) the preparer group when dissected between accountants and the other (combined) preparers,¹² and (c) the user group when dissected between bank analyst and shareholder participants.¹³

To further test the sensitivity of the single factor (principal axis factoring) model to alternate specifications, the following single factor models were also conducted:

- Maximum likelihood factoring; and
- Component (principal component) analysis.

These alternate models support the conclusion drawn from the basic single factor model.¹⁴ Results consistently indicate the single factor model to be robust and stable, both between-groups and within-groups.

8.7 DISCUSSION OF COGNITIVE STRUCTURE

The second research hypothesis for the study was stated as:

H2: Research participants interpret the connotative meaning of the auditor independence concept within a shared cognitive structure.

¹¹ Correlation equals 0.981. Of the 80 auditor participants, 49 were from Big Four firms and 31 from Second Tier firms.

¹² Correlation equals 0.992. Accountants were the largest single group of preparer participants, representing 25 of the 71 preparers. The other preparer groups comprised chief executive officers, chief financial officers, chief operating officers, directors, financial controllers, financial managers and managers.

¹³ Correlation equals 0.996. Of the 69 user participants, 19 were bank analysts and 50 were shareholders who were members of the Australian Investors' Association.

¹⁴ Under maximum likelihood factoring, the minimum between-group correlation for the single factor was 0.982 (between auditors and preparers) and the minimum within-group correlation was 0.976 (within the auditor group). Under component analysis, the minimum between-group correlation was 0.984 (again between auditors and preparers) and the minimum within-group correlation was 0.973 (again within the auditor group).

Given the factor comparability analysis results for the single factor model, *H2* is supported. The three research participant groups interpreted the connotative meaning of the auditor independence concept within a shared cognitive structure. While this was not a three-factor *E-P-A* structure, as hypothesised by *H1*, factor comparability results indicate the existence of a shared, single factor cognitive structure. Discussion of the nature of this single dimension of meaning follows.

Seventeen scales have factor loadings in the single factor model exceeding 0.5. These comprise six evaluative, seven potency and four activity scales. This indicates a variety of dimensions of connotative meaning being highly correlated with respect to the concept of auditor independence. This is also supported by the many significant correlations between the underlying evaluative, potency and activity scales presented in the previous chapter.

There are three evaluative and three potency scales with factor loadings exceeding 0.8. The high loadings for both dimensions are intuitively reasonable when considering the auditor independence concept. For the independence concept, the *good*, *safe* and *beneficial* evaluative scales are similar in effect to the *strong*, *real* and *complete* potency scales. That is, if independence has connotations of being good, safe and beneficial, it will also have connotations of being strong, real and complete.

Fifteen scales have factor loadings exceeding 0.6. These comprise six evaluative, seven potency and two activity scales, again suggesting an overlap in a variety of dimensions of meaning with respect to the independence concept. It is pertinent to note that it is the activity scales which, of the three *E-P-A* dimensions, tend to have the least impact. The *planned* activity scale does load highly with a factor loading of 0.749. However, the other activity scales with loadings exceeding 0.5 are the last

three of the loading factors, and the three remaining activity scales have loadings of less than 0.5.

It is also relevant to highlight that all seven potency scales load on the factor. Only two of the eight evaluative scales do not load. Given the *compulsory* nature of auditor independence, it is not surprising that the non-loading evaluative scales are the discretionary–required and unnecessary–necessary ones.

In summary, it can be concluded on the basis of this section’s analysis that, for the auditor, preparer and user research participants, the evaluative and potency dimensions of meaning in particular, but also the activity dimension to a lesser extent, are highly related and overlapping with respect to connotations of the auditor independence concept.

Osgood *et al.* (1957, p. 38) suggested that the evaluative factor plays the dominant role in meaningful judgments of general concepts, and this has been supported by subsequent studies. The relative weights of the three *E-P-A* factors have also been fairly consistent, with evaluation accounting for approximately double the amount of variance due to either potency or activity (Osgood *et al.*, 1957, p. 38). The far greater proportion of variance explained by the single factor in the present study, and the robust and stable nature of this factor, supports the conclusion that the various evaluative, potency and activity scales work together in determining connotations (interpretations) of auditor independence in individual situations.

The results of the present study can also be compared with previous accounting and auditing studies using the same 22 semantic scales. In the prior studies in which

eigenvalues were published,¹⁵ the first factor eigenvalues were not as high as the value of 10.5 found in the present study. In studies deriving three or four factor solutions, the highest eigenvalue was 6.8 (Hronsky and Houghton, 2001). In accounting studies deriving single factor solutions for less experienced groups of research participants, the highest eigenvalue was 9.1 for shareholder participants (Houghton, 1987a). The eigenvalue of the first factor extracted in the pilot study (referred to in Chapter 4), where students were used as research participants, was 8.6. Accordingly, the high eigenvalue for the first factor in this study reinforces the conclusion that a single factor model is appropriate and that the alternative *E-P-A* dimensions are highly related and overlapping when considering the connotative meaning of the auditor independence concept.

The extraction of a factor combining alternative *E-P-A* scales is also not unique to the present study. Many of the prior accounting and auditing semantic differential studies have extracted dominant factors comprising alternative dimensions of meaning. For example, the dominant factor extracted in Houghton (1987a) comprised four potency, three evaluative and one activity scale. In Houghton and Hronsky (1993), the dominant factor comprised four evaluative, three activity and one potency scale, while Hronsky and Houghton (2001) extracted a dominant factor of four potency, two evaluative and one activity scale. Also, in Houghton (1987b), the dominant factor was a potency, not evaluative, one.

Osgood (1976, p. 37) emphasised the significance of the evaluative factor and noted that this *attitudinal* variable appeared to be primary in human judgment. He suggested that the greater the emotional or attitudinal loading of the concept being judged, the

¹⁵ These studies were Houghton (1987a, 1987b, 1988, 1997), Houghton and Messier (1990), Houghton and Hronsky (1993), Hronsky and Houghton (2001) and Wines (2006).

greater the tendency of the semantic framework to collapse into a single, combined dimension (Osgood, 1976, p. 38). This appears to be the situation for the concept of auditor independence, a concept that does evoke considerable emotion. The auditing research literature and professional standards refer to *perceptions* of auditor independence, and this represents an *attitudinal evaluation* (interpretation) of independence in specific contexts. Perceptions of independence commonly involve evaluations of its strength, a potency dimension. It follows that the potency of independence is highly related to its evaluative dimension, and this is confirmed by the study's finding of a single factor cognitive structure.

8.8 SUMMARY

The results from the first component of the study, determining the cognitive structure within which the concept of auditor independence is considered, were presented in this chapter. The chapter commenced with a discussion of issues related to the form of factor analysis used in applying the measurement of meaning framework. Factor analysis results for four, three, two and single factor models were then presented. Only the single factor model was found to be robust and stable between and within the three research participant groups. Hence, a three factor *E-P-A* cognitive structure as hypothesised by *H1* was not supported for the concept of auditor independence. However a shared single factor structure was found, supporting *H2*. Discussion of these findings highlighted that the evaluative and potency dimensions of meaning in particular, but also the activity dimension to a lesser extent, are highly related and overlapping for the auditor independence concept.

The single factor structure revealed by this first component of the study can be used to examine the measured meaning of the independence concept across the nine

alternative experimental cases for the three research participant groups. The findings from this second component of the study are presented in the following two chapters.

CHAPTER 9

RESEARCH FINDINGS: BETWEEN-GROUP COMPARISONS OF EXPERIMENTAL CASES

The prior chapter identified a single factor cognitive structure within which the concept of auditor independence was considered by research participants. Based on that identified structure, this and the following chapter present the findings from an examination of the *measured meaning* of auditor independence across the nine alternative experimental cases and across the three research participant groups. Findings from between-group comparisons of the experimental cases are examined in this chapter. The analysis allows conclusions to be drawn on the study's *H3*. Within-group differences between sets of related cases are then examined in Chapter 10. The analyses in this and the following chapter allow further insight into participants' connotations of independence arising from the alternative experimental cases and whether shared meaning of the concept of auditor independence exists.

The chapter proceeds as follows. Results of initial MANOVAs of the semantic scale data for each of the experimental cases are presented in Section 9.1. Factor placements for the experimental cases at the aggregated case level are presented in Section 9.2, and findings from between-group comparisons for the aggregated cases are presented and discussed in Section 9.3. Factor placements for individual cases are presented in Section 9.4, and findings from between-group comparisons of each of

the individual cases are presented and discussed in Section 9.5. A summary in Section 9.6 concludes the chapter.

9.1 BETWEEN GROUP COMPARISONS OF SEMANTIC SCALE DATA BY CASE

Results of MANOVAs of the data from the 22 semantic differential scales for each individual experimental case are presented in this section. This allows insight into whether there are any differences in each of the individual scales between the three research participant groups for each case. The MANOVA results are presented in Table 9.1.

The table shows the Pillai's Trace between-group F statistic and associated significance for each case.¹ The table also shows, for each case, the number of the 22 individual semantic scales for which significant between-group differences exist (at both $p \leq .05$ and $p \leq .01$).

¹ As explained in Chapter 7, Pillai's Trace is generally considered to be the most robust of the MANOVA test statistics with respect to statistical assumption violations (Coakes, 2005). It is therefore the single summary statistic shown in Table 9.1.

Case Scenario	Pillai's Trace: Between-group comparisons		Number of scales with significant between-group differences at $p \leq .05$	Number of scales with significant between-group differences at $p \leq .01$
	<i>F</i>	<i>p</i>		
1. No major threats	1.33	.127	3	1
2. Interlocking directorships	1.35	.113	0	0
3. Longer tenure and audit partner rotation after 4 years.	1.26	.175	6	2
4. Longer tenure and audit partner rotation after 7 years.	1.77	.009	5	2
5. High NAS with PCAOB	1.86	.006	12	8
6. High NAS without PCAOB	1.73	.012	12	10
7. Low NAS	1.41	.084	12	9
8. Ex-partner director of audit client with local independence board	0.93	.603	0	0
9. Ex-partner director of audit client without local independence board.	1.14	.297	0	0

NAS = Non-audit services

Table 9.1: MANOVA of semantic scales — Between-group differences in individual cases

Table 9.1 shows that there are no significant between-group differences in any of the 22 semantic scales for Cases 2, 8 and 9. There are, though, significant between-group differences in some of the scales for the other six cases.

For Case 1 (no major independence threats), there are significant between-group differences in three of the 22 scales at $p \leq .05$. There are therefore 19 scales with no significant between-group differences at $p \leq .05$. The scales exhibiting significant differences were the bad–good, subjective–objective and indirect–direct scales.

Cases 3 and 4 specified longer periods of audit firm tenure (nine years) than did the other seven cases (four years). Table 9.1 shows that there are significant between-group differences, at $p \leq .05$, in six scales for Case 3 and five scales for Case 4. There were therefore no significant differences in 16 scales for Case 3 and 17 scales for Case 4 at $p \leq .05$. Two scales exhibited significant differences for both Cases 3 and 4 at $p \leq .05$. These were the subjective–objective and variable–constant scales. The four further scales exhibiting significant differences at $p \leq .05$ for Case 3 were the indirect–direct, discretionary–required, passive–active and short-term–long-term scales. For Case 4, the further three scales exhibiting significant differences at $p \leq .05$ were the unmeasurable–measurable, temporary–permanent and uncontrollable–controllable scales.

Cases 5, 6 and 7 specified the joint provision of audit and non-audit (taxation) services. Table 9.1 shows the greatest number of significant between-group differences for these three cases, with significant differences at $p \leq .05$ in 12 of the 22 scales for each case. Nine individual scales exhibited significant between-group differences at this level for all three cases. These were the bad–good, unmeasurable–measurable, unplanned–planned, weak–strong, risky–safe, incomplete–complete,

imaginary–real, adverse–beneficial and uncontrollable–controllable scales. The estimated–exact and temporary–permanent scales exhibited significant between-group differences at $p \leq .05$ for both Cases 5 and 6. Other scales exhibiting significant between-group differences at $p \leq .05$ were the static–dynamic scale for Case 5, the discretionary–required, unexpected–expected and passive–active scales for Case 6, and the indirect–direct scale for Case 7.

In summary, the above discussion highlights that there are significant between-group differences in individual semantic differential scales for six of the nine experimental cases. The three non-audit services cases exhibit the highest number of significant between-group differences, each with significant differences at $p \leq .05$ in 12 of the 22 scales. There are therefore significant differences in slightly over one-half of the 22 scales for these three cases. This represents twice the number of significant differences as the case with the next highest number of significant differences at $p \leq .05$, being Case 3 with significant differences at this level in six of the 22 scales.

Table 9.1 also shows that the three non-audit services cases have a considerably larger number of scales with significant between-group differences at $p \leq .01$ than the other cases. Cases 5, 6 and 7 have, respectively, eight, ten and nine semantic scales with significant differences at $p \leq .01$. Cases 3 and 4 have only two scales each with significant differences at $p \leq .01$, while Case 1 has only one scale with a between-group difference at this level.

Results of the analysis in this section indicate that there are some differences in the semantic scale data between the three participant groups for certain cases, and especially for the three non-audit services cases. As explained in Chapter 3, factors (factor placements) arise from the data reduction step of factor analysis and

represent a systematic summary of the individual variables included in the analysis. In the context of semantic differential analysis, the factor placements represent a summary of the semantic differential scale data and indicate the measured meaning of the particular concept being examined (Houghton and Messier, 1990; Houghton and Hronsky, 1993; Hronsky and Houghton, 2001). Between-group comparisons of factor placements therefore enable a systematic and parsimonious examination of the data for each individual research participant group compared to each of the other participant groups. This allows analysis of the information in all 22 semantic scales concurrently. Accordingly, the balance of this chapter is based on between-group comparisons of factor placements.

9.2 FACTOR PLACEMENTS AT THE AGGREGATED CASE LEVEL

The factor comparability analysis results presented in Chapter 8 enabled identification of a shared, single factor cognitive structure for the concept of auditor independence for the three research participant groups. The analyses in the chapter from this point compare the factor placements for the experimental cases, pursuant to the identified single factor structure, as measurements of connotations of independence held by each of the participant groups for the alternate cases.

Factor placements for each participant group for the experimental cases at the aggregated case level are presented in Table 9.2. Factor placements are presented for the cases containing common potential audit independence threats, as follows:

- Case 1: No major threats;
- Case 2: Interlocking directorships;
- Cases 3 and 4: Longer period of audit firm tenure;
- Cases 5, 6 and 7: Auditor provision of non-audit (taxation) services;
- Cases 8 and 9: Former audit firm partner as a director of the auditee company.

Case Scenario(s)	Factor Placements		
	Auditors	Preparers	Users
Case 1: No major threats	+70	+89	+61
Case 2: Interlocking directorships	-19	-46	-27
Cases 3 and 4: Longer period of audit firm tenure	+59	+61	+80
Cases 5, 6 and 7: Non-audit (taxation) services	+14	-48	-94
Cases 8 and 9: Ex-partner director of audit client	-30	-21	-34

Table 9.2: Factor placements — Aggregated cases

The factor placements for Case 1 (no major independence threats) are highly positive for all three participant groups. They range from a high of +89 for the preparers to +61 for the users.

In contrast to Case 1, the factor placements for Case 2 (interlocking directorships) are negative for all three groups. The interlocking directorships case stated that three non-executive directors of the auditee, out of the eight directors in total, were also non-executive directors of other companies audited by the incumbent audit firm. Factor placements for the case range from -19 for auditors to -46 for preparers.

Cases 3 and 4 were based on an audit firm tenure period of nine years, with audit partner rotation every four or seven years. This compared to a four year tenure period in all other cases. The factor placements for Cases 3 and 4 aggregated are highly positive for all participant groups, with a range from a high of +80 for users to a low of +59 for auditors.

The factor placements for Cases 5, 6 and 7 aggregated (auditor provision of additional taxation services to the auditee) are moderately positive for auditors, but are negative for preparers and users. In contrast to the earlier cases, factor placements show greater variability between the groups. Factor placements are positive for auditors (+14), negative for preparers (-48), and more extremely negative for users (-94).

Cases 8 and 9 involved a former audit firm partner being a director of the audit client. These cases stated that the director resigned from the audit firm 12 months earlier after 17 years with the firm, becoming director of the auditee eight months earlier. The director had not previously been involved in the audit of the auditee, and hence was not subject to the *cooling-off* period specified in the *Corporations Act 2001*.

As with the interlocking directorships case, the factor placements for Cases 8 and 9 aggregated are negative for all three groups. Factor placements for these cases aggregated range from -21 for preparers to -34 for users.

Observation of the factor placements presented in Table 9.2 shows a varying range of factor placements between the three participant groups, with the greatest range appearing for the non-audit services cases. The aim in the following section is to determine whether the differences in these factor placements for each of the cases at the aggregated independence threat level are statistically significant.

9.3 BETWEEN-GROUP COMPARISONS AT THE AGGREGATED CASE LEVEL

Between-group one-way analysis of variance (ANOVA) results, analysing factor placements for cases at the aggregated level, are presented in Table 9.3. The table also shows the results of post hoc testing. This enables determination of whether there are significant differences in factor placements between alternate pairs of research participants.

