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Re-engineering Internal Audit: Strategy and Control, Control Models and Control Self Assessment

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Part 1

Chapters 1 - 7

[2002]

Part 1

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'Progress through sharing'

Abstract

This thesis examines the role of internal auditors in three key areas: strategy, control models and control self assessment.

Research findings are based on the results of a survey of a specialist group of professionals with an interest in Control Self Assessment. This group comprises both internal auditors and non-internal auditors. Membership is multinational and a full range of industries is represented.

The actual and potential contribution that internal auditors can make to strategy is assessed and evaluated, with particular reference to the Balanced Scorecard. Control models were examined to identify use and effectiveness and the potential link with successful implementation of Control Self Assessment. Control Self Assessment was also examined as a specific activity. This part of the research addressed how it was perceived by the respondents and their organisations, and also to examine the importance of facilitation skills and IT support.

The results show that internal auditors already play a significant role in strategic issues, and that there is a significant awareness of the potential benefits of the Balanced Scorecard to internal audit practice. Control models are seen as highly important to the effective implementation of Control Self Assessment, which can be seen to have developed into a mature and established audit tool.

Chapter 1

Introduction, Need and Nature of Research

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1.1 Introduction

The last two decades of the 20th century brought significant and irreversible changes to the way organisations are managed. Innovations like Business Process Reengineering (BPRE) and downsizing radically changed the structure and management styles of organisations throughout the world. At the same time, progress in information technology led to huge changes in the way information is produced, transmitted and used. From an audit and control perspective, this meant that traditional methods of assessing and reporting control issues were at best less effective, and at worst redundant. This research began as an attempt to address the need for auditors to reengineer their profession to meet the changed environment in which we work. Traditionally, internal audit has primarily been concerned with management at operational and middle management levels. This is unsurprising, given that much of the scope of audit work as defined in the 1978 version of the *Standards for the Professional Practice of Internal Auditing* of the Institute of Internal Auditors (IIA) addresses the operation of control systems set by senior management to ensure that targets are achieved and policies are complied with.¹ Practically, this meant that internal audit had a focus not on the development and control of strategic processes but on their outcomes and implementation. At a working level this means that internal audit work mainly impacts management who are involved in short to medium term decision making. While this may not have been problematic before, modern organisations may no longer have structures that include the level of management on which internal audit has historically relied when evaluating systems of control. Anecdotally, this can be illustrated by a statement made by a very long serving bank auditor who was making a presentation at a specialist training course in 1996. In answer to a question from an auditor at a major UK

bank regarding current account operations, the presenter expressed the opinion that the best assurance that controls were in operation was good branch management, with experienced staff able to react to and solve day to day problems. This statement was met with general approval from other presenters. In the past, such dependence on management would have been justified. But in today's technology-driven organisations, many customers have neither traditional branch managers nor branches; operation of current accounts having moved to banking over telephone or computer networks. Auditors who rely on traditional methods of control and evaluation in these systems will therefore fail in their duty to assure management that their objectives are being met. The 2002 revision of the *Standards* has a modified definition of internal auditing that has been developed to include a broader range of activities than hitherto, adding the concepts of governance and risk management to its traditional domain of reviewing management's systems of control:

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.²

The changing business environment has also increased the importance of information. Organisations now operate in a context where the ownership, dissemination and production of information is potentially both the biggest asset and the worst threat. Where organisations have reengineered and downsized, the need for effective, accurate and timely management information systems is much greater. Highly automated business systems are usually too complex for general management to fully understand, so reliance is placed on systems producing correct information at the appropriate time.

Control and audit of these systems has also grown in complexity and difficulty. Traditional and long established security and control measures that rely upon stringent input control and segregation of duties cannot be depended upon in organisations where due to staff reduction and delayering, segregation of duty is often seen as an unnecessary overhead. Furthermore, input controls are effective only if coupled with restricted access and supervision. This is in conflict with the growing use of networked and open systems such as electronic commerce, telephone and internet banking and automated operations.