Case Scenario(s)	Factor Placements			ANOVA		Post Hoc Testing (Scheffé)		
	Auditors	Preparers	Users	F	p	Auditors vs Preparers	Auditors vs Users	Preparers vs Users
Case 1: No major threats	+70	+89	+61	1.76	.179	N.S.	N.S.	N.S.
Case 2: Interlocking directorships	-19	-46	-27	0.55	.581	N.S.	N.S.	N.S.
Cases 3 and 4: Longer period of audit firm tenure	+59	+61	+80	1.42	.246	N.S.	N.S.	N.S.
Cases 5, 6 and 7: Non-audit (taxation) services	+14	-48	-94	31.51	<.001	<i>p</i> < .001	<i>p</i> < .001	<i>p</i> = .005
Cases 8 and 9: Ex-partner director of audit client	-30	-21	-34	0.23	.788	N.S.	N.S.	N.S.

N.S. = Not significant (at $p \leq .10$)

Table 9.3: One-way ANOVA of factor placements — Aggregated cases

The factor placements for Case 1 (no major independence threats) are highly positive for all three participant groups. The ANOVA results indicate no significant differences in placements for this case between the three groups.

In contrast to Case 1, the factor placements for Case 2 (interlocking directorships) are negative for all three groups. Consistent with Case 1, the ANOVA results for Case 2 indicate no significant differences between the three participant groups.

Cases 3 and 4 were based on an audit firm tenure period of nine years with audit partner rotation every four or seven years. This compared to a four year tenure period in all other cases. The factor placements for Cases 3 and 4 aggregated are highly positive for all participant groups. There are again no significant differences in factor placements between the three participant groups.

As noted in Chapter 7, Case 4 had the highest incidence of incorrect responses to the manipulation check questions. It was also the only case to have manipulation check failures within all research participant groups. Accordingly, the analysis of Cases 3 and 4 (aggregated) was also conducted excluding the responses from participants responding incorrectly to the manipulation check questions. This did not result in any substantive change to the ANOVA results.²

The factor placements for Cases 5, 6 and 7 aggregated (auditor provision of additional taxation services to the auditee) are moderately positive for auditors, but are negative for preparers and users. The post hoc testing results indicate significant differences in

² Under this revised analysis, the F statistic was 1.64 and the significance level was at $p = .199$. Post hoc differences between individual pairs of participant groups remained insignificant at $p \leq .10$.

factor placements between all three participant groups, with the factor placements for users being the most negative.

Cases 8 and 9 involved a former audit firm partner being a director of the audit client. The factor placements for cases 8 and 9 aggregated are negative for all three groups and there are no significant between-group differences.

As noted in Chapter 7, Case 8 had the second highest incidence of incorrect responses to the manipulation check questions. It was also the only case, other than Case 4, to have manipulation check failures within more than one participant group. The analysis of Cases 8 and 9 (aggregated) was therefore also conducted excluding the responses from participants responding incorrectly to the manipulation check questions, but there were no substantive changes to the ANOVA results.³

In summary, the above analyses of the factor placements for aggregated cases containing common potential audit independence threats reveal significant between-group differences for only the cases specifying the auditor provision of additional taxation services. There were no significant differences between any of the groups for the case presenting no major potential independence threats. Significant between-group differences were also not present for the cases presenting the potential independence threats of interlocking directorships, a longer period of audit firm tenure or a former audit partner being a director of the auditee.

³ Under this revised analysis, the F statistic was 0.22 and the significance level was at $p = .801$. Post hoc differences between individual pairs of participant groups remained insignificant at $p \leq .10$

9.4 FACTOR PLACEMENTS AT THE INDIVIDUAL CASE LEVEL

Factor placements for cases at the aggregated level were presented and analysed in the previous two sections. To provide further detail on participants' connotations of independence under the alternative independence threat and safeguard scenarios, factor placements at the individual case level are presented in this section and are analysed for any between-group differences in Section 9.5.

Factor placements for each of the individual experimental cases are presented in Table 9.4. As already noted in Section 9.2, factor placements for all groups are highly positive for Case 1 (no independence threats) and are negative for Case 2 (interlocking directorships).

Cases 3 and 4 specified a longer (nine year rather than four year) audit firm tenure period. As in Case 1 where no major independence threats were indicated, factor placements for Case 3, where the partner rotation period was after four years, are highly positive for all three participant groups. The factor placements for all groups are somewhat lower in Case 4, where the partner rotation period was after seven years.

Case Scenario	Factor Placements		
	Auditors	Preparers	Users
1. No major threats	+70	+89	+61
2. Interlocking directorships	-19	-46	-27
3. Longer tenure and audit partner rotation after 4 years.	+70	+78	+85
4. Longer tenure and audit partner rotation after 7 years.	+48	+45	+76
5. High NAS with PCAOB	+24	-72	-98
6. High NAS without PCAOB	-20	-53	-113
7. Low NAS	+36	-18	-65
8. Ex-partner director of audit client with local independence board	+2	+7	-2
9. Ex-partner director of audit client without local independence board.	-63	-51	-75

Table 9.4: Factor placements — Individual cases

For the individual cases comprising the auditor provision of non-audit (taxation) services (Cases 5 to 7), Table 9.4 shows generally negative factor placements for all participant groups, with the exception of positive placements for auditors for both Case 5 (high level of taxation services with PCAOB oversight) and Case 7 (low level of taxation services). The factor placements for each of the three cases show a trend of decreasing placements for each case moving across the columns from auditors to preparers to users. It is also clear that there is higher variability in the factor placements across the three groups for each of the non-audit services cases in comparison to the six other cases. Also, of the factor placements for all nine cases across the three groups, the two lowest are for the two high non-audit services cases for the users (-98 for Case 5 where additional PCAOB oversight was indicated and -113 for Case 6 where additional PCAOB oversight was not specified).

Cases 8 and 9 specified a former audit firm partner being a director of the audit client. The factor placements for Case 8, where a local independence board within the audit firm was indicated, are around the middle of the range of factor placements for all cases and groups, being +2, +7 and -2 for auditors, preparers and users respectively. The range of factor placements for this case indicates lower variability across the three groups than for any other individual case.

The factor placements for Case 9, where a local independence board was not specified, are negative for all three groups and are lower for each group in comparison to Case 8 where such a board was specified.

The factor placements for individual cases presented in Table 9.4 show a varying range of placements across the three participant groups. Consistent with the factor placements for cases at the aggregated level presented in Section 9.2, the greatest

variation in placements between the groups across the nine cases is evident for the three non-audit services cases. The aim in the following section is to determine whether the differences in these factor placements for each of the individual cases are statistically significant. This allows a conclusion to be drawn on whether there are between-group differences in connotations of auditor independence for each experimental case scenario.

9.5 BETWEEN-GROUP COMPARISONS AT THE INDIVIDUAL CASE LEVEL

To gain insight into any between-group differences, ANOVA results for cases at the individual level are presented in Table 9.5. This also provides additional information on the factor placements for the individual cases that were aggregated in Section 9.3.

Case Scenario	Factor Placements			ANOVA		Post Hoc Testing (Scheffé)		
	Auditors	Preparers	Users	F	p	Auditors vs Preparers	Auditors vs Users	Preparers vs Users
1. No major threats	+70	+89	+61	1.76	.179	N.S.	N.S.	N.S.
2. Interlocking directorships	-19	-46	-27	0.55	.581	N.S.	N.S.	N.S.
3. Longer tenure and audit partner rotation after 4 years.	+70	+78	+85	0.40	.675	N.S.	N.S.	N.S.
4. Longer tenure and audit partner rotation after 7 years.	+48	+45	+76	1.32	.274	N.S.	N.S.	N.S.
5. High NAS with PCAOB	+24	-72	-98	13.35	<.001	<i>p</i> = .001	<i>p</i> < .001	N.S.
6. High NAS without PCAOB	-20	-53	-113	9.70	<.001	N.S.	<i>p</i> < .001	<i>p</i> = .024
7. Low NAS	+36	-18	-65	10.15	<.001	<i>p</i> = .057	<i>p</i> < .001	N.S.
8. Ex-partner director of audit client with local independence board	+2	+7	-2	0.05	.948	N.S.	N.S.	N.S.
9. Ex-partner director of audit client without local independence board.	-63	-51	-75	0.37	.689	N.S.	N.S.	N.S.

NAS = Non-audit services

N.S. = Not significant (at $p = .10$)

Table 9.5: One-way ANOVA of factor placements — Individual cases

As noted earlier, the factor placements for the case indicating no major independence threats (Case 1) are highly positive for all groups and, for the case indicating interlocking directorships (Case 2), are all negative. The ANOVA results show no significant between-group differences for either case.

Cases 3 and 4 were based on an audit firm tenure period of nine years, with audit partner rotation every four and seven years respectively. Factor placements for each of these individual cases are positive for all participant groups and there are no significant between-group differences.

As noted earlier, Case 4 had the highest manipulation check failure rate. The between-group comparisons for this case were re-analysed with the exclusion of the data for participants who had failed the manipulation check. This did not result in any substantive change to the ANOVA results.⁴

For the individual cases comprising the auditor provision of non-audit (taxation) services, Table 9.5 shows generally negative factor placements for all groups, with the exception of positive placements for auditors for both Case 5 (high level of taxation services with PCAOB oversight) and Case 7 (low level of taxation services). In contrast to Cases 1 to 4, between-group differences are evident for each of the three non-audit services cases. The factor placements are significantly lower for users in comparison to auditors for all three cases. Factor placements are significantly lower for preparers in comparison to auditors for Cases 5 and 7. There are no significant differences in factor placements between users and preparers for Cases 5

⁴ Under this revised analysis, the F statistic was 2.39 and the significance level was at $p = .102$. Post hoc differences between individual pairs of participant groups remained insignificant at $p \leq .10$.

and 7, but factor placements are significantly lower for users in comparison to preparers for Case 6.

Hence, for two of the three non-audit services cases (Cases 5 and 7), both the users and preparers have more negative interpretations of auditor independence than auditors. Only for one case (Case 6) are the interpretations of preparers not significantly different from those of auditors, but the interpretations of users are significantly more negative than those of the other two groups for this case.

There are no significant between-group differences in factor placements for either of Cases 8 or 9. Accordingly, for each of these cases individually, the three groups are in agreement in their interpretation of auditor independence.

As noted earlier, Case 8 had the second highest manipulation check failure rate. The between-group comparisons for this case were re-analysed with the exclusion of the data for participants who had failed the manipulation check, but there were no substantive changes to the ANOVA results.⁵

Shared meaning of the auditor independence concept in the individual experimental cases would be absent if significant differences exist between the three research participant groups. Any differences would be of practical significance as they would signify a lack of agreement between key parties to the financial reporting communication process in response to the specified independence threat and safeguard circumstances. The study's third research hypothesis was stated as:

⁵ Under this revised analysis, the F statistic was 0.69 and the significance level was at $p = .508$. Post hoc differences between individual pairs of participant groups remained insignificant at $p \leq .10$.

H3: There are no significant differences between research participant groups in the measured meaning of auditor independence for each of the alternative experimental cases.

The analyses presented in this chapter show there are no significant between-group differences for any of the cases except for the three non-audit services cases. With the exception of those non-audit services cases, shared meaning of the independence concept between the three participant groups exists under the stated independence threat and safeguard scenarios. Hence, pursuant to the measurement of meaning research framework, the three participant groups are in agreement in their interpretation of the audit firm's independence for the individual cases specifying (a) no major independence threats, (b) interlocking directorships, (c) a longer period of audit firm tenure (with four or seven year audit rotation periods), and (d) a former audit partner of the audit firm being a director of the audit client (both with and without a local independence board). Accordingly, *H3* is supported for these situations.

However, *H3* is not supported for the three cases comprising the auditor provision of non-audit (taxation) services. Significant between-group differences are evident for each of these cases (Cases 5, 6 and 7). Factor placements are significantly lower for users in comparison to auditors for all three of the non-audit services cases. They are also significantly lower for preparers in comparison to auditors for two of the cases and for preparers in comparison to users for the remaining non-audit services case. These between-group differences signify a lack of shared meaning between the relevant groups for these non-audit services scenarios.

9.6 SUMMARY

Based on the analyses in this chapter, a general conclusion can be drawn that the three participant groups, representing the three major parties to the financial reporting communication process, generally exhibit shared meaning of the auditor's independence across the alternative experimental case scenarios. The major area in which the study found significant differences to exist between auditors and users, and with preparers to a slightly lesser extent, was that of the joint provision of audit and non-audit services.

The between-group comparisons of factor placements summarised in this chapter did not examine, other than in a general way, the manner in which connotations of auditor independence held by each individual participant group were impacted by the potential independence threat and safeguard manipulations presented. Within-group comparisons of factor placements for this purpose are the subject of the following chapter.

CHAPTER 10

RESEARCH FINDINGS: WITHIN-GROUP COMPARISONS OF EXPERIMENTAL CASES

The prior chapter presented between-group comparisons of connotations of auditor independence for the nine experimental cases. Findings from an analysis of differences within each of the participant groups between related sets of cases are presented in this chapter. This provides insight into the impact of the alternative experimental case scenarios on interpretations of independence for each of the participant groups, and thereby on various contemporary auditor independence issues. The findings enable conclusions to be drawn on the study's hypotheses *H4* to *H11*.

The chapter proceeds as follows. Sections 10.1 to Section 10.4 present an analysis of within-group differences for cases involving, respectively, (a) the non-audit (taxation) services threat and the additional public oversight board safeguard, (b) the interlocking directorships threat, (c) the longer period of audit firm tenure threat and the auditor rotation safeguard, and (d) the threat of an auditee company director who was formerly a partner of the incumbent audit firm and the safeguard of a local independence board. A summary in Section 10.5 concludes the chapter.

10.1 NON-AUDIT SERVICES AND PUBLIC OVERSIGHT BOARD

The first group of cases to be compared in this section are the non-audit (taxation) services cases (Cases 5, 6 and 7). As discussed in the previous chapter, these three

cases were the only cases, of the nine, to exhibit significant between-group differences in factor placements.

Prior to specifically comparing the three non-audit services cases, the first within-group comparisons presented are between the case in which no major independence threats were indicated (Case 1) and the two cases where the audit firm jointly provided audit services and a relatively high level of non-audit services (Cases 5 and 6).¹ Recall that the two high non-audit services cases indicated the provision of taxation services to the audit client over the audit firm's four year tenure period of approximately three to four times the audit fee in each year. Case 5 indicated the presence of additional oversight by the United States PCAOB, while the presence of the PCAOB was not indicated in Case 6.

Before comparing factor placements for Cases 1, 5 and 6 for each participant group, results from initial MANOVAs of the semantic differential scale data for these cases are discussed for each group. This allows insight into whether, for each group, there are significant differences in any of the 22 semantic differential scales between Cases 1, 5 and 6.

For the auditors, the MANOVA results revealed significant differences across the three cases in 11 of the 22 semantic scales at $p \leq .05$, with seven of these significant at $p \leq .01$. For the preparers, there were significant differences in 17 of the semantic scales at $p \leq .05$, all of which were also significant at $p \leq .01$. For the users, there were significant differences in 19 of 22 semantic scales, 18 of which were significant at $p \leq .05$.

¹ While being within-group tests, all comparisons in the study (with one exception referred to later in this sub-section), as explained in Chapter 4, represent between-subject comparisons. Hence, in the above comparison, different sub-groups of auditors responded to Cases 1, 5 and 6, as did different sub-groups of preparers and users.

Accordingly, the MANOVA results indicate, for Cases 1, 5 and 6, significant differences in a large number of the 22 semantic scales within each of the participant groups. As explained in Chapter 9, comparisons of factor placements enable a more systematic and parsimonious means for analysing the semantic differential data. For this purpose, one-way ANOVA results comparing factor placements between Cases 1, 5 and 6 within each of the three participant groups are presented in Table 10.1.

Panel A: One-way ANOVA of factor placements

Case Scenario	Factor Placements		
	Auditors	Preparers	Users
1. No major threats	+70	+89	+61
5. High NAS with PCAOB	+24	-72	-98
6. High NAS without PCAOB	-20	-53	-113
ANOVA: <i>F</i>	11.06	31.78	34.10
<i>p</i>	<.001	<.001	<.001

NAS = Non-audit services

Panel B: Within-group post hoc comparisons

Scenarios	Mean Difference	Scheffé	Bonferroni
Auditors:			
Case 1 vs Case 5	46	<i>p</i> = .059	<i>p</i> = .053
Case 1 vs Case 6	90	<i>p</i> < .001	<i>p</i> < .001
Case 5 vs Case 6	44	N.S.	N.S.
Preparers:			
Case 1 vs Case 5	161	<i>p</i> < .001	<i>p</i> < .001
Case 1 vs Case 6	142	<i>p</i> < .001	<i>p</i> < .001
Case 5 vs Case 6	-19	N.S.	N.S.
Users:			
Case 1 vs Case 5	159	<i>p</i> < .001	<i>p</i> < .001
Case 1 vs Case 6	174	<i>p</i> < .001	<i>p</i> < .001
Case 5 vs Case 6	15	N.S.	N.S.

N.S. = Not significant (at $p \leq .10$)

Table 10.1: Case placements — High non-audit (taxation) services

As revealed in Panel A of Table 10.1, significant within-group differences in factor placements exist for all three participant groups for Cases 1, 5 and 6. This is not surprising given the large number of significant within-group differences in the underlying semantic differential scales revealed in the initial MANOVA results.

The within-group post hoc comparison results presented in Panel B of Table 10.1 indicate significantly lower factor placements within each of the three groups for the two non-audit services cases (Cases 5 and 6) in comparison to Case 1.² This suggests all participants considered the auditor's independence to have been adversely impacted by the provision of a high level of taxation services.

The study's fourth research hypothesis was stated as:

H4: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a high level of auditor provided taxation services.

Given the significantly lower factor placements for Cases 5 and 6 in comparison to Case 1 for all participant groups, *H4* is supported. The two experimental cases involving a high level of auditor provided taxation services result in significantly lower factor placements for all groups in comparison to the case indicating no major threats to auditor independence.³

To further investigate the non-audit services issue, the three non-audit services cases are now compared. This allows comparison of the factor placements for the case in which a low level of non-audit services was specified (Case 7) with the two cases

² The difference between Cases 1 and 5 for auditors is approaching significance, with significance levels of $p = .059$ (Scheffé) and $p = .053$ (Bonferroni). The other two within-group differences between Cases 1 and 5, and all three between Cases 1 and 6, are significant at $p < .001$.

³ This, though, does not indicate shared meaning for these cases. As noted in Section 9.1, significant between-group differences exist for both Case 5 and Case 6.

indicating a high level of non-audit services (Cases 5 and 6). The low non-audit services case specified the provision of taxation services to the audit client over the audit firm's four year tenure period of approximately one-half the audit fee. As noted earlier, this compares to a level of three to four times the annual audit fee specified in the high non-audit services cases.

Before comparing factor placements for Cases 5, 6 and 7 for each participant group, results from initial MANOVAs of the semantic differential scale data for these cases are discussed for each group.

For the auditors, the MANOVA results revealed significant differences across the three cases in five of the 22 semantic scales at $p \leq .05$, with one of these significant at $p \leq .01$. For the preparers, there were significant differences in four of the semantic scales at $p \leq .05$, two of which were significant at $p \leq .01$. For the users, there were significant differences in only two of the 22 semantic scales at $p \leq .05$, none of which were significant at $p \leq .01$.

In comparison to the MANOVA results arising from a comparison of Cases 1, 5 and 6, the MANOVA results from a comparison of Cases 5, 6 and 7 showed differences, within each participant group, in a considerably smaller number of individual semantic scales. Differences in some scales did nevertheless exist, especially for the auditor and preparer groups. To further investigate these within-group differences, ANOVA results comparing the factor placements between the three non-audit services cases are presented in Table 10.2.

Panel A: One-way ANOVA of factor placements

Case Scenario	Factor Placements		
	Auditors	Preparers	Users
7. Low NAS	+36	-18	-65
5. High NAS with PCAOB	+24	-72	-98
6. High NAS without PCAOB	-20	-53	-113
ANOVA: <i>F</i>	3.89	2.46	1.96
<i>p</i>	.025	.093	.150

NAS = Non-audit services

Panel B: Within-group post hoc comparisons

Scenarios	Mean Difference	Scheffé	Bonferroni
Auditors:			
Case 7 vs Case 5	12	N.S.	N.S.
Case 7 vs Case 6	56	<i>p</i> = .035	<i>p</i> = .029
Case 5 vs Case 6	44	N.S.	N.S.
Preparers:			
Case 7 vs Case 5	54	N.S.	N.S.
Case 7 vs Case 6	35	N.S.	N.S.
Case 5 vs Case 6	-19	N.S.	N.S.
Users:			
Case 7 vs Case 5	33	N.S.	N.S.
Case 7 vs Case 6	48	N.S.	N.S.
Case 5 vs Case 6	15	N.S.	N.S.

N.S. = Not significant (at $p \leq .10$)

Table 10.2: Case placements — Low and high non-audit (taxation) services

As revealed in Panel A of Table 10.2, the auditors are the only participant group for which there is a highly significant within-group difference in factor placements for the three non-audit services scenarios ($p = .025$). The within-group difference for the three cases is of moderate significance for the preparer group ($p = .093$), but not significant at $p \leq .10$ for the users.

Post hoc comparison results, presented in Panel B of Table 10.2, show that the auditor factor placements for the case indicating a high level of taxation services without PCAOB oversight (Case 6) are significantly lower than those for the low taxation services case (Case 7).

The lack of statistically significant post hoc comparisons within each of the preparer and user groups between the three taxation services cases, and their negative factor placements in all cases, supports the conclusion that both these groups had lower interpretations of auditor independence in the presence of these non-audit services (given the comparison with factor placements for Case 1 presented in Table 10.1), and that this was the situation whether those services were provided at the lower or higher levels specified.⁴

As this is an important issue, a further within-subject comparison was conducted to determine the extent to which the low non-audit services scenario impacted negatively on connotations of independence. This was achieved by comparing factor placements for Case 7 (low taxation services) with Case 1 (no major threats).⁵ For the

⁴ That is, factor placements for the preparers and users are significantly lower for the two high non-audit services cases in comparison to the no major threats case (Table 10.1), indicating an adverse impact on connotations of independence from this high level of non-audit services. However, for these two participant groups, Table 10.2 shows no significant differences in factor placements between the low non-audit services case and the two high non-audit services cases.

⁵ This was the only within-subject comparison conducted by the study.

auditor group, there was no significant difference in factor placements between these two cases (mean difference = 34; $p = .150$). For the preparers and users, though, there were significantly lower factor placements for the low non-audit services case in comparison to the no major threats case. The mean difference for the preparer group was 107 ($p < .001$) and for the user group was 126 ($p < .001$). This reinforces the adverse impact on connotations of independence of even the lower level of taxation services specified in Case 7 for the preparers and users. This was in contrast to the auditors, where there was not a significant adverse impact.

The fifth research hypothesis was stated as:

***H5:** The measured meaning of auditor independence within individual research participant groups is affected by the extent of auditor provided taxation services.*

Hypothesis five is tested by comparing factor placements for Cases 6 and 7. As Case 5 introduced the additional safeguard of PCAOB oversight, the difference between Cases 5 and 7 is not directly a test of *H5*.

Hypothesis five is supported for auditors, given the significantly lower factor placements for Case 6 in comparison to Case 7. Hence, for this group, connotations of independence were adversely affected by the higher level of taxation services in Case 6 in comparison to the lower level in Case 7. However, given the lack of significant differences in factor placements for preparers and users between these cases, *H5* is not supported for these two groups.

The sixth research hypothesis was stated as:

H6: The measured meaning of auditor independence within individual research participant groups is affected by the existence of additional auditor oversight.

Hypothesis six is tested by comparing factor placements for Cases 5 and 6. Both cases involved the same high level of taxation services, but Case 5 indicated the presence of additional PCAOB oversight. The post hoc comparison tests in Panel B of Table 10.2 show no significant differences for any of the three groups between Cases 5 and 6. In the presence of the high level of taxation services indicated in those cases, the presence of additional PCAOB oversight does not result in significantly lower factor placements. Accordingly, for these experimental cases, *H6* is not supported for any of the three research participant groups. Additional PCAOB oversight does not result in a significant improvement in connotations of independence.

10.2 INTERLOCKING DIRECTORSHIPS AMONG AUDIT CLIENTS

To examine the effect of the existence of interlocking directorships among audit clients, Case 1 (no major independence threats case) and Case 2 (interlocking directorships) are compared in this section.

Before comparing factor placements for Cases 1 and 2 for each participant group, results from initial MANOVAs of the semantic differential scale data for these cases are discussed for each group. For the auditors, the MANOVA results revealed significant differences between the two cases in 14 of the 22 semantic scales at $p \leq .05$, with 11 of these significant at $p \leq .01$. For the preparers, there were significant differences in 16 of the semantic scales at $p \leq .05$, all of which were

significant at $p \leq .01$. For the users, there were significant differences in 11 of the semantic scales at $p \leq .05$, with seven of these significant at $p \leq .01$. The MANOVA results therefore indicate significant differences between Case 1 and Case 2 in a large number of the scales within each of the participant groups.

ANOVA results comparing factor placements between Cases 1, 2 and 6 for each participant group are presented in Table 10.3. Case 6 is included in the comparison to further examine the extent of any perceived independence threat presented by interlocking directorships. This enables a comparison of the perceived threat arising from the interlocking directorships case (Case 2) with that from the auditor provision of a relatively high level of taxation services without additional public oversight (Case 6).

The ANOVA results presented in Panel A of Table 10.3 show there are significant within-group differences in factor placements for all three participant groups between Cases 1, 2 and 6.

Panel A: One-way ANOVA of factor placements

Case Scenario	Factor Placements		
	Auditors	Preparers	Users
1. No major threats	+70	+89	+61
2. Interlocking directorships	-19	-46	-27
6. High NAS without PCAOB	-20	-53	-113
ANOVA: <i>F</i>	12.39	30.20	27.74
<i>p</i>	<.001	<.001	<.001

Panel B: Within-group post hoc comparisons

Scenarios	Mean Difference	Scheffé	Bonferroni
Auditors:			
Case 1 vs Case 2	89	<i>p</i> < .001	<i>p</i> < .001
Case 2 vs Case 6	1	N.S.	N.S.
Preparers:			
Case 1 vs Case 2	135	<i>p</i> < .001	<i>p</i> < .001
Case 2 vs Case 6	7	N.S.	N.S.
Users:			
Case 1 vs Case 2	88	<i>p</i> = .003	<i>p</i> = .002
Case 2 vs Case 6	86	<i>p</i> = .002	<i>p</i> = .001

N.S. = Not significant (at $p \leq .10$)

Table 10.3: Case placements — Interlocking directorships

Within-group post hoc comparisons are presented in Panel B of Table 10.3.⁶ These show significantly lower factor placements within each of the three groups for the interlocking directorships case in comparison to Case 1. This indicates that all participant groups, including auditors themselves, considered auditor independence to have been significantly diminished in the presence of the interlocking directorships.

The study's seventh research hypothesis was stated as:

H7: The measured meaning of auditor independence within individual research participant groups is affected by the presence of interlocking directorships among audit clients.

Given the significantly lower factor placements for Case 2 in comparison to Case 1 for all participant groups, *H7* is supported. The presence of the interlocking directorships among audit clients specified in Case 2 results in significantly lower factor placements for all groups in comparison to the case indicating no major threats to auditor independence.

With regard to the threat to auditor independence of interlocking directorships in comparison to that of the auditor provision of a relatively high level of non-audit (taxation) services, there are no significant differences in factor placements for these two cases for auditors and preparers. For these two groups, the adverse impact on auditor independence of interlocking directorships is not significantly different from that of the auditor provision of a high level of taxation services. However, users did consider the high taxation services case to represent a greater threat to auditor independence than the presence of interlocking directorships, as indicated by significantly lower factor placements for the former case.

⁶ Post hoc comparisons between Cases 1 and 6 are not presented in Table 10.3 as these were discussed in the previous section.

10.3 LONGER PERIOD OF AUDIT FIRM TENURE AND AUDIT PARTNER ROTATION

To examine the impact on interpretations of auditor independence of a longer period of audit firm tenure and of audit partner rotation, factor placements for Case 1 (no major independence threats) are compared with those for Cases 3 and 4 in this section. The scenario in Case 1 was based on an audit firm tenure period of four years. Cases 3 and 4 were based on an audit firm tenure period of nine years, with audit partner rotation every four and seven years respectively.

Before comparing factor placements for Cases 1, 3 and 4 for each participant group, results from initial MANOVAs of the semantic differential scale data for these cases are discussed for each group. For the auditors, the MANOVA results revealed significant differences across the three cases in three of the 22 semantic scales at $p \leq .05$, none of which were significant at $p \leq .01$. For the preparers, there were significant differences in four of the semantic scales at $p \leq .05$, only one of which was significant at $p \leq .01$. For the users, there were no significant differences in any of the semantic scales at $p \leq .05$. The MANOVA results therefore indicate significant differences between Cases 1, 3 and 4 in only a very small number of the scales for the auditor and preparer groups and in no scales for the users.

ANOVA results from a comparison of factor placements for Cases 1, 3 and 4 are presented in Panel A of Table 10.4. The table reveals positive factor placements for the three cases for all three participant groups.

Panel A: One-way ANOVA of factor placements

Case Scenario	Factor Placements		
	Auditors	Preparers	Users
1. No major threats	+70	+89	+61
3. Longer tenure and audit partner rotation after 4 years.	+70	+78	+85
4. Longer tenure and audit partner rotation after 7 years.	+48	+45	+76
ANOVA: <i>F</i>	1.21	2.86	0.76
<i>p</i>	.304	.064	.472

Panel B: Within-group post hoc comparisons

Scenarios	Mean Difference	Scheffé	Bonferroni
Auditors:			
Case 1 vs Case 3	0	N.S.	N.S.
Case 1 vs Case 4	22	N.S.	N.S.
Case 3 vs Case 4	22	N.S.	N.S.
Preparers:			
Case 1 vs Case 3	11	N.S.	N.S.
Case 1 vs Case 4	44	<i>p</i> = .080	<i>p</i> = .075
Case 3 vs Case 4	33	N.S.	N.S.
Users:			
Case 1 vs Case 3	-24	N.S.	N.S.
Case 1 vs Case 4	-15	N.S.	N.S.
Case 3 vs Case 4	9	N.S.	N.S.

N.S. = Not significant (at $p \leq .10$)

Table 10.4: Case placements — Longer period of audit tenure and audit partner rotation

As revealed in Panel A of Table 10.4, the preparers are the only participant group for which there is a moderately significant within-group difference in factor placements across the three cases ($p = .064$). The within-group differences for the auditors and users between the three cases are not significant at $p \leq .10$.

Within-group post hoc comparison tests are presented in Panel B of Table 10.4. The post hoc comparisons show a moderately significant difference in factor placements between only Cases 1 and 4 for the preparers ($p = .080$ Scheffé and $.075$ Bonferroni).

As noted earlier, Case 4 had the highest manipulation check failure rate of the nine experimental cases. The within-group comparisons for Cases 1, 3 and 4 were therefore reanalysed with the exclusion of the data for participants who had failed the manipulation checks. There were again no significant within-group differences in factor placements for the auditor and user groups.⁷

There was a minor change, though, for the preparers. The removal of the manipulation check failures increased the factor placement for Case 4 from +45 to +49.⁸ While there was a within-group difference of moderate significance between Case 1 and 4 for the preparers in the original analysis, this difference was not significant with the removal of the manipulation check failures.⁹

⁷ With the manipulation check failures removed, the factor placement for auditors for Case 3 increased from +70 to +74 and for Case 4 from +48 to +75. For users, the factor placement for Case 4 increased from +76 to +90 (there were no manipulation failures for Case 3). Hence, the removal of the manipulation failure observations brought the factor placements for Cases 3 and 4 closer together for the auditors and users.

⁸ There were no manipulation check failures for Case 3 for the preparers.

⁹ The significance of the overall ANOVA for the three cases for the preparers decreased from $p = .064$ to $p = .102$. The significance of the difference between Cases 1 and 4 when the manipulation check failures were removed decreased from $p = .080$ (Scheffé) and $p = .075$ (Bonferroni) to $p = .111$ (both Scheffé and Bonferroni).

The study's eighth research hypothesis was stated as:

H8: The measured meaning of auditor independence within individual research participant groups is affected by the length of audit firm tenure, even in the presence of audit partner rotation policies.

Given the lack of any significant within-group differences between Cases 1 and 3 and Cases 1 and 4, *H8* is not supported. There is no significant difference in factor placements between the case specifying an audit firm tenure period of four years and the two cases indicating a nine year tenure period.

The ninth research hypothesis was stated as:

H9: The measured meaning of auditor independence within individual research participant groups is affected by the period of audit partner rotation.

By reference to the lack of any significant differences in factor placements between Cases 3 and 4 for any of the three participant groups, *H9* is not supported.¹⁰ When the audit firm had been incumbent for a nine year period, an audit partner rotation period of four years did not result in significantly higher factor placements for any group in comparison to rotation periods of seven years.

10.4 FORMER PARTNER AS DIRECTOR OF AUDITEE AND LOCAL INDEPENDENCE BOARD

Cases 8 and 9 both included the potential independence threat of the presence of a former audit partner of the audit firm as a director of the audit client. Case 8 indicated that the audit firm had a local (internal) independence board, while such a board was not indicated in Case 9.

¹⁰ As noted earlier, this conclusion is unaffected by the removal of manipulation check failure observations from the analysis.

To enable between-subject comparisons of Cases 8 and 9 with a case in which auditor independence was not considered to have been adversely affected, the two cases are compared with Case 3. That case, involving a nine year period of audit firm tenure with audit partner rotation after 4 years, is used as a proxy for a scenario with no major independence threats. The factor placements for this case, presented previously in Section 10.3 and Table 10.4, show no significant differences to those for Case 1 (no major independence threats) for any participant group.