There are three main issues underpinning this thesis. Firstly, the need to change the internal audit paradigm from its focus on middle and operational management to a position where greater assurance can be given to senior management on their strategic planning and decision-making. Secondly, the potential benefits for organisations of control models to enable internal auditors and managers to develop and implement best practices for control and corporate governance. Finally, Control Self Assessment (CSA) is examined as a potential solution to improve the effectiveness of audit while ensuring that any move towards strategic management does not leave a vacuum at the operational level.

1.2 Nature of the Research

1.2.1 Background

The starting point of this research is that internal audit as it is currently practised focuses on a tactical/operational view rather than at a strategic/tactical level and in so doing misses the opportunity to ensure that key corporate governance and control

matters are effectively addressed. If internal audit is to continue to be a useful and positive contribution to organisations, then its methods and approach must develop to match the changes in the modern management environment. Furthermore, corporate governance pronouncements during the 1990s emphasised the need for senior management to gain assurance about qualitative ('soft') controls such as ethical behaviour and creating an effective control environment. A paradigm shift from an operational/tactical focus to a strategic/tactical focus must be accompanied by management reclaiming responsibility for the review of controls in their operations to reduce the likelihood that such assurance work would not be undertaken, if internal auditors change the focus of their work. Control models enable effective assessments of control systems using both quantitative and qualitative measures. The final element of the research is based on CSA. Effective use of CSA can enable management and auditors to work collaboratively in reviewing systems of control at all levels.

1.2.2 **Audit Environment and Context**

Ackoff (1993) has suggested a technique of 'idealised design' where a corporate vision is constructed of a perfect world, which may not be feasible at the time. This technique has a firm base in systems theory and is therefore methodical.³ Ackoff suggests two types of idealised design: constrained and unconstrained. A *constrained design* assumes that the entity must be totally reconstructed, but its environment remains the same. *Unconstrained design* allows the 'containing systems' (the environment and connecting systems) to be changed. In an audit context, this might enable an organisation to redesign its accounting systems so that

more efficient throughput was achieved with no loss of control, envisioning technological support which may not exist at present. An unconstrained design would enable this new model to link with other organisations to create a completely new method of trading. Auditors have historically taken a conservative view of reality, and prefer to work with the techniques and system components available, although in the 1980s some practitioners made deliberate attempts to become proactive, rather than reactive. This was largely an exercise in furthering the participative approach championed by Mints in 1972, and although the issues were aired in professional journals, there was no conceptual leap of the magnitude of systems versus compliance auditing.⁴

A constrained design for the audit function would need to work within current clearly defined roles and boundaries of audit: internal auditors working within their organisations; external auditors working from their independent firms. In some ways this type of reorganisation has already occurred, due to changes in regulation (compulsory market testing in government, disastrous lapses in control - such as those which initiated the Treadway report, and downsizing). In these cases it can be seen that although internal audit has been streamlined, even automated, and made more efficient and economic the basic premise has not altered. Internal auditors are still responsible for the review of internal control systems although external consultancies are increasingly involved in work traditionally carried out by internal auditors.⁵ External auditors in their turn are still responsible for reporting on financial records to shareholders.

The conditions for unconstrained design and a much more radical reorganisation have yet to occur. Arguably, it is likely to need a more comprehensive disaster even than the Barings fiasco to stimulate this. * Interestingly, although both external and internal auditors bore some criticism from inspectors from the Bank of England and Singapore the key control issue was seen to be management's inability to understand and control their modern business practices.^{6 7} Alternatively, the auditing professions may decide to adopt new working practices because of threats from other sources. A research project commissioned by the ICAEW addressed the likely impact of IT on audit in the next decade.⁸ One radical view that the authors discussed was that company accounts might be prepared by 'accounting factories' rather than by in-house professionals. Data mining and the rapid growth of publicly available information through the internet would mean that potentially no annual audit would be necessary, as up to the second information could be obtained at any time. A traditional post-event audit would not provide any significant assurance that operations were controlled, and would therefore become irrelevant.