Before comparing factor placements for Cases 3, 8 and 9 for each participant group, results from initial MANOVAs of the semantic differential scale data for these cases are discussed for each group. For the auditors, the MANOVA results revealed significant differences across the three cases in 13 of the 22 semantic scales at $p \leq .05$, with 11 of these also significant at $p \leq .01$. For the preparers, there were significant differences in 17 of the semantic scales at $p \leq .05$, of which 12 were also significant at $p \leq .01$. For the users, there were significant differences in 18 of the semantic scales at $p \leq .05$, all of which were also significant at $p \leq .01$. The MANOVA results therefore indicate significant within-group differences between Cases 3, 8 and 9 in a large number of the semantic scales for all participant groups.

ANOVA results from a comparison of factor placements for Cases 3, 8 and 9 are presented in Panel A of Table 10.5. These show significant within-group differences in factor placements for all three participant groups.

Panel A: One-way ANOVA of factor placements

Case Scenario	Factor Placements		
	Auditors	Preparers	Users
3. Longer tenure and rotation after 4 years.	+70	+78	+85
8. Ex-partner director of audit client with local independence board	+2	+7	-2
9. Ex-partner director of audit client without local independence board.	-63	-51	-75
ANOVA: <i>F</i>	18.17	13.97	19.61
<i>p</i>	<.001	<.001	<.001

Panel B: Within-group post hoc comparisons

Scenarios	Mean Difference	Scheffé	Bonferroni
Auditors			
Case 3 vs Case 8	68	<i>p</i> = .011	<i>p</i> = .009
Case 3 vs Case 9	133	<i>p</i> < .001	<i>p</i> < .001
Case 8 vs Case 9	65	<i>p</i> = .018	<i>p</i> = .014
Preparers:			
Case 3 vs Case 8	71	<i>p</i> = .016	<i>p</i> = .013
Case 3 vs Case 9	129	<i>p</i> < .001	<i>p</i> < .001
Case 8 vs Case 9	58	<i>p</i> = .059	<i>p</i> = .054
Users:			
Case 3 vs Case 8	87	<i>p</i> = .003	<i>p</i> = .002
Case 3 vs Case 9	160	<i>p</i> < .001	<i>p</i> < .001
Case 8 vs Case 9	73	<i>p</i> = .016	<i>p</i> = .012

N.S. = Not significant (at $p \leq .10$)

Table 10.5: Case placements — Former partner as director of audit client and local independence board

The study's tenth research hypothesis was stated as:

H10: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a director of the audit client who was formerly an audit partner of the audit firm.

The above hypothesis is tested by comparing Case 3, the case proxying no major independence threats, with Case 9. The post hoc comparisons presented in Panel B of Table 10.5 show significantly lower factor placements for Case 9 in comparison to case 3, at $p < .001$, for all participant groups. This indicates all groups consider auditor independence to have been significantly diminished where a former audit partner had moved to become a director of the auditee. Accordingly, *H10* is supported.

The significance of the differences between Case 3 and Case 8 can also be observed. In comparison to Case 9, Case 8 specified the additional safeguard of a local independence board within the audit firm. Panel B of Table 10.5 shows significantly lower factor placements for all groups for Case 8 in comparison to Case 3. Hence, even with the additional safeguard of a local independence board, all groups consider auditor independence to be diminished when a former audit partner has become a director of the auditee.¹¹ This provides additional support for *H10*.

The eleventh research hypothesis was stated as:

H11: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a local independence board within the audit firm.

¹¹ Case 8 was the case with the second highest manipulation check failure rate. When excluding the manipulation check failure observations, the difference between Cases 3 and 8 for preparers was significant at $p = .014$ (Scheffé) and $p = .011$ (Bonferroni). The difference for auditors fell to a moderate significance level of $p = .083$ (Scheffé) and $p = .078$ (Bonferroni). There were no manipulation check failures in Case 8 for the user group.

The above hypothesis is tested by comparing the two case scenarios involving an ex-audit partner as director of the audit client (Cases 8 and 9). The post hoc comparisons presented in Panel B of Table 10.5 indicate, for these two cases, significantly higher factor placements for Case 8 where a local independence board was specified to exist within the audit firm. This is generally consistent for all participant groups, although the significance was only at a moderate level for the preparers.¹²

When the manipulation check failure observations for auditors and preparers were removed,¹³ the significance of the difference in Cases 8 and 9 factor placements for auditors remained at $p < .001$ (Scheffé and Bonferroni). However, the difference for preparers became insignificant ($p = .119$, both Scheffé and Bonferroni).

The above results lead to the conclusion that the auditors and users, but not the preparers, consider auditor independence to be positively affected by the presence of a local audit independence board within the audit firm. Accordingly, *H11* is supported for the auditors and users but not for the preparers.

10.5 SUMMARY

The within-group comparisons of related sets of experimental cases presented in this chapter highlight the negative impact on connotations of auditor independence of non-audit (taxation) services, interlocking directorships and the presence of a former audit partner as a director of the auditee. The findings also document the positive impact on connotations of independence of a local independence board within the audit firm.

¹² The significance of the difference was at $p = .059$ (Scheffé) and $.054$ (Bonferroni).

¹³ There were no manipulation check failures for users for Cases 8 or 9.

The study's research findings have been presented in this and the previous two chapters. The next, and final, chapter presents an overall summary, particularly outlining policy issues arising from the study's findings, research limitations and suggestions for future research.

CHAPTER 11

SUMMARY AND CONCLUSIONS

This chapter, which concludes the thesis, proceeds as follows. The objectives and theoretical foundations of the research, together with the study's general research question and research method, are summarised in Section 11.1. Conclusions drawn from the study's data analysis are presented in Section 11.2. Limitations of the research are discussed in Section 11.3. Policy, theoretical and future research implications are presented in Section 11.4, and a chapter summary is contained in Section 11.5.

11.1 SUMMARY OF THE RESEARCH

The research reported in the thesis was designed to provide further investigation into the concept of auditor independence following the series of corporate collapses earlier this decade. Vigorous debate on auditor independence arose in the aftermath of those collapses. A number of formal inquiries and reviews were commissioned and reports prepared in Australia and internationally. These have resulted in considerable substantive amendment to the legislative and professional rules and guidelines aimed at strengthening the independence of auditors in fact and in appearance. The ultimate aim of the revisions and amendments has been to ensure the confidence of shareholders and other stakeholders in the reliability of audited financial reports.

The independence pronouncements and standards issued by the major professional accounting organisations and regulatory bodies represent their attempts to provide a

definition of auditor independence and to provide guidance for auditors when evaluating their independence in practice. These statements therefore effectively elaborate on the meaning of the concept of auditor independence, particularly by presenting explanations of independence and by providing rules and guidelines regarding various threats to auditor independence and safeguards to protect against independence impairment. Recent amendments to the pronouncements, standards and legislation in Australia and internationally have been designed to guide auditors in the light of contemporary developments.

The objective of the research was to determine, using an innovative research method not previously applied in the extant literature, the presence and extent of shared meaning of the concept of auditor independence between key parties to the financial reporting communication process. The aim was also to determine the extent to which connotations of auditor independence are affected by various potential independence threats and safeguards. The research framework for the measurement of meaning originally developed by Osgood *et al.* (1957) was used for this purpose. Auditors, financial report preparers and financial report users were used as research participants to represent the major parties to the financial reporting communication process.

The experimental manipulations employed in the study represented contemporary auditor independence issues. The manipulations comprised potential independence threats highlighted in the literature, independence safeguards introduced to mitigate potential independence threats, and proposals for additional independence safeguards. The measurement of meaning research framework was utilised to examine whether there was shared meaning of aspects of these contemporary issues between the three research participant groups. The findings provide insight into interpretations of independence in response to the independence threats and safeguards examined.

11.2 SUMMARY OF THE RESEARCH CONCLUSIONS

The results of the study show that the Osgood *et al.* (1957) measurement of meaning research framework can be successfully used to examine the connotative meaning of the auditor independence concept. A summary of the research findings in relation to each of the research hypotheses, based on the individual experimental cases employed in the study, is presented in Table 11.1. The findings are then summarised under the headings (a) cognitive structure and shared meaning (*H1* and *H2*), (b) between-group comparisons of experimental cases and shared meaning (*H3*), and (c) within-group comparisons of experimental cases (*H4* to *H11*).

Research hypotheses	Supported / Not supported
H1: Research participants interpret the connotative meaning of the auditor independence concept within a three factor E-P-A cognitive structure.	Not supported.
H2: Research participants interpret the connotative meaning of the auditor independence concept within a shared cognitive structure.	Supported (single factor cognitive structure).
H3: There are no significant differences between research participant groups in the measured meaning of auditor independence for each of the alternative experimental cases.	Supported for all experimental cases except the three non-audit (taxation) services cases.
H4: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a high level of auditor provided taxation services.	Supported for all participant groups.
H5: The measured meaning of auditor independence within individual research participant groups is affected by the extent of auditor provided taxation services.	Supported for auditors. Not supported for preparers and users.
H6: The measured meaning of auditor independence within individual research participant groups is affected by the existence of additional auditor oversight.	Supported for auditors. Not supported for preparers and users.
H7: The measured meaning of auditor independence within individual research participant groups is affected by the presence of interlocking directorships among audit clients.	Supported for all participant groups.
H8: The measured meaning of auditor independence within individual research participant groups is affected by the length of audit firm tenure, even in the presence of audit partner rotation policies.	Not supported for any participant group.
H9: The measured meaning of auditor independence within individual research participant groups is affected by the period of audit partner rotation.	Not supported for any participant group.
H10: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a director of the audit client who was formerly an audit partner of the audit firm.	Supported for all participant groups.
H11: The measured meaning of auditor independence within individual research participant groups is affected by the presence of a local independence board within the audit firm.	Supported for auditors and users. Not supported for preparers.

Table 11.1: Research hypotheses — Summary of research findings

11.2.1 Cognitive structure and shared meaning

Contrary to *H1*, study results showed that the three research participant groups did not interpret the connotative meaning of the auditor independence concept within a shared, three-factor *E-P-A* (evaluative, potency, activity) cognitive structure.

However, consistent with *H2*, the research participants did interpret the connotative meaning of auditor independence within a shared cognitive structure, albeit a single factor structure. The evaluative and potency dimensions of meaning in particular, but also the activity dimension to a lesser extent, were found to be highly related and overlapping for the auditor independence concept. Osgood (1976) suggested that the greater the emotional or attitudinal loading of the concept being judged, the greater the tendency of the semantic framework to collapse into a single, combined dimension. The results of this study suggest this to be the case for the concept of auditor independence, a concept that does evoke considerable emotion.

11.2.2 Between-group comparisons of experimental cases and shared meaning

The study's *H3* hypothesised that there would be no significant differences in the measured meaning (connotations) of auditor independence between the research participant groups for each of the alternative experimental cases. This was supported for all cases except the three non-audit (taxation) services experimental cases.

The three participant groups were in agreement in their interpretation of the audit firm's independence, by reference to factor placements under the shared cognitive structure, for the individual cases specifying (a) no major independence threats, (b) interlocking directorships among audit clients, (c) a longer period of audit firm tenure (with four or seven year audit partner rotation periods), and (d) a former audit

partner of the audit firm being a director of the audit client (both with and without a local independence board). This indicates shared meaning for these situations.

However, significant between-group differences were evident for the three experimental cases specifying the auditor provision of non-audit (taxation) services. In particular, factor placements were significantly lower for users in comparison to auditors for all three cases and for preparers in comparison to auditors for two of the three cases. This signifies a lack of shared meaning for the non-audit services scenarios presented.

11.2.3 Within-group comparisons of experimental cases

Within-group comparisons of related sets of cases for each participant group allowed insight into the impact of alternative experimental case scenarios on connotations of auditor independence. In turn, this allowed insight into various contemporary independence issues.

In support of *H4*, connotations of auditor independence were adversely affected by the presence of a high level of auditor provided taxation services for all participant groups. In addition, for auditors only and in partial support of *H5*, connotations of auditor independence were affected by the extent of auditor provided taxation services. Significantly lower factor placements were found for auditors for the case specifying a high level of taxation services without additional PCAOB oversight in comparison to the case specifying a low level of taxation services.

However, *H5* was not supported for the preparers and users. There was no significant difference in connotations of the auditor's independence between the case specifying a low level of taxation services and the two cases in which high levels of taxation

services were indicated. This again signifies a lack of shared meaning between the participant groups with respect to independence in the presence of audit firm provided non-audit services.

In the presence of a high level of audit firm provided non-audit services, none of the participant groups' connotations of the audit firm's independence were improved by the presence of additional PCAOB oversight. *H6* was therefore not supported for any of the groups.

In support of *H7*, all three groups considered auditor independence to be adversely impacted by the presence of interlocking directorships among audit clients. In this experimental case, the audit partner was specified to also be the audit engagement partner for two other companies for which interlocking directorships existed between three non-executive directors.

The study's *H8* was not supported. While *H8* proposed that connotations of auditor independence would be adversely affected by a longer nine year period of audit firm tenure in comparison to a shorter four year tenure period, even in the presence of audit partner rotation policies, this was not supported for any of the participant groups. Further, there was no negative impact on connotations of auditor independence for any of the three groups where the period of audit partner rotation was seven years rather than four years. Accordingly, *H9* was not supported.

Study results found connotations of auditor independence to be adversely impacted by the presence of a former audit partner of the incumbent audit firm as a director of the auditee company. This was the situation for all participant groups, and therefore *H10* was supported. However, for the auditor and user groups (but not the preparers),

connotations of independence were positively impacted in this situation by the presence of a local independence board within the audit firm. Accordingly, H10 was partially supported.

In summary, the results of the within-group comparisons of experimental cases show that the Osgood *et al.* (1957) research framework for the measurement of meaning can be used to examine similarities and differences in connotations of auditor independence in response to differing audit engagement circumstances.

11.3 LIMITATIONS OF THE RESEARCH

This section discusses the limitations of the research and assesses the impacts these limitations have on the research conclusions. The potential threats to validity described by Shadish, Cook and Campbell (2002) provide the basis for this discussion. The typology of threats identified by Shadish *et al.* (2002) comprises threats to (a) statistical conclusion validity, (b) internal validity, (c) construct validity, and (d) external validity.

11.3.1 Statistical conclusion validity

Statistical conclusion validity refers to the appropriate use of statistics to infer whether the presumed independent and dependent variables covary (Shadish *et al.*, 2002). Three possible threats to statistical conclusion validity in the study arise from (a) unreliability of treatment implementation, (b) extraneous variance in the experimental setting, and (c) heterogeneity of respondents.

An unreliability of treatment implementation threat occurs if a treatment is implemented inconsistently from site to site or from person to person within sites (Shadish *et al.*, 2002). A related potential threat is that of extraneous variance in the

experimental setting. This arises from features of the experimental setting which ‘artificially inflate error’, such as any distractions facing research participants (Shadish *et al.*, 2002, p. 51). These threats are pervasive in field experiments where controlling the treatment is less feasible than in the laboratory (Shadish *et al.*, 2002).

The potential threats in the study of unreliability of treatment implementation and extraneous variance in the experimental setting arise from the manner in which the research instrument was administered. Procedures for administration of the research instrument were explained in Chapter 5. Given the difficulty of gaining access to research participants for the type of experimental research undertaken by the study, the research instrument could not be administered with participants in a controlled, laboratory setting. To gain access to auditor participants, the majority of research instruments were distributed to the relevant audit staff by personnel within the audit firms and then returned to the researcher. Administration of the research instrument with preparers was achieved via mail. Administration with users was achieved by a combination of the two approaches used for the auditors and preparers. These procedures considerably reduced the control of the researcher over the administration process, but were necessary to obtain a suitable sample size for the three participant groups.

A further potential statistical conclusion validity threat in the study arises from heterogeneity of respondents, which can potentially obscure any systematic covariation between the treatment and the outcome (Shadish *et al.*, 2002). Of the three participant groups, heterogeneity of respondents would be of least concern for the auditors. All auditor participants were from major Big Four and Second Tier accounting firms. Participants were also relatively experienced, with a minimum of

three years audit experience. Nevertheless, possible variation across audit firms and across levels of auditor experience is a potential study limitation.

The preparer participants were employed in a number of different roles. While accountants represented the largest sub-group within this category, other preparers included, for example, chief financial and chief operating officers, financial controllers and managers. These alternate occupational roles could potentially result in differing perspectives on the audit function and the concept of auditor independence.

The user participants, comprising bank analysts and private shareholders, represented two distinct sub-groups. While participants in the former sub-group were directly employed in roles requiring the use of audited financial reports, the latter group would be more inclined to use financial reports voluntarily as an input into their own investment activities. Accordingly, this could potentially result in differing perspectives on the audit function and the concept of auditor independence for the two sub-groups.

Despite the above, and from the viewpoint of the measured meaning of the auditor independence concept, it is not expected that possible heterogeneity in each of the study's participant groups will have significantly contributed to error variance. The finding of a shared cognitive structure within which the concept of auditor independence was considered by each participant group suggests that heterogeneity of respondents does not constitute a major problem. However, any heterogeneity could nevertheless potentially affect individual connotations of independence in the individual experimental cases.

Statistical conclusion validity, though, was strengthened by the use of a number of variations in the statistical analysis methods. In particular, alternative factor analysis extraction and rotation methods and alternative post hoc comparison tests (Scheffé and Bonferroni) were used, with no substantive change to the research results.