Negative and reactionary responses to technological and social change are not the only alternatives. For organisations to develop and grow, there must be a concomitant willingness to build a learning organisation, where a corporate memory is made a clear strategic priority. As organisations reengineer and restructure, much of the experience gained in different circumstances is lost. Periodically, fundamental control principles are overridden or ignored and losses are incurred. In the recent

* The failure of the USA energy enterprise Enron in 2002 was announced after the completion of the thesis. It will be interesting to see how far internal and external auditors are judged to have failed stakeholders in this case.

past, clear examples can be seen where basic audit concepts might have prevented large scale disasters. (Figure 1.1)

Figure 1.1

Event	Control Weakness
Baring Brothers	Segregation of duties, lack of supervision, inadequate audit testing ⁹
London Stock Exchange <i>Taurus</i> trading system	Inadequate audit involvement, insufficient control of budgets ¹⁰
Morgan Grenfell fund management	Verification of assets, supervision ¹¹
Sumitomo/LME	Segregation of duty, personnel controls, management and supervision ¹²

An example of the unconstrained design approach to consider more relevant, effective auditing might address the six expectations listed by MacInnes in *Auditing in the 21st Century*: ¹³

1. the financial statements are right
2. the company will not fail
3. there has been no fraud
4. the company has acted within the law
5. the company has been competently managed
6. the company has adopted a responsible attitude to environmental and social matters

While senior management are responsible to their shareholders for ensuring proper management of financial records, which are then audited by registered external auditors, there is currently no legal framework for items 2, 3, and 6. Furthermore, even this list of expectations is largely backward looking and provides little

assurance about future survival or corporate responsibility to the wider groups of stakeholder. A reconstructed vision of the audit role could distribute audit work among the range of agencies available: external, internal, environmental, technical and auditors from potential investors or stakeholders.

1.3 Objectives of Research

Modern organisations in developed economies operate in an environment where their effectiveness is measured through financial reporting. Internal and external evaluation of performance is typically expressed in terms of profit and loss over a relatively short period of one to five years. The focus of most audit and control activities, both internally and externally, is on operational and tactical performance: for example, budgets versus actual figures, return on investment, percentage of rejected throughput and market share. Strategic issues and long term planning are not generally seen as being part of either internal or external audit's terms of reference. Nonfinancial performance measures such as corporate governance, social reporting and environmental issues while growing in importance, are not yet seen as essential.

The objectives of this research are as follows:

- to examine the actual and potential contribution that internal auditors make to strategic management
- to investigate the awareness and potential benefits of control models
- to assess the impact and success of CSA

1.4 Need for Research

1.4.1 **Overview**

While outsourcing and partnership arrangements are beginning to blur the traditional boundaries between external and internal auditors, apart from statutory and regulated audits control and governance issues are still largely sidelined. Furthermore, many of the initiatives and developments which affect the audit professions are defensive and reactive: the report of the Committee on Corporate Governance chaired by Sir Ronnie Hampel, for example, interprets the Greenbury and Cadbury guidelines as 'prescriptive' and (even more disparagingly) as 'box ticking'.¹⁴ Clearly the best intentions of these committees to encourage honest and integrity in financial and control issues has not convinced their potential audience. Hampel's primary method of ensuring good practice would be the employment of good directors; furthermore, good governance can even be a barrier to prosperity:

The importance of corporate governance lies in its contribution both to business prosperity and to accountability. In the UK the latter has preoccupied much public debate over the past few years. We would wish to see the balance corrected.¹⁵

In Hampel's opinion, 'correction' of the imbalance implies acceptance that even the comparatively limited response of governments and professional bodies to the corporate failures exemplified by Barings, Maxwell and Polly Peck must cease so that proper attention can be paid to the more pressing issue of prosperity. Prospects for the development of a progressive culture of control and

audit would seem bleak if this view were to become widespread. Corporate governance and accountability are clearly perceived as *barriers* to prosperity, not as *safeguards* of public and private investment.