11.3.2 Internal validity

Internal validity refers to whether the covariation between the independent and dependent variables results from a causal relationship (Shadish *et al.*, 2002). It refers to 'the extent to which the effect of an independent variable on a dependent variable has been correctly interpreted' (Haslam and McGarty, 2003, p. 51). Two possible threats to internal validity in this study arise from history and testing.

The threat to internal validity of history arises when events occurring concurrently with the experimental treatment affect the observed effect (Shadish *et al.*, 2002). In laboratory research, history is controlled by isolating research participants from outside events (Shadish *et al.*, 2002). This, though, was not possible in the present study. As highlighted in Chapter 5 and the previous sub-section, only a minority of the research instruments were administered by the researcher in controlled conditions over a specific, limited time period. Accordingly, for the majority of participants, other events could have occurred during the period between receiving the research instrument and returning it that could have affected responses. In particular, while the corporate collapses such as those of Enron and HIH Insurance occurred in 2001, repercussions continued for some time after. Accordingly, while the initial magnitude of the reporting of these corporate collapses and the reaction of the various regulatory and professional bodies had decreased by the time of administration of the research instrument (March 2004 to May 2005), the responses of participants to the

experimental conditions could have been affected by the ongoing developments at the time. Further, an extended period of time of slightly over 13 months was required to gain access to all participant groups and meet sample size requirements. This poses the threat that research participants could have been exposed to varied events impacting on their responses at the time they were completing the research instrument. These events could have particularly arisen from, for example, the reporting in the media, or professional and regulatory developments occurring at the time, with respect to auditor independence issues in the aftermath of the 2001 corporate collapses.

The second potential internal validity threat in the study arises from testing. This threat arises where exposure to a test can affect scores on subsequent exposures to the test, thereby confusing the treatment effect (Shadish *et al.*, 2002). The result is that practice, familiarity or other forms of reactivity arising from repeated exposure to a test can be mistaken for treatment effects (Shadish *et al.*, 2002). In the present study, all research participants were exposed to the testing more than once as they responded to three experimental cases each. As explained in Chapter 4, all possible orders of the experimental cases were presented in alternate variations of the research instrument to protect against order effects, and this should have minimised testing effects. Nevertheless, the potential for an internal validity threat arising from a testing effect remains.

11.3.3 Construct validity

Construct validity involves ‘making inferences from the sampling particulars of a study to the higher-order constructs they represent’ (Shadish *et al.*, 2002, p. 65). Construct validity refers to the degree to which inferences are warranted from the

observed persons, settings, and cause and effect operations included in the study to the constructs that these instances might represent (Shadish *et al.*, 2002). The concept of auditor independence represents the construct for which measured meaning was investigated in the present study. Possible construct validity threats could arise from (a) inadequate explication of constructs, (b) construct confounding, (c) mono-method bias, (d) experimenter expectancies, and (e) novelty and disruption effects.

A construct validity threat from a failure to adequately explicate the construct leads to the potential for incorrect inferences about the relationship between the operation and the construct (Shadish *et al.*, 2002). Common errors in explicating constructs include identifying constructs at too general or too specific a level, identifying a wrong construct or identifying a single construct that actually reflects two or more constructs (Mark, 2000). While the study was designed to investigate the construct of auditor independence, research participants may have considered other issues in providing their responses. For example, participants may have been making assessments of a broader construct than that of independence only, such as that of auditor quality comprising both auditor competence and independence. It is possible that the preparer and user participants, who would be expected to have less knowledge of and experience with independence than the auditors, may have been responding based on a different understanding (conceptualisation) of exactly what auditor independence entails.

A related validity threat is that of construct confounding, which arises because operations in an experiment are rarely pure representations of constructs (Shadish *et al.*, 2002). Participants' considerations of, for example, auditor competence in the present study may have confounded their interpretations of auditor independence in individual experimental cases.

Mono-method bias transpires when all operationalisations of a construct use the same method, resulting in the method becoming part of the construct studied (Shadish *et al.*, 2002). This bias can arise when alternate treatments are presented to participants, and outcome responses are measured, in the same way (Shadish *et al.*, 2002). While mono-method bias was reduced in the study to some extent by protecting against order effects in the presentation of experimental cases and semantic scales, the potential for bias remains due to use of the same set of semantic scales and the same general manner of presentation of the different experimental cases.

A further potential construct validity threat arises from experimenter expectancies, caused by the researcher conveying expectations about desirable responses (Shadish *et al.*, 2002). Demand characteristics (demand effects) may arise in behavioural experiments, these resulting in participants responding to cues about the experimental hypothesis and replying differently than they would in real world situations (Orne, 1962; Weber and Cook, 1972; Pany and Reckers, 1987; Gul and Windsor, 1994; Haslam and McGarty, 2003). While the researcher in the present study did not convey any expectations of desired responses in any correspondence with participants or in the research instrument itself, participants may have consciously or subconsciously considered, when responding to the alternate experimental cases, the responses the researcher might have expected or desired.

A final potential construct validity threat is that caused by novelty and disruption effects (Shadish *et al.*, 2002). These result in participants responding unusually well to novel situations or unusually poorly where their routine is disrupted (Shadish *et al.*, 2002). Novelty or disruption effects could have affected participants' responses in the present study, and it is possible that the effects may have differed between participants. For example, some participants may have felt completion of the research

instrument disrupted their normal work or leisure routine and reacted negatively, such as by completing the research instrument in a minimum amount of time with less than a complete level of commitment. Other participants may have considered their involvement in the research to be a novel situation and reacted positively by considering their responses carefully.

One aspect of the study which has impacted positively on construct validity stems from the research method's utilisation of 22 semantic differential scales across nine experimental cases with three participant groups. This decreases any threat of mono-operation bias, which occurs when only a single operationalisation of a construct is used in an experiment (Shadish *et al.*, 2002). Another positive aspect stems from the fact that the experimental cases presented widely differing treatment levels with respect to potential independence threats and safeguards. This reduces the threat of confounding the construct with the level of the construct (Shadish *et al.*, 2002). Nevertheless, the validity threat remains that the 22 scales potentially measured only certain aspects of the independence construct.

11.3.4 External validity

External validity relates to the validity of inferences about whether the causal relationship holds over variation in persons, settings, treatment variables and measurement variables (Shadish *et al.*, 2002), and refers to the extent to which a research finding can be generalised to other situations (Haslam and McGarty, 2003). Of the various external validity threats identified by Shadish *et al.* (2002), possible threats in the present study arise from interaction of the causal relationship (a) with units, (b) over treatment variations, (c) with outcomes, and (d) with setting.

An interaction of the causal relationship with units means that an effect found with certain kinds of units might not hold if other types of units had been studied (Shadish *et al.*, 2002). The units in the study were the research participants. In order to generalise from an experimental sample to a population, the sample must be representative of the population on theoretically relevant dimensions (Haslam and McGarty, 2003). Accordingly, the research results may not be generalisable to the general population of auditors, preparers and users if the participant group samples were not representative of the respective populations.

The auditor participants were not employed in a single audit firm but were drawn from three Big Four and five Second Tier firms. Within the total sample, though, there was a large group of participants from a single Big Four firm. This group represented 47.5 per cent of the total sample of auditors, with the next largest group of auditor participants, from a Second Tier firm, representing 12.5 per cent of the auditor sample. Hence, there was a degree of concentration of participants from one particular audit firm. However, as a group, the auditor participants represented a range of experience levels, spanning from three years to over 30 years experience, and the group comprised both females and males. Despite some degree of concentration of participants from one Big Four firm, the sample should have mitigated external validity threats to at least some extent as the auditors were drawn from eight firms rather than a single firm, comprised both females and males, and represented a range of experience levels. Nevertheless, the potential for external validity threats will be present if the participants differed in a systematic way from the general population of auditors across all types of audit firms.

The financial report preparer participants were drawn from a variety of roles, employing entities and experience levels. They also comprised both females and

males. Accordingly, the sample would have mitigated external validity threats to a large extent given this variation. However, it could not be expected that these characteristics would exactly mirror those of the entire population of financial report preparers, and hence the potential for external validity threats remains. Also, as noted in Chapter 5, the preparer participants had responded to a mail request to voluntarily participate in the research. The potential threat exists that the type of preparers who volunteered to be involved in the research might have differ in systematic ways from the general population of financial report preparers.

The financial report user participants represented both institutional (professional bank analyst) and private shareholder (investor) users. The bank analysts had a variety of years of experience in their current occupation (from one year to 25 years) and comprised both females and males. The private shareholder participants all had at least a reasonable level of familiarity with audited financial reports, comprised both females and males and had a range of experience in investing (from one to 40 years). Hence, from the viewpoint of external validity, a study strength is that it did not focus on a single group of financial report users having a narrow range of occupational or investment experience characteristics.

However, the analysts voluntarily participated in the research and, being from two of the four major Australian banks, only represented one area of analyst employment. They therefore could not be expected to be completely representative of the population of the professional analyst community. The private shareholder participants were all individual investors, were members of the Australian Investors' Association (AIA) who had attended the association's monthly meetings or annual conference, and were voluntary research participants. They therefore could not be expected to be entirely representative of the population of individual investors, and

potentially may not even have been completely representative of the AIA's total membership.

An interaction of the causal relationship over treatment variations means that an effect found with one treatment variation might not hold with other variations of that treatment or combinations of treatments (Shadish *et al.*, 2002). The experimental scenarios were based on potential independence threat treatments of interlocking directorships between certain directors, non-audit (taxation) services at two different levels, a longer period of audit firm tenure of a particular length, and a director of the auditee company having formerly been a partner of the audit firm for a specified time period. Similarly, the potential independence safeguard treatments were based on individual specifications of additional public oversight, audit partner rotation after two specific time periods and local independence boards within the audit firm. Whether the research results could be generalised to further variations of these potential independence threats and safeguards or to different potential threats and safeguards would require further research.

A further aspect of a treatment variation validity threat arises from the audit engagement scenarios expressed in the experimental cases. Characteristics of the auditee company portrayed in the cases were based on, for example, a retail company in a sound financial position with a market capitalisation of around 200 on the ASX, an eight member board with separation of the chairman and managing director functions and an effective audit committee. The participants' reactions to the potential auditor independence threats and safeguards may have differed with alternate specifications of industry, financial condition, company size and/or corporate governance structure. Similarly, characteristics of the audit engagement portrayed in the cases included a Big Four audit firm, unqualified opinions in prior years and an

audit fee of a particular magnitude. The participant's responses may have differed with variations in audit firm type, prior audit opinions and/or audit fee level.

An interaction of the causal relationship with outcomes means that an effect on one kind of outcome observation might not hold if other outcome observations were used (Shadish *et al.*, 2002). The primary outcome observations in the study were the responses of the participants to the 22 semantic differential scales within the research instrument. Conclusions on the effects of the alternate experimental cases may have differed if responses in a different form were requested. For example, narrative responses in an interview setting may have resulted in different research conclusions to those elicited from the 22 semantic scales.

An interaction of the causal relationship with setting means that an effect found in one kind of setting may not hold if other settings were used (Shadish *et al.*, 2002). The setting in the present study refers to the environment in which the research participants were employed or engaged and in which they completed the research instrument. Many of the issues discussed earlier in this sub-section with respect to the research participants and the environment within which they completed the research instrument are also applicable here. A potential external validity threat is that the research results may not be generalisable to other settings, including real world rather than experimental settings.

11.4 IMPLICATIONS OF THE RESEARCH

The study makes a contribution in being the first to have examined the concept of auditor independence using the Osgood *et al.* (1957) research framework for the measurement of meaning. The implications of the research are discussed in this

section under the headings (a) theoretical implications, (b) methodological implications, (c) policy implications, and (d) future research implications.

11.4.1 Theoretical implications

The thesis has made a theoretical contribution to the collective knowledge and thinking about the connotative meaning of concepts generally and, more specifically, the connotative meaning of the concept of auditor independence. It has achieved this by building on earlier research that has examined perceptions of auditor independence in different contexts. The thesis also adds to current theory by focusing on the three major groups of parties to the financial reporting communication process, auditors, financial report preparers and financial report users, in a single study.

The thesis has made a theoretical contribution with respect to the dimensions of connotative meaning within which specific concepts are judged. Osgood *et al.* (1957) proposed the three *E-P-A* dimensions for the general domain of connotative meaning; that is, for common concepts within ordinary fields of usage. Osgood *et al.* (1957) concluded that these three factors have reappeared in a wide variety of judgmental situations, particularly where the sampling of concepts has been broad. However, Osgood (1976) suggested that there would be a tendency for these dimensions (the semantic framework) to collapse into a single, combined dimension where the emotional or attitudinal loading of the concept being judged was high. The concept of auditor independence is one that evokes considerable emotion as evidenced by, for example, the questioning of auditor independence following the corporate collapses earlier this decade. The auditing research literature and professional standards refer to perceptions of auditor independence, and this represents an attitudinal evaluation (interpretation) of independence in specific contexts. The study's finding of a single

dimension of meaning for the concept of auditor independence, rather than a three-dimensional *E-P-A* structure, provides theoretical support for the insight of Osgood (1976) regarding concepts that are highly emotional or attitudinal in nature.

11.4.2 Methodological implications

The thesis makes a methodological contribution by using the measurement of meaning research framework to examine a concept to which it has not previously been applied. A conclusion to be drawn is that the framework represents a valid and useful research tool for the purpose of examining connotations of auditor independence in specific contexts and across alternate parties to the financial reporting communication process. The research findings suggest that the method can be used to provide a means by which the effects of potential auditor independence threats and safeguards on connotations of independence might be better understood. This theoretical contribution has implications for policy-makers, as discussed in the next sub-section.

The study also confirms that the 22 semantic differential scales developed by Houghton (1987a, 1988) can be used to investigate a variety of accounting and auditing concepts. These scales have been used in a number of other prior accounting and auditing concept studies (Houghton and Hronsky, 1993; Bagranoff *et al.*, 1994; Houghton, 1997; Hronsky and Houghton, 2001), and subsets of the scales have also been used (Houghton, 1987b; Houghton and Messier, 1990). The present study serves to confirm their relevance in examining a further auditing concept, that of auditor independence.

A major methodological implication stems from the study's illustration of the manner in which the measurement of meaning research method can be utilised to

prospectively evaluate the impact on connotations (perceptions) of any proposed changes to auditor independence rules. In developing new or revised rules, the method could be used by professional bodies, regulatory bodies and researchers to assess the reaction of various interested parties to any revisions prior to their finalisation. The method could also be used to assess reactions to variations of proposed measures.

11.4.3 Policy implications

Implications for policy-makers arise from the research. These particularly concern (a) assumptions about the existence of an audit expectation gap, and (b) the impact of specific potential independence threat and safeguard circumstances.

A major implication of the research concerns the audit expectation gap. As highlighted in Chapter 2, the independence concept has been identified as a central issue contributing to the expectation gap. With respect to auditor independence, the expectation gap suggests differences between auditors and financial report users in connotations of the independence concept in individual contexts. However, the research found that the auditor and user participant groups generally exhibited shared meaning of the audit firm's independence across the various experimental case scenarios. This finding suggests that the audit expectation gap between the two groups, at least with respect to auditor independence, may be exaggerated.

The auditors and users were generally in agreement in their interpretation of the auditor's independence across the various independence threat and safeguard scenarios. However, the major area in which the study found significant differences between auditors and users was that of the joint provision of audit and non-audit services. Users were concerned with the audit firm provision of non-audit services

even when these were at the lower level and even when they were specified to only comprise traditional taxation (tax compliance and tax planning) services. This supports the views of various authors (see, for example, Humphrey and Moizer, 1990; Mitchell and Sikka, 1993; Pentland, 1993; Power, 1995) that the joint provision of audit and non-audit services is the key issue contributing to the audit expectation gap in the area of auditor independence.

With the major exception of the auditor provision of non-audit services, the research findings suggest to policy-makers that there is generally a shared meaning of the auditor independence concept between auditors and financial report users. This is of relevance when considering the views of auditors and financial report users on auditor independence rules and guidelines, and particularly on those rules and guidelines related to independence in appearance. If significant differences are found between auditors and users in connotations of independence in a particular audit context, this suggests that the issue is a genuinely controversial one requiring specific examination by policy-makers, rather than being assumed to be simply a manifestation of the audit expectation gap.

A second major implication is that the research provides further information for policy-makers with respect to specific potential auditor independence threats and safeguards. The manipulations in the experimental cases represented contemporary auditor independence issues. They comprised potential independence threats highlighted in the literature, independence safeguards introduced to minimise potential independence threats, or proposals for additional independence safeguards. The study, therefore, has implications for policy-makers in providing further evidence on the impact on connotations of these specific independence threats and on the

perceived effectiveness, or otherwise, of independence safeguards. A discussion of the specific implications follows.