The publication in January 1999 of the *Turnbull* Report and Combined Code can be seen as having a potentially positive impact on the role of internal audit. Its emphasis on the importance of internal control systems and risk assessment, and the mandatory requirement for companies to report on these issues provide a clear justification for internal audit work. The ICAEW guidance to the Combined Code states that 'a company's system of internal control has a key role in the management of risks that are significant to the fulfilment of its business objectives', and that internal control systems should 'be embedded within the operations of the company and form parts of its culture'.^{16 17} Furthermore, they should 'be capable of responding quickly to evolving risks to the business arising from factors within the company and to changes in the business environment'.¹⁸

Risk also formed the basis for Selim and McNamee in the late 1990s whose work examined the changing perceptions of risk to internal auditors.¹⁹ Their results demonstrated that there is a visible change in the focus of internal audit work from control to risk. The nature of this research project is founded in the need for internal auditors to change their paradigm from the operationally focused and quantitative to a participative, constructive and strategically oriented style of auditing. Key issues to be addressed include the nature of

qualitative ('soft') controls, methods for controlling strategy, development of control models and the successful implementation of CSA.

1.4.2 Audit and Strategy

The strategic management literature has rarely examined the links between control and strategy; even fewer authors have examined the contribution internal audit can make to strategic management. Johnson and Scholes define strategy as

the *direction* and *scope* of an organisation over the *long term*: which achieves *advantage* for the organisation through its configuration of *resources* within a changing *environment*, to meet the needs of *markets* and to fulfil *stakeholder* expectations. (emphasis in the original)²⁰

This study will focus on the potential and actual contribution internal auditors make to the outputs of the strategic planning process rather than to the formulation of strategy *per se*. Figure 1.2 shows the potential role of internal auditors in the strategic process:

Figure 1.2

Strategic Activity	Internal Audit Contribution
Improving efficiency	Systems audit review of processes
Providing expertise	Advisory role
Providing investment	Provide assurance to senior management
Fostering innovation	Participation in R and D
Mitigating risk	Provision of assurance to management
Providing a strong external image	Include reputational risk in audit reviews
Encouraging collaboration	Evaluation of process effectiveness
Setting standards	Involvement in governance and control processes

(After Johnson and Scholes, 1999. ²¹)

A fundamental element of this research is the evaluation of the need and importance of qualitative controls, which include performance measurements which are not solely based on financial and other quantitative information. As can be seen in Figure 1.2, specific financial issues are only one aspect of the strategic management process. While authors such as Kaplan and Sveiby have suggested methods for including qualitative measures in performance evaluation, they do not include control as an integral element. ^{22 23} Kaplan and Norton proposed a method for ensuring a holistic view of performance, which they called ‘the Balanced Scorecard’ (BSC). This research will examine the potential benefits of the BSC for both senior management and internal auditors, and investigate its potential use in control and governance systems. ²⁴

1.4.3 The Balanced Scorecard

A major obstruction for organisations wishing to make radical changes to their systems of internal control is the need to report their performance against generally agreed targets. Historically these have almost always been financial ratios derived from analysis of the accounting records (return on investment, payback period, and performance against budgets for example). These ratios may not detect an underperforming strong enterprise where more aggressive investment may have been appropriate, or misreport success of a weak enterprise where financial records are manipulated in favour of the short term. In particular, during the post recession period of restructuring and downsizing, management risk weakening long term control of their systems for the short term benefit of an apparently successful exercise in the reduction of overheads and fixed costs. A more effective method of evaluation, and one which should address the issues raised in the ICAS report is the 'balanced scorecard', first suggested by Kaplan and Norton in 1992.²⁵ This method focuses on operational as well as financial criteria, and therefore is fully in accordance with the IIA guidance relating to the role of internal auditing.

Kaplan and Norton define four measurement criteria as a basis for evaluation:²⁶

- How do customers see us?
- What must we excel at?
- Can we continue to improve and create value?
- How do we look to shareholders?

These questions are placed in four measurable perspectives: Customer (are our customers satisfied with performance, is the organisation the first choice supplier?) Internal (how can we reduce cycle time, can we improve even on high standards), Innovation and Learning (are we developing new products which will fulfil our customers' future needs), and Financial (are we gaining sufficient return on investment, are we reducing costs, can we be more competitive). Each stands alone, yet together they provide a complete picture of the organisation's success. This framework fits much more comfortably with the objectives of Total Quality Management (TQM) and the Baldrige award than the traditional management approach, driven by the need to meet narrow production or marketing targets. Letza emphasises the need to link the balanced scorecard with strategy:

The scorecard puts strategy and vision at the centre. Traditional measurement systems have a control bias, that is, they specify the particular actions they want employees to take and then measure to see whether or not the employees have taken these actions ... The balanced scorecard, on the other hand, assumes that people will adopt whatever action is necessary to arrive at these goals.²⁷

This is a philosophy which would horrify many audit practitioners, where achieving objectives set by management is the essence of an effective control system. There is some justification in a negative view: if employees are empowered to do as they wish, there is a high risk of resources being directed at satisfying the needs of the individual systems component or person rather than those of the organisation as a whole. In other words, subsystems are optimised at the expense of synergy. Kaplan and Norton solve this dilemma by

recommending that all senior management are involved in an enterprise-wide review of operations and their targets. This type of review fits readily both with CSA and is consistent with the participative approach first suggested by Mints in 1972.²⁸ While the balanced scorecard in its original design does not address control issues, the fact that organisations that adopt the BSC by definition include a range of measurable activities supports the argument that it has potential benefits for both senior management and internal auditors

1.4.4 Benchmarking and Standards

TQM has been linked with internal auditing for some ten years, although quality assurance of internal audit work has a much longer history (For example, the IIA *Standards*, 1978 and 2002).^{29 30} Studies by Ridley in 1996 and Gupta and Ray in 1995 have shown that TQM and internal audit have strong links, but also significant differences in emphasis.^{31 32} In principle, audit and TQM have a great deal of potential synergy: TQM studies have highlighted the importance of developing control systems which encourage responsibility and a target of zero defects; the Baldrige Award and other quality frameworks emphasise clear guidelines and a focus on measurable outputs. Despite these similarities, TQM as a framework for audit work (rather than a target for an audit *function*) has not been wholly accepted by either branch of the audit profession.

The audit approach to TQM has taken two main paths: firstly, the external validation of internal quality through certification of the department (for example, the IIA Global Audit Information Network (GAIN) programme,

launched in 1994 where formal industry benchmarks are used to evaluate the efficiency and effectiveness of internal audit departments), and secondly through the use of TQM principles and methods in audit work. IIA *Standard 1300* requires internal audit departments to establish a quality assurance and improvement programme, and gives explicit guidance on both internal and external reviews:

The chief audit executive should develop and maintain a quality assurance and improvement program that covers all aspects of the internal audit activity and continuously monitors its effectiveness³³

This type of TQM work is discussed by Lampe and Sutton (1994).³⁴ A more general approach to TQM was researched by Gupta and Ray (1995).³⁵ This work investigated the ways internal auditors might consider TQM processes during their reviews.