Connotations of auditor independence were found to be adversely affected by the presence of a high level of auditor provided non-audit services for all participant groups. This was despite the fact that the non-audit services comprised only taxation services provided by a different division within the accounting firm. In addition, preparers' and users' connotations of auditor independence were as adversely effected when these taxation services fees were at a lower level of around one-eighth the higher level amount. While the provision of traditional taxation services to audit clients has generally not been considered to represent a high independence risk, the findings of the study reinforce the problematic nature of the auditor provision of these services for the accounting profession. As noted in Chapter 6, Francis (2006) states that taxation services are generally viewed positively as a logical add-on to the audit. However, the study's findings suggest that the Australian preparer and user research participants did not view taxation services positively from an independence perspective, at least at the levels specified in the relevant experimental cases.

It is possible that the taxation services in the lower fee case, approaching a level of one-half the audit fee, may nevertheless have been considered to be relatively high by the preparers and users. These participants may have considered at least some of those taxation services to have comprised the type of tax advice centred on higher risk tax structures and potentially abusive and aggressive tax transactions that have been prohibited in countries such as the United Kingdom and the United States, or to comprise the type of advice, recently mentioned by the International Ethics Standards Board for Accountants (IESBA), that depends on a questionable accounting treatment or financial statement presentation. If this is the situation, the research indicates that

the effective banning of this type of potentially abusive and aggressive tax planning would be viewed favourably, by preparers and users, from the viewpoint of independence in appearance. This supports the recent moves in the United Kingdom and the United States to ban these types of services, and suggests that the Accounting Professional and Ethical Standards Board (APESB) in Australia should also consider specifically referring to such potentially abusive and aggressive tax planning in APES 110 (APESB, 2006a).

A further implication is that the view, such as that expressed by Francis (2006), that normal taxation services are generally viewed positively as a logical add-on to the audit may require some reconsideration by policy-makers. It is possible that, due to the corporate collapses earlier this decade and the resulting questioning of the independence of auditors, various parties to the financial reporting communication process, but not auditors themselves, have become more sensitive to the joint provision of even normal types of tax compliance and tax planning services. Policy-makers need to be aware of any such shifts in thought processes as they impact on perceptions of auditor independence. The study findings suggest that policy-makers, and especially the APESB in the Australian context, should investigate the issue of the joint provision of audit and taxation services to better understand the effect on independence perceptions of the normal type of tax compliance and tax planning services versus the more potentially abusive or aggressive tax services.

The potential independence threat of interlocking directorships among audit clients was also examined by the study. All participant groups agreed on the adverse impact of audit engagement scenarios involving the presence of interlocking directorships. However, there are currently no professional rules or legislative provisions that, other than in a general way, address this issue. In Australia, APES 110 requires members to

avoid relationships that 'bias or unduly influence' professional judgment (APESB, 2006a, s. 120.2). With specific reference to auditor independence, APES 110 states that personal relationships between a member of the assurance team and a director could create self-interest, familiarity or intimidation threats, and that such circumstances will need to be evaluated and safeguards applied to reduce the threat to an acceptable level (APESB, 2006a, s. 290.135). The extent of any personal relationships between auditors and directors would normally be expected to be greater if certain individuals act as directors of more than one client of the audit firm, and particularly where the same audit partner is involved.

Given the paucity of prior research into the effects of interlocking directorships on auditor independence, policy-makers should determine the extent to which these interlocks exist in practice and consider whether specific rules should be introduced to address them. In particular, policy-makers should consider whether the general provisions requiring auditors to be independent in fact and in appearance are sufficient to counteract any potential adverse perceptions of independence arising in the presence of interlocking directorships. If not, legislators might need to consider whether specific legislative requirements should be introduced to limit the extent to which interlocking directorships can exist among a firm's audit clients. Also, professional bodies might consider whether specific requirements should be inserted in relevant codes or guidelines, either limiting the extent to which interlocking directorships can exist or specifically mentioning them as a potential threat to be carefully considered.

A longer period of audit firm tenure was examined as a potential independence threat in the study, together with audit partner rotation as an associated independence safeguard. In the presence of audit partner rotation policies, all three groups of

research participants did not consider auditor independence to be adversely impacted by a longer nine year, rather than four year, period of audit firm tenure. In addition, participants did not consider auditor independence to be adversely impacted if audit partner rotation occurred after seven years rather than after four years. This provides support for the current Australian *Corporations Act 2001* requirements for partner rotation after five years in normal circumstances and seven years as a maximum.

The findings also provide evidence that audit partner rotation is perceived to be a suitable safeguard against potential independence concerns stemming from longer periods of audit firm tenure of the length examined in the relevant experimental cases. In turn, this suggests that proposals for audit firm, rather than audit partner, rotation may be unnecessary. The implication for policy-makers is that, if audit firm rotation is to be contemplated, it only needs to be considered for audit firm tenure periods of some length greater than the nine years specified in the study's experimental cases.

The final potential independence threat examined by the study was the presence of a former audit firm partner as a director of the audit client. The three research participant groups agreed on the adverse impact on auditor independence of this potential threat. This suggests that the requirements introduced relatively recently by various policy-makers internationally for cooling-off periods before former audit partners can take positions with an audit firm client are justified.

An original study finding was of an adverse impact on connotations of independence arising from a former partner becoming a director of an audit client despite the relevant experimental scenario specifying the former partner had not previously been involved in the audit of that company. In Australia, the HIH Royal Commission (2003, Vol. 1, pp. lxvii, 177) advocated a two year cooling-off period for a former

partner who was not directly involved in the audit of the client. However, this was not enacted in the Australian CLERP 9 legislation of 2004 and the situation is therefore not subject to the two year cooling-off period specified in s.324CI of the *Corporations Act 2001*. Accordingly, given the extent of the adverse reaction to this potential independence threat by all research participant groups, the study's finding suggests that policy-makers should consider extending the cooling-off period requirements to encompass this situation.

In addition to the independence safeguard of audit partner rotation discussed earlier, two further safeguards investigated by the study were additional external oversight by a formal oversight board and the establishment of a local independence board within the audit firm. With respect to the first of these safeguards, additional oversight by the PCAOB was not considered by the research participants to protect against independence concerns arising from the high non-audit (taxation) services scenarios, these being perceived to be of high threat by all three participant groups. This suggests that additional external oversight does not provide a complete solution when a high independence threat is perceived to be present. Accordingly, while the FRC in Australia does now have an additional role in providing oversight of auditors and their independence, the finding indicates that such oversight cannot be relied on alone to control independence threats. This suggests that individual rules and guidelines are still required to address specific potential independence threats, and therefore that policy-makers need to consider the specific independence threats for which explicit rules and guidance are required.

The study found that the auditor and user participant groups agreed on the beneficial impact of the existence of a local independence board within the audit firm. Hence, the finding suggests the benefits to audit firms of establishing such local

independence boards and of publicising any similar internal procedures they have established. Alternatively, Australian audit firms might consider registering with, and being subject to the monitoring of, the Audit Quality Review Board (AQRB) that has now been established, as this would fulfil a similar role.¹ This would make the internal independence processes of the monitored firm more transparent, in a manner similar to that provided by a local independence board within the firm.

At a broader level, the findings suggest that policy-makers should closely examine the various processes that exist for the oversight and inspection of audit firms. The two safeguards of an oversight and inspection nature included as case manipulations in the study were oversight by the PCAOB and the establishment of a local independence board. These essentially represent two ends of the continuum of oversight and inspection. At one end of the spectrum, PCAOB oversight represents an external, legislative-based regime. A local independence board within the audit firm represents an internal, firm-based regime.

Between the two extremes are various other oversight and inspection mechanisms. Some examples in the Australian environment include those of ASIC, the FRC, the professional accounting bodies such as CPA Australia and the ICAA, the AQRB and the global accounting firms themselves. As there has been a proliferation of oversight and inspection regimes, it appears timely for a review to be conducted by the regulatory and professional policy-makers to determine the contribution of each and to consider whether rationalisation is warranted. Rationalisation could avoid duplication of effort by the different bodies involved and result in more effective and efficient oversight and inspection. It could also result in lower costs for audit firms, in

¹ At the time of writing, only the four Big Four audit firms were registered with the AQRB (AQRB, 2007).

a time of significant staffing pressures, in complying with oversight and inspection requirements.

The various implications for policy-makers discussed above also have implications for auditors themselves. Knowledge of the impacts on connotations of the various potential independence threats and safeguards examined provides further information, based on rigorous research, allowing auditors to more effectively consider and evaluate their independence in practice.

11.4.4 Future research implications

Several areas for future research are suggested. First, a previously noted limitation was that, due to the difficulty of gaining access to research participants for the type of experimental research undertaken, the research instrument was not administered in a controlled, laboratory setting. Future research could therefore aim to replicate the study in a more controlled setting. This would particularly address statistical conclusion validity threats arising from unreliability of treatment implementation and extraneous variance in the experimental setting and from internal validity threats arising from history.

Second, to address external validity threats, and particularly those arising from interaction of the causal relationship with units (participants) and setting, the research could be replicated with other groups of research participants in other settings. Different groups of auditors, financial report users and financial report preparers to those in this study could act as participants to determine whether similar results are found.

Also, other categories of research participants could be used. In particular, further research could seek the participation of policy-makers. This extension would be useful given the implications for policy-makers outlined previously. Given that the various policy-makers internationally are responsible for setting the auditor independence rules and guidelines in their particular jurisdictions, it would be useful to know whether they consider the concept of auditor independence in the same manner as other parties to the financial reporting communication process. In that they are responsible for setting and enforcing the independence rules, it would be especially useful for policy-makers to know whether their interpretation of independence differs from those of the auditors who are regulated and the users who rely on the output of the audit process. If so, they can implicitly take this into account in determining reasonable and appropriate independence rules and guidelines. Using Australia as an example, the major policy-makers who could be used as research participants would be members of the AUASB, the FRC, ASIC and the professional accounting bodies.

Third, to address external validity threats arising from interaction of the causal relationship over treatment variations, the research could be repeated with experimental cases comprising further auditor independence threats and safeguards. These cases could comprise either variations of the threats and safeguards examined in the study or completely different threats and safeguards.

The experimental cases in the study included potential independence threats highlighted in the literature that can currently arise. Accordingly, research examining variations in these potential threats will provide further input into their effects. With respect to the potential threat of the joint provision of audit and taxation services, further research could examine the effects of taxation services at lower fee levels than

those in the present study to attempt to determine the point at which they might not impact adversely on connotations of auditor independence. Research could also investigate the difference in connotations of independence arising from the accounting firm provision of the usual types of tax compliance and tax planning services in comparison to those of a potentially more abusive or aggressive nature.

Further research into the potential threat of interlocking directorships among audit clients could examine the effects on connotations of independence of variations in case scenarios of the nature and extent of interlocks, such as variations in the number of directors and the number of companies involved in the interlocks. Also, any interaction between interlocking directorships and other potential threats, such as the length of audit firm or audit partner tenure, could be examined.

Further research into the potential threat of lengthier periods of audit firm tenure could examine tenure periods of greater than the nine year period examined in the present study to determine the extent to which partner rotation provides benefits in the presence of longer tenure periods. Research could also examine the question of the length of firm tenure at which audit partner rotation may no longer be considered to be a suitable safeguard and where audit firm rotation might be considered to provide a more acceptable independence safeguard.

Further research into the potential threat created by a former audit partner being a director of an auditee company could examine alternate specifications of the length of the period that the partner had previously been with the audit firm and of the period elapsing between the partner leaving the audit firm and joining the audit client.

In addition to potential audit threats, the experimental cases also comprised independence safeguards introduced to minimise potential independence threats or proposals for additional independence safeguards. The study's research approach could be used to further examine such issues as the impacts on connotations of independence of (a) additional external oversight by a formal oversight board on potential independence threats other than that of the joint provision of audit and non-audit (taxation) services examined in the study, and (b) alternate specifications of the format or composition of local independence boards within audit firms.

Further research of this nature would provide insight into the effect of various audit contexts on connotations of auditor independence. While only single major potential independence threats and single major safeguards were manipulated in each of the experimental cases in the present study, auditors in practice are likely to face a number of potential threats concurrently and have a number of safeguards in place to confront those threats. Accordingly, future research could manipulate a number of threat and safeguard conditions concurrently to determine the impacts on connotations of independence. As noted earlier, this could provide benefits to professional bodies, standard-setters and regulators in terms of an improved understanding of the perceived effects of potential independence threats and safeguards.

Finally, the study used the twenty-two semantic scales previously employed in prior accounting and auditing studies. While most were found to be effective in examining the connotative meaning of the auditor independence concept, future research could attempt to develop further semantic scales that could be suitable for the purpose of examining the independence concept.

11.5 CHAPTER SUMMARY

The results of the research reported in the thesis were discussed and summarised in this chapter. Limitations of the research were identified and commented on. Aside from the usual limitations that apply to this type of research, none of the possible limitations identified appeared to impair the validity of results or the study's contribution. The chapter also discussed theoretical and policy implications stemming from the study's findings. The chapter concluded with suggestions for future research that could confirm the study findings and extend and expand the research method utilised in the thesis.

APPENDIX 1

PILOT STUDY RESEARCH INSTRUMENT

AUDITOR INDEPENDENCE

A PhD Research Project

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TO THE PARTICIPANTS

This research study is concerned with interpretations of the meaning of auditor independence in response to certain fact situations. In particular, we are interested in the meaning you attribute to the concept of auditor independence.

This questionnaire contains three separate parts. Each part consists of a brief case study of a particular audit engagement. After reading the case material, your perception of auditor independence, and interpretation of the meaning of auditor independence, in that particular fact situation will be solicited.

The usefulness of the results of this research study is dependent on the integrity of your responses. You should be aware that there are not necessarily any correct answers. Rather, we are interested in your individual responses.

As this study is concerned with individual judgments, it is important that you work independently. Once you have made a judgment, please do not revise it but proceed to the next case.

We thank you for your participation and gratefully acknowledge your time and effort.

GENERAL INSTRUCTIONS

In this questionnaire, we are interested in your interpretation of the meaning of the concept of auditor independence.

You are asked to consider auditor independence in relation to certain variables (adjectival pairings or scales, e.g. GOOD–BAD). The following instructions should assist you in completing the questionnaire with a minimum of difficulty.

- (1) Please indicate your response to each scale by placing a tick [✓] in the space that best categorises your response.

For example, if you feel that auditor independence in the described situation tends to be something that is extremely strong, tick as indicated below:

STRONG : : _____ : _____ : _____ : _____ : _____ : _____ : WEAK

If, on the other hand, you feel that auditor independence in the described situation tends to be something that is fairly weak, tick as indicated below:

STRONG : _____ : _____ : _____ : _____ : _____ : : _____ : WEAK

Thus, for each of the scales, you should place your tick in any ONE of the seven spaces that best represents your view.

- (2) If the concept of auditor independence has some meaning to you in the described situation but you think the individual scale may not be relevant to describing your response, then tick the mid-point of the scale.

For example, if you do not feel the scale is relevant, or if you feel that auditor independence in the described situation tends to be at a mid-point between the two extreme ends of the scale, then tick as indicated below:

BENEFICIAL : _____ : _____ : _____ : : _____ : _____ : _____ : ADVERSE

PART I

Hypothetical Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Hypothetical Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Hypothetical Ltd has retained its current audit firm, one of the 'Big Five' accounting firms, for the previous four years. The same audit partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions. Hypothetical's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Hypothetical Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors of Hypothetical acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm. The audit firm does not audit any of the company's direct competitors.

Hypothetical Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Hypothetical Ltd audit engagement, amounting to \$162 500, represents approximately five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit services to the company over the four year period.

To what extent do you agree with the statement that the audit firm in this situation would be seen by third parties to be free of any interest or circumstance incompatible with objectivity and independence:

Strongly Disagree : ___ : ___ : ___ : ___ : ___ : ___ : Strongly Agree

In my view, the independence of the audit firm in this situation tends to be:

EXACT	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	ESTIMATED
BAD	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	GOOD
MEASURABLE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	UNMEASURABLE
NECESSARY	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	UNNECESSARY
PLANNED	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	UNPLANNED
OBJECTIVE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	SUBJECTIVE
TANGIBLE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	INTANGIBLE
STRONG	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	WEAK
INDIRECT	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	DIRECT
VARIABLE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	CONSTANT
SAFE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	RISKY
COMPLETE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	INCOMPLETE
DISCRETIONARY	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	REQUIRED
REAL	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	IMAGINARY
BENEFICIAL	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	ADVERSE
TEMPORARY	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	PERMANENT
CONTROLLABLE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	UNCONTROLLABLE
UNEXPECTED	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	EXPECTED
PASSIVE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	ACTIVE
STATIC	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	DYNAMIC
LONG-TERM	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	SHORT-TERM
INFLEXIBLE	: ___ : ___ : ___ : ___ : ___ : ___ : ___ :	FLEXIBLE

PART II

Company Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Company Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Company Ltd has retained its current audit firm, one of the 'Big Five' accounting firms, for the previous four years. The same audit partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions. Company's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Company Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm. The auditor does not audit any of the company's direct competitors

Company Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Company Ltd audit engagement in the current year, amounting to \$162 500, represents approximately five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. In addition to audit services, the audit firm has provided additional non-audit services to Company over the prior six years. While these services have generally been of a recurring nature, the scope and extent of the services has increased over the period of the audit firm's tenure. The services rendered mainly comprise tax compliance work, tax planning, information technology systems advice, feasibility studies and mergers and acquisitions advice. The table below indicates annual non-audit services remuneration as a percentage of the audit fee in each year of the audit firm's tenure:

<i>Financial Year</i>	Audit fee	Non-audit services fees	Non-audit services fees as a percentage of the audit fee
2002	\$ 162 500	\$ 648 000	398.8%
2001	\$ 157 500	\$ 614 000	389.8%
2000	\$ 153 000	\$ 541 000	353.6%
1999	\$ 150 500	\$ 493 000	327.6%

PART III

Retail Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Retail Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Retail Ltd has retained its current audit firm, one of the 'Big Five' accounting firms, for the previous four years. The same audit partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions. Retail's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Retail Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors of Retail acts as a director of any other company audited by its current audit firm. The audit firm does not audit any of the company's direct competitors.