Not all authors have viewed TQM favourably. Ackoff finds serious weaknesses in TQM:

TQM's development has to a large extent been based on experience; little theory has been involved. As a result, its various components do not hang together as a cohesive whole. It tends to be an aggregate (a euphemism for a hodgepodge) of procedures and practices rather than a systemic process³⁶

Ackoff goes on to note the fact that TQM needs a stable structure, and that many organisations are subjected to change in less time than it takes to institute a TQM programme. TQM attempts to instil a culture of quality control, through

measurable standards and best practice. Quality standards define the targets and checks which should be made. These measures can then be inspected to ensure compliance. In principle, this should encourage good practice. But the reality may be that an emphasis on strict procedures may hinder imaginative solutions to problems; in other words, staff may be subject to prescriptive procedures and not empowered to apply their knowledge. Conversely, without structure staff may be able to manipulate systems so that controls are overridden.

TQM promised much more than it ever delivered for internal auditors. The IIA and many practitioners saw TQM as an important way of demonstrating the effectiveness of systems (and indeed their own audit organisations) through compliance with an independent series of standards. Research was carried out into TQM and internal audit, enthusiastically and widely. (Gupta and Ray, 1995; Ridley, 1996).^{37 38} Unfortunately the rise of TQM ran parallel to economic recession and a trend towards smaller management structures, through downsizing and outsourcing.

TQM's impact on internal audit was therefore limited. In the UK, apart from champions of the ISO 9000 series of quality standards such as Ridley, the potential impact of independent quality measurements was never achieved. This is for a variety of reasons. In a climate of major change, concentration on procedures and strategy takes second place to survival. With organisations reengineering and reducing layers of management, activities with no direct contribution to profitability are not given priority. Additionally, managers may not accept the usefulness of standards if they make operations slower. Within

internal auditing too, there is an inherent mistrust of standardised solutions and methodology. Even given that the IIA *Standards* are probably the most widely quoted and important publication in the history of internal auditing, many organisations develop their own methodologies and working practices which may differ in theory and practice.

1.4.5 Other Control Frameworks

Apart from the international standards for TQM, other bodies have produced standards frameworks which have a direct application to auditing. Most important are the corporate governance pronouncements of the Treadway Commission (COSO) ³⁹ and the Canadian Institute of Chartered Accountants Criteria of Control Report (CoCo). ⁴⁰ These standards are used by the major CSA players as a foundation for their work. In addition, the Malcolm Baldrige National Quality Award in the USA established in 1987 has encouraged world class organisations to focus on quality management. ⁴¹ Criticism of these standards and the Baldrige Award has come from both supporters and detractors of their underlying principles: Deming (the founder of TQM) sees a misplaced emphasis on results; others have commented on the inverse rewards for the highly intensive process for participation in the award. ⁴² There is an apparent contradiction then for management involvement in TQM schemes. The amount of management support and effort is misdirected to a goal which has only superficial value; meanwhile, 'real' targets are ignored in favour of a spurious attempt to gain recognition. This argument has also been used during the growth of quality assured organisations after the then BS 5750 (now the ISO 9000

series) was initiated. While some large internal audit departments such as BT and the Alliance and Leicester worked towards implementing TQM programmes and registration others saw TQM as a distraction from 'pure' audit work

1.4.6 Control Self Assessment (CSA)

CSA grew as a response to changes in the way organisations operate. In Gulf Canada, the diversity of operations and speed of change meant that traditional audit approaches, even the systems audit, were not adding value to the organisation. In order to address this problem the then Chief Internal Auditor, Paul Makosz, in conjunction with senior managers in the internal audit department developed a participative approach which enabled better coverage of operations. While control remained the responsibility of management, the means of assessing risk and evaluating control was devolved to groups of users and auditors. This had the benefit that discussion and agreement of control measures and risk also included the people who operate the systems.⁴³

From its origins in Gulf Canada, CSA has developed along two main paths. Tim Leech refined CSA into Control Risk Self Assessment, which is oriented towards risk analysis and acceptance. In this method, workshops and discussion sessions are used as a forum for identifying, understanding and accepting the inherent and residual risk in an organisation's systems. In contrast, the CSA methodology developed by Paul Makosz (PDK Consultancy) focuses on identifying risks and designing controls which are enhance the well-being of the

organisation. Both methodologies