Retail Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

With the exception of one of the directors, none of Retail Ltd's directors, including the chairman and managing director, were previously employees, associates or partners of the audit firm. One non-executive director, Director A, was previously an audit partner with the audit firm, although they had not previously been involved in the Retail audit in any way. Director A, who had joined the audit firm as an audit supervisor nineteen years ago and been a partner for eleven years, resigned from the firm eighteen months ago and became a director of Retail twelve months ago. The current Retail audit engagement partner, who had been with the audit firm for the entire period in which Director A had been an employee and partner, became a partner of the firm three years after Director A gained partnership. Prior to becoming a partner, Retail's current auditor had worked as an audit supervisor and manager on several audits for which Director A had previously been the manager or engagement partner. Director A is a member of Retail's audit committee.

The audit fee derived from the Retail Ltd audit engagement, amounting to \$162 500, represents approximately five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit services to the company over the four year period.

To what extent do you agree with the statement that the audit firm in this situation would be seen by third parties to be free of any interest or circumstance incompatible with objectivity and independence:

Strongly Disagree : _ : _ : _ : _ : _ : _ : Strongly Agree

In my view, the independence of the audit firm in this situation tends to be:

EXACT	: _ : _ : _ : _ : _ : _ :	ESTIMATED
BAD	: _ : _ : _ : _ : _ : _ :	GOOD
MEASURABLE	: _ : _ : _ : _ : _ : _ :	UNMEASURABLE
NECESSARY	: _ : _ : _ : _ : _ : _ :	UNNECESSARY
PLANNED	: _ : _ : _ : _ : _ : _ :	UNPLANNED
OBJECTIVE	: _ : _ : _ : _ : _ : _ :	SUBJECTIVE
TANGIBLE	: _ : _ : _ : _ : _ : _ :	INTANGIBLE
STRONG	: _ : _ : _ : _ : _ : _ :	WEAK
INDIRECT	: _ : _ : _ : _ : _ : _ :	DIRECT
VARIABLE	: _ : _ : _ : _ : _ : _ :	CONSTANT
SAFE	: _ : _ : _ : _ : _ : _ :	RISKY
COMPLETE	: _ : _ : _ : _ : _ : _ :	INCOMPLETE
DISCRETIONARY	: _ : _ : _ : _ : _ : _ :	REQUIRED
REAL	: _ : _ : _ : _ : _ : _ :	IMAGINARY
BENEFICIAL	: _ : _ : _ : _ : _ : _ :	ADVERSE
TEMPORARY	: _ : _ : _ : _ : _ : _ :	PERMANENT
CONTROLLABLE	: _ : _ : _ : _ : _ : _ :	UNCONTROLLABLE
UNEXPECTED	: _ : _ : _ : _ : _ : _ :	EXPECTED
PASSIVE	: _ : _ : _ : _ : _ : _ :	ACTIVE
STATIC	: _ : _ : _ : _ : _ : _ :	DYNAMIC
LONG-TERM	: _ : _ : _ : _ : _ : _ :	SHORT-TERM
INFLEXIBLE	: _ : _ : _ : _ : _ : _ :	FLEXIBLE

APPENDIX 2

FINAL RESEARCH INSTRUMENT

APPENDIX 2.1

COVER SHEET AND INSTRUCTIONS

AUDITOR INDEPENDENCE

A PhD Research Project

Graeme Wines

(Telephone: 03 55633271)

(Fax: 03 55633320)

(Email: winesg@deakin.edu.au)

TO THE PARTICIPANTS

This research study is concerned with interpretations of the meaning of auditor independence in response to certain fact situations. In particular, we are interested in the meaning you attribute to the concept of auditor independence.

This questionnaire contains two parts. The first part consists of three brief case studies of particular audit engagements. After reading the case material, your perception of auditor independence and interpretation of the meaning of auditor independence in each of the particular fact situations will be solicited. Part two asks you for a small number of biographical details.

The usefulness of the results of this research study is dependent on the integrity of your responses. You should be aware that there are not necessarily any correct answers. Rather, we are interested in your individual responses.

As this study is concerned with individual judgments, it is important that you work independently. Once you have made a judgment, please do not revise it but proceed to the next case.

We thank you for your participation and gratefully acknowledge the donation of your time and effort.

GENERAL INSTRUCTIONS

In this questionnaire, we are interested in your interpretation of the meaning of the concept of auditor independence.

You are asked to consider auditor independence in relation to certain variables (adjectival pairings or scales, e.g. BAD-GOOD). The following instructions should assist you in completing the questionnaire with a minimum of difficulty.

- (1) Please indicate your response to each scale by placing a tick [✓] in the space that best categorises your response.

For example, if you feel that auditor independence in the described situation tends to be something that is extremely strong, tick as indicated below:

STRONG : : _____ : _____ : _____ : _____ : _____ : _____ : WEAK

If, on the other hand, you feel that auditor independence in the described situation tends to be something that is fairly weak, tick as indicated below:

STRONG : _____ : _____ : _____ : _____ : _____ : : _____ : WEAK

If you feel that auditor independence in the described situation tends to be at a mid-point between the two extreme ends of the scale, then tick the mid-point as follows:

STRONG : _____ : _____ : _____ : : _____ : _____ : _____ : WEAK

Thus, for each of the scales, you should place your tick in any ONE of the seven spaces that best represents your view.

- (2) If you think the individual scale may not be relevant in describing your interpretation of auditor independence in the specific situation, then tick the mid-point of the scale as indicated below:

OBJECTIVE : _____ : _____ : _____ : : _____ : _____ : _____ : SUBJECTIVE

PART I

CASE STUDIES

In this part of the questionnaire, you are provided with three brief case studies of particular audit engagements.

After reading each of the cases, you are asked to respond by describing your understanding of auditor independence in that particular fact situation in relation to the scales provided, as described in the General Instructions.

APPENDIX 2.2

EXPERIMENTAL CASES

CASE 1

Hypothetical Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Hypothetical Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Hypothetical Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous four years. The same audit engagement partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Hypothetical's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Hypothetical Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors of Hypothetical acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm.

Hypothetical Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Hypothetical Ltd audit engagement, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit (consulting) services to the company over the four year period.

CASE 2

Operations Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Operations Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Operations Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous four years. The same audit engagement partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Operations Ltd's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Operations Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors were previously employees, associates or partners of the audit firm.

Three of the directors of Operations Ltd, who have all been non-executive directors for at least the past six years, are also non-executive directors of other companies that are currently audited by Operations Ltd's audit firm. In all cases, Operations' audit engagement partner is also the audit engagement partner for these other companies (DEF Ltd and GEH Ltd) and has been for over six years. The table below indicates, for each of the directors, the names of the other companies for which they are also a director and the total period of their directorship of those companies.

Operations Ltd Director	Name of other companies for which they act as director	Total number of years as director
Director A	DEF Ltd	6
Director B	DEF Ltd and GEH Ltd	7
Director C	GEH Ltd	5

Operations Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Operations Ltd audit engagement, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit (consulting) services to the company over the four year period.

CASE 3

Corporation Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Corporation Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Corporation Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous nine years. All published financial reports of the company released during this nine year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Corporation's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The audit firm has a policy of audit partner rotation (both engagement and review partner) every four years. In accordance with this policy, the engagement was most recently rotated two years ago to a new audit engagement partner from the firm. Prior to the date of the rotation, the current audit engagement partner had not undertaken any audit or other work for Corporation Ltd. The engagement will be rotated to a new audit engagement partner in two years time.

The board of directors of Corporation Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors of Corporation acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm.

Corporation Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Corporation Ltd audit engagement, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit (consulting) services to the company over the nine year period.

CASE 4

Anonymous Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Anonymous Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Anonymous Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous nine years. All published financial reports of the company released during this nine year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. The company's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The audit firm has a policy of audit partner rotation (both engagement and review partner) every seven years. In accordance with this policy, the engagement was most recently rotated two years ago to a new audit engagement partner from the firm. Prior to the date of the rotation, the current audit engagement partner had not undertaken any audit or other work for Anonymous Ltd. The engagement will be rotated to a new audit engagement partner in five years time.

The board of directors of Anonymous Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors of Anonymous acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm.

Anonymous Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Anonymous Ltd audit engagement, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit (consulting) services to the company over the nine year period.

CASE 5

Holdings Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Holdings Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Holdings Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous four years. The same audit engagement partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Holdings Ltd's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Holdings Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm.

Holdings Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Holdings Ltd audit engagement in the current year, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. In addition to audit services, the 'Big Four' firm's taxation division has provided additional tax services to Holdings over the prior four years. While these services have generally been of a recurring nature, the scope and extent of the services has increased somewhat over the period of the audit firm's tenure. The services rendered comprise tax compliance services and tax planning advice, with fees from each of these categories being approximately equal. The table below indicates annual non-audit services remuneration, including as a percentage of the audit fee, in each year of the audit firm's tenure:

Financial Year	Audit fee	Taxation services fees	Taxation services fees as a percentage of the audit fee
2002	\$ 192 500	\$ 767 500	399 %
2001	\$ 186 500	\$ 727 000	390 %
2000	\$ 181 000	\$ 640 000	354 %
1999	\$ 178 500	\$ 584 800	328 %

As Holdings Ltd has raised debt and equity in the United States, the audit of Holdings Ltd's financial report, and the Australian auditor and audit firm, are subject to oversight by the US Public Company Accounting Oversight Board (PCAOB). Pursuant to United States legislation, the taxation services provided by the auditor are allowable only if they have been pre-approved by Holdings Ltd's audit committee. The audit committee has considered and pre-approved the procurement of the additional tax services from the audit firm.

CASE 6

Company Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Company Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Company Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous four years. The same audit engagement partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Company's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Company Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm.

Company Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Company Ltd audit engagement in the current year, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. In addition to audit services, the 'Big Four' firm's taxation division has provided additional tax services to Company over the prior four years. While these services have generally been of a recurring nature, the scope and extent of the services has increased somewhat over the period of the audit firm's tenure. The services rendered comprise tax compliance services and tax planning advice, with fees from each of these categories being approximately equal. Company Ltd's audit committee has considered and pre-approved the procurement of the additional tax services from the audit firm. The table below indicates annual non-audit services remuneration, including as a percentage of the audit fee, in each year of the audit firm's tenure:

Financial Year	Audit fee	Non-audit services fees	Taxation services fees as a percentage of the audit fee
2002	\$ 192 500	\$ 767 500	399 %
2001	\$ 186 500	\$ 727 000	390 %
2000	\$ 181 000	\$ 640 000	354 %
1999	\$ 178 500	\$ 584 800	328 %

CASE 7

Entity Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Entity Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Entity Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous four years. The same audit engagement partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Entity's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Entity Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors acts as a director of any other company audited by its current audit firm, and none of the directors were previously employees, associates or partners of the audit firm.

Entity Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

The audit fee derived from the Entity Ltd audit engagement in the current year, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. In addition to audit services, the 'Big Four' firm's taxation division has provided additional tax services to Entity over the prior four years. These services have generally been of a recurring nature, and their scope and extent has not changed greatly over the period of the audit firm's tenure. The services rendered comprise tax compliance services and tax planning advice, with fees from each of these categories being approximately equal. Entity Ltd's audit committee has considered and pre-approved the procurement of the additional tax services from the audit firm. The table below indicates annual non-audit services remuneration, including as a percentage of the audit fee, in each year of the audit firm's tenure.

Financial Year	Audit fee	Non-audit services fees	Taxation services fees as a percentage of the audit fee
2002	\$ 192 500	\$ 94 300	49 %
2001	\$ 186 500	\$ 90 600	49 %
2000	\$ 181 000	\$ 85 800	47 %
1999	\$ 178 500	\$ 83 500	47 %

CASE 8

Enterprise Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Enterprise Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Enterprise Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous four years. The same audit engagement partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Enterprise's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Enterprise Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors of Enterprise acts as a director of any other company audited by its current audit firm.

Enterprise Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

With the exception of one of the directors, Director A, none of Enterprise Ltd's directors were previously employees, associates or partners of the audit firm. Director A, a non-executive director, was previously an audit partner with the audit firm, although they had not previously been involved in the Enterprise audit in any way or in any capacity. Director A, who had joined the audit firm as an audit supervisor eighteen years ago and been a partner for ten years, resigned from the firm twelve months ago. They became a director of Enterprise Ltd eight months ago. The current Enterprise Ltd audit engagement partner, who had been with the audit firm for the entire period in which Director A had been an employee and partner, became a partner of the firm three years after Director A gained partnership. Prior to becoming a partner, Enterprise's current auditor had worked as an audit supervisor and manager on several audits for which Director A had previously been the manager or engagement partner. Director A is a member of Enterprise Ltd's audit committee.

The audit fee derived from the Enterprise Ltd audit engagement, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit (consulting) services to the company over the four year period.

To emphasise and make visible quality controls for independence, the audit firm established a separate 'Independence Board' eighteen months ago. This board comprises a panel of four expert persons not otherwise commercially associated with the "Big Four" firm, the current members being a commercial lawyer, a retired former partner of another 'Big Four' accounting firm, a university auditing professor and a former chairperson of the Australian Accounting Standards Board. The Independence Board has the specific authority to define, review and decide upon all threats and potential threats to auditor independence, and to remove decision making in respect of such independence matters from those within the firm who have a commercial or vested interest in the outcome.

CASE 9

Retail Ltd, a public company operating in retailing, has been listed on the Australian Stock Exchange for the past twenty years. The company has traded profitably throughout this period and is currently in a sound financial position. The size of Retail Ltd places it at around number 200 in a ranking, by market capitalisation, of all companies listed on the Australian Stock Exchange.

Retail Ltd has retained its current audit firm, one of the 'Big Four' accounting firms, for the previous four years. The same audit engagement partner has managed the audit engagement, and signed the audit report, over this period. All published financial reports of the company released during this four year period have received unqualified audit opinions indicating that the accounts have been true and fair and in accordance with Australian accounting standards. Retail's prior auditor also did not issue any qualified audit opinions during their period of tenure.

The board of directors of Retail Ltd comprises eight members, with a clear separation of the chairman and managing director functions. None of the directors of Retail acts as a director of any other company audited by its current audit firm.

Retail Ltd established an audit committee, comprising three of the company's non-executive directors, eight years ago. The audit committee has operated effectively since its inception and has not experienced any problems in communications between itself and the audit firm. Various audit issues raised with the committee in the past have been successfully addressed and concluded to the satisfaction of the audit partner.

With the exception of one of the directors, Director A, none of Retail Ltd's directors were previously employees, associates or partners of the audit firm. Director A, a non-executive director, was previously an audit partner with the audit firm, although they had not previously been involved in the Retail audit in any way or in any capacity. Director A, who had joined the audit firm as an audit supervisor eighteen years ago and been a partner for ten years, resigned from the firm twelve months ago. They became a director of Retail Ltd eight months ago. The current Retail Ltd audit engagement partner, who had been with the audit firm for the entire period in which Director A had been an employee and partner, became a partner of the firm three years after Director A gained partnership. Prior to becoming a partner, Retail's current auditor had worked as an audit supervisor and manager on several audits for which Director A had previously been the manager or engagement partner. Director A is a member of Retail Ltd's audit committee.

The audit fee derived from the Retail Ltd audit engagement, amounting to \$192 500, represents less than five percent of the total audit fee revenue of the office (located in an Australian State capital city) of the audit partner's audit firm. The audit firm has not derived any additional remuneration from the provision of non-audit (consulting) services to the company over the four year period.

APPENDIX 2.3

RESPONSE SHEETS

RESPONSE SHEET: RESEARCH INSTRUMENT VERSION 1

To what extent do you agree with the statement that the audit firm in this case would have maintained its independence:

Strongly Disagree : _____ : _____ : _____ : _____ : _____ : _____ : Strongly Agree

I interpret the independence of the audit firm in this case situation to be:

EXACT	: _____ : _____ : _____ : _____ : _____ : _____ :	ESTIMATED
BAD	: _____ : _____ : _____ : _____ : _____ : _____ :	GOOD
MEASURABLE	: _____ : _____ : _____ : _____ : _____ : _____ :	UNMEASURABLE
NECESSARY	: _____ : _____ : _____ : _____ : _____ : _____ :	UNNECESSARY
PLANNED	: _____ : _____ : _____ : _____ : _____ : _____ :	UNPLANNED
OBJECTIVE	: _____ : _____ : _____ : _____ : _____ : _____ :	SUBJECTIVE
TANGIBLE	: _____ : _____ : _____ : _____ : _____ : _____ :	INTANGIBLE
STRONG	: _____ : _____ : _____ : _____ : _____ : _____ :	WEAK
INDIRECT	: _____ : _____ : _____ : _____ : _____ : _____ :	DIRECT
VARIABLE	: _____ : _____ : _____ : _____ : _____ : _____ :	CONSTANT
SAFE	: _____ : _____ : _____ : _____ : _____ : _____ :	RISKY
COMPLETE	: _____ : _____ : _____ : _____ : _____ : _____ :	INCOMPLETE
DISCRETIONARY	: _____ : _____ : _____ : _____ : _____ : _____ :	REQUIRED
REAL	: _____ : _____ : _____ : _____ : _____ : _____ :	IMAGINARY
BENEFICIAL	: _____ : _____ : _____ : _____ : _____ : _____ :	ADVERSE
TEMPORARY	: _____ : _____ : _____ : _____ : _____ : _____ :	PERMANENT
CONTROLLABLE	: _____ : _____ : _____ : _____ : _____ : _____ :	UNCONTROLLABLE
UNEXPECTED	: _____ : _____ : _____ : _____ : _____ : _____ :	EXPECTED
PASSIVE	: _____ : _____ : _____ : _____ : _____ : _____ :	ACTIVE
STATIC	: _____ : _____ : _____ : _____ : _____ : _____ :	DYNAMIC
LONG-TERM	: _____ : _____ : _____ : _____ : _____ : _____ :	SHORT-TERM
INFLEXIBLE	: _____ : _____ : _____ : _____ : _____ : _____ :	FLEXIBLE

If you were a non-executive director of the company in this case, would you regard the audit appointment to be satisfactory with respect to the independence of the audit firm?

Yes No

RESPONSE SHEET: RESEARCH INSTRUMENT VERSION 2

To what extent do you agree with the statement that the audit firm in this case would have maintained its independence:

Strongly Agree : _____ : _____ : _____ : _____ : _____ : _____ : Strongly Disagree

I interpret the independence of the audit firm in this case situation to be:

INCOMPLETE	: _____ : _____ : _____ : _____ : _____ : _____ :	COMPLETE
REQUIRED	: _____ : _____ : _____ : _____ : _____ : _____ :	DISCRETIONARY
IMAGINARY	: _____ : _____ : _____ : _____ : _____ : _____ :	REAL
ADVERSE	: _____ : _____ : _____ : _____ : _____ : _____ :	BENEFICIAL
PERMANENT	: _____ : _____ : _____ : _____ : _____ : _____ :	TEMPORARY
UNCONTROLLABLE	: _____ : _____ : _____ : _____ : _____ : _____ :	CONTROLLABLE
EXPECTED	: _____ : _____ : _____ : _____ : _____ : _____ :	UNEXPECTED
ACTIVE	: _____ : _____ : _____ : _____ : _____ : _____ :	PASSIVE
DYNAMIC	: _____ : _____ : _____ : _____ : _____ : _____ :	STATIC
SHORT-TERM	: _____ : _____ : _____ : _____ : _____ : _____ :	LONG-TERM
FLEXIBLE	: _____ : _____ : _____ : _____ : _____ : _____ :	INFLEXIBLE
EXACT	: _____ : _____ : _____ : _____ : _____ : _____ :	ESTIMATED
BAD	: _____ : _____ : _____ : _____ : _____ : _____ :	GOOD
MEASURABLE	: _____ : _____ : _____ : _____ : _____ : _____ :	UNMEASURABLE
NECESSARY	: _____ : _____ : _____ : _____ : _____ : _____ :	UNNECESSARY
PLANNED	: _____ : _____ : _____ : _____ : _____ : _____ :	UNPLANNED
OBJECTIVE	: _____ : _____ : _____ : _____ : _____ : _____ :	SUBJECTIVE
TANGIBLE	: _____ : _____ : _____ : _____ : _____ : _____ :	INTANGIBLE
STRONG	: _____ : _____ : _____ : _____ : _____ : _____ :	WEAK
INDIRECT	: _____ : _____ : _____ : _____ : _____ : _____ :	DIRECT
VARIABLE	: _____ : _____ : _____ : _____ : _____ : _____ :	CONSTANT
SAFE	: _____ : _____ : _____ : _____ : _____ : _____ :	RISKY

If you were a non-executive director of the company in this case, would you regard the audit appointment to be satisfactory with respect to the independence of the audit firm?

Yes No

RESPONSE SHEET: RESEARCH INSTRUMENT VERSION 3

To what extent do you agree with the statement that the audit firm in this case would have maintained its independence:

Strongly Disagree : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Strongly Agree

I interpret the independence of the audit firm in this case situation to be:

COMPLETE	: _____ : _____ : _____ : _____ : _____ : _____	INCOMPLETE
DISCRETIONARY	: _____ : _____ : _____ : _____ : _____ : _____	REQUIRED
REAL	: _____ : _____ : _____ : _____ : _____ : _____	IMAGINARY
BENEFICIAL	: _____ : _____ : _____ : _____ : _____ : _____	ADVERSE
TEMPORARY	: _____ : _____ : _____ : _____ : _____ : _____	PERMANENT
CONTROLLABLE	: _____ : _____ : _____ : _____ : _____ : _____	UNCONTROLLABLE
UNEXPECTED	: _____ : _____ : _____ : _____ : _____ : _____	EXPECTED
PASSIVE	: _____ : _____ : _____ : _____ : _____ : _____	ACTIVE
STATIC	: _____ : _____ : _____ : _____ : _____ : _____	DYNAMIC
LONG-TERM	: _____ : _____ : _____ : _____ : _____ : _____	SHORT-TERM
INFLEXIBLE	: _____ : _____ : _____ : _____ : _____ : _____	FLEXIBLE
ESTIMATED	: _____ : _____ : _____ : _____ : _____ : _____	EXACT
GOOD	: _____ : _____ : _____ : _____ : _____ : _____	BAD
UNMEASURABLE	: _____ : _____ : _____ : _____ : _____ : _____	MEASURABLE
UNNECESSARY	: _____ : _____ : _____ : _____ : _____ : _____	NECESSARY
UNPLANNED	: _____ : _____ : _____ : _____ : _____ : _____	PLANNED
SUBJECTIVE	: _____ : _____ : _____ : _____ : _____ : _____	OBJECTIVE
INTANGIBLE	: _____ : _____ : _____ : _____ : _____ : _____	TANGIBLE
WEAK	: _____ : _____ : _____ : _____ : _____ : _____	STRONG
DIRECT	: _____ : _____ : _____ : _____ : _____ : _____	INDIRECT
CONSTANT	: _____ : _____ : _____ : _____ : _____ : _____	VARIABLE
RISKY	: _____ : _____ : _____ : _____ : _____ : _____	SAFE

If you were a non-executive director of the company in this case, would you regard the audit appointment to be satisfactory with respect to the independence of the audit firm?

Yes No

APPENDIX 2.4

MANIPULATION CHECKS

MANIPULATION CHECKS: RESEARCH INSTRUMENT VERSION 1

In respect of the case you have just completed, could you please respond to the following statements by ticking the appropriate box.

It was stated in the case that the current audit engagement partner was appointed pursuant to an audit partner rotation policy.

Yes No

It was stated in the case that at least one director on the board of the company also acts as a director of another company having the same audit firm and audit engagement partner.

Yes No

The audit firm derived additional remuneration from the company by providing taxation services.

Yes No

It was stated in the case that the audit of the company, and the Australian auditor and audit firm, were subject to oversight by the US Public Company Accounting Oversight Board (PCAOB).

Yes No

MANIPULATION CHECKS: RESEARCH INSTRUMENT VERSION 2

In respect of the case you have just completed, could you please respond to the following statements by ticking the appropriate box.

The company's current audit engagement partner has been in this position for over eight years.

Yes No

It was stated in the case that a director on the board of the company was formerly an audit partner of the audit firm.

Yes No

The audit firm derived additional remuneration from the company by providing taxation services.

Yes No

It was stated in the case that the audit firm had established a separate 'Independence Board' to review threats and potential threats to auditor independence.

Yes No

MANIPULATION CHECKS: RESEARCH INSTRUMENT VERSION 3

In respect of the case you have just completed, could you please respond to the following statements by ticking the appropriate box.

The company in the case you have just completed operated in the retail industry.

Yes No

The audit firm derived additional remuneration from the company by providing non-audit (tax) services.

Yes No

It was stated in the case that a director on the board of the company was formerly an audit partner of the audit firm.

Yes No

The auditor's opinion on the financial report of the company was qualified.

Yes No

APPENDIX 2.5

BIOGRAPHICAL DETAILS

BIOGRAPHICAL DETAILS: ALL PARTICIPANTS**PART II
BIOGRAPHICAL DETAILS**

The following information will assist us in analysing your responses. You are reminded that all responses are anonymous and that no individual can be identified.

1. Current occupation:
2. Years of experience in current occupation:
3. In my current occupation, I deal with audited financial reports (please tick the appropriate space):

Frequently	: _____ : _____ : _____ : _____ : _____ :	Never
------------	---	-------
4. The use of audited financial reports in my occupation is (please tick the appropriate space):

Very important	: _____ : _____ : _____ : _____ : _____ :	Unimportant
----------------	---	-------------
5. Are you a member of a professional accounting association?

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
-----	--------------------------	----	--------------------------
6. What is your gender?

Female	<input type="checkbox"/>	Male	<input type="checkbox"/>
--------	--------------------------	------	--------------------------
7. What is your age? (please tick the appropriate box):

Less than 25.....	<input type="checkbox"/>
Between 26 and 30.....	<input type="checkbox"/>
Between 31 and 35.....	<input type="checkbox"/>
Between 36 and 40.....	<input type="checkbox"/>
Between 41 and 45.....	<input type="checkbox"/>
Between 46 and 50.....	<input type="checkbox"/>
Between 51 and 55.....	<input type="checkbox"/>
Between 56 and 60.....	<input type="checkbox"/>
Over 60.....	<input type="checkbox"/>
8. What is the highest level of education you have attained? (please tick the appropriate box):

Secondary.....	<input type="checkbox"/>
TAFE certificate/diploma.....	<input type="checkbox"/>
Bachelor degree.....	<input type="checkbox"/>
Honours/postgraduate degree.....	<input type="checkbox"/>
Masters degree.....	<input type="checkbox"/>
PhD.....	<input type="checkbox"/>
Other:.....	<input type="checkbox"/>
Please specify.....	

THANK YOU FOR THE CONTRIBUTION OF YOUR VALUABLE TIME AND EFFORT IN COMPLETING THIS RESEARCH QUESTIONNAIRE.

BIOGRAPHICAL DETAILS: ADDITIONAL QUESTIONS FOR AUSTRALIAN INVESTORS'
ASSOCIATION PARTICIPANTS

9. Years as a member of the Australian Investors' Association:

10. Years involved in investing:

11. Do you own shares in any listed public company?

Yes No

12. Please indicate the degree to which you are familiar with company financial reports (please tick the appropriate space):

Not familiar :___:___:___:___:___: Very familiar

13. In your investment activities, to what extent do you refer to audited financial reports (please tick the appropriate space):

Never :___:___:___:___:___: Frequently

THANK YOU FOR THE CONTRIBUTION OF YOUR VALUABLE TIME AND EFFORT IN COMPLETING THIS RESEARCH QUESTIONNAIRE.

APPENDIX 3

FACTOR COMPARABILITY ANALYSIS: ALTERNATIVE FOUR FACTOR MODELS

APPENDIX 3.1

MAXIMUM LIKELIHOOD FACTORING WITH VARIMAX ROTATION

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.929	0.927
Preparers		0.974

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.704	0.671
Preparers		0.630

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	-0.031	0.619
Preparers		0.441

Panel D: Between-group correlations for Factor 4

	Preparers	Users
Auditors	-0.032	0.072
Preparers		0.746

Panel E: Within-group correlations

	Split-half correlation coefficients			
	Factor 1	Factor 2	Factor 3	Factor 4
Auditors	0.870	0.815	0.615	-0.167
Preparers	0.961	0.749	0.862	0.588
Users	0.958	0.744	0.629	0.526

APPENDIX 3.2

PRINCIPAL AXIS FACTORING WITH DIRECT OBLIMIN ROTATION

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.859	0.958
Preparers		0.928

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.767	-0.289
Preparers		0.890

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	-0.352	0.646
Preparers		0.389

Panel D: Between-group correlations for Factor 4

	Preparers	Users
Auditors	-0.440	-0.526
Preparers		-0.009

Panel E: Within-group correlations

	Split-half correlation coefficients			
	Factor 1	Factor 2	Factor 3	Factor 4
Auditors	0.928	0.909	-0.169	0.326
Preparers	0.859	0.826	0.900	-0.753
Users	0.973	0.660	0.554	0.520

APPENDIX 3.3
MAXIMUM LIKELIHOOD FACTORING WITH DIRECT
OBLIMIN ROTATION

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.941	0.992
Preparers		0.975

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.548	0.893
Preparers		0.465

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	0.489	0.618
Preparers		0.500

Panel D: Between-group correlations for Factor 4

	Preparers	Users
Auditors	0.210	-0.197
Preparers		-0.698

Panel E: Within-group correlations

	Split-half correlation coefficients			
	Factor 1	Factor 2	Factor 3	Factor 4
Auditors	0.949	0.907	0.064	-0.287
Preparers	0.838	-0.635	0.906	0.620
Users	0.993	-0.697	0.627	0.665

APPENDIX 4

FACTOR COMPARABILITY ANALYSIS: ALTERNATIVE THREE FACTOR MODELS

APPENDIX 4.1
MAXIMUM LIKELIHOOD FACTORING WITH VARIMAX ROTATION

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.945	0.934
Preparers		0.972

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.688	0.884
Preparers		0.676

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	0.640	0.432
Preparers		0.656

Panel D: Within-group correlations

	Split-half correlation coefficients		
	Factor 1	Factor 2	Factor 3
Auditors	0.737	0.858	-0.292
Preparers	0.937	0.811	0.589
Users	0.946	0.766	0.417

APPENDIX 4.2
PRINCIPAL AXIS FACTORING WITH DIRECT OBLIMIN ROTATION

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.903	0.956
Preparers		0.991

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.486	0.414
Preparers		0.782

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	0.429	0.243
Preparers		-0.615

Panel D: Within-group correlations

	Split-half correlation coefficients		
	Factor 1	Factor 2	Factor 3
Auditors	0.905	0.324	0.386
Preparers	0.957	0.279	0.944
Users	0.988	0.554	0.541

APPENDIX 4.3
MAXIMUM LIKELIHOOD FACTORING WITH DIRECT
OBLIMIN ROTATION

Panel A: Between-group correlations for Factor 1

	Preparers	Users
Auditors	0.973	0.981
Preparers		0.996

Panel B: Between-group correlations for Factor 2

	Preparers	Users
Auditors	0.766	0.456
Preparers		0.616

Panel C: Between-group correlations for Factor 3

	Preparers	Users
Auditors	0.780	0.273
Preparers		0.309

Panel D: Within-group correlations

	Split-half correlation coefficients		
	Factor 1	Factor 2	Factor 3
Auditors	0.935	0.906	0.387
Preparers	0.949	0.023	0.702
Users	0.993	0.725	0.757

APPENDIX 5

FACTOR COMPARABILITY ANALYSIS: ALTERNATIVE TWO FACTOR MODELS

APPENDIX 5.1

MAXIMUM LIKELIHOOD FACTORING WITH VARIMAX ROTATION

Panel A: Between-group correlations for Factor 1 – 2 factor model

	Preparers	Users
Auditors	0.962	0.906
Preparers		0.976

Panel B: Between-group correlations for Factor 2 – 2 factor model

	Preparers	Users
Auditors	0.757	0.567
Preparers		0.872

Panel C: Within-group correlations – 2 factor model

	Split-half correlation coefficients	
	Factor 1	Factor 2
Auditors	0.910	0.793
Preparers	0.941	0.757
Users	0.899	0.521

APPENDIX 5.2

PRINCIPAL AXIS FACTORING WITH DIRECT OBLIMIN ROTATION

Panel A: Between-group correlations for Factor 1 – 2 factor model

	Preparers	Users
Auditors	0.931	0.966
Preparers		0.996

Panel B: Between-group correlations for Factor 2 – 2 factor model

	Preparers	Users
Auditors	-0.117	-0.163
Preparers		0.347

Panel C: Within-group correlations – 2 factor model

	Split-half correlation coefficients	
	Factor 1	Factor 2
Auditors	0.959	0.288
Preparers	0.983	0.476
Users	0.838	0.685

APPENDIX 5.3
MAXIMUM LIKELIHOOD FACTORING WITH DIRECT
OBLIMIN ROTATION

Panel A: Between-group correlations for Factor 1 – 2 factor model

	Preparers	Users
Auditors	0.946	0.980
Preparers		0.997

Panel B: Between-group correlations for Factor 2 – 2 factor model

	Preparers	Users
Auditors	0.423	0.587
Preparers		0.693

Panel C: Within-group correlations – 2 factor model

	Split-half correlation coefficients	
	Factor 1	Factor 2
Auditors	0.963	0.686
Preparers	0.968	0.364
Users	0.978	0.303

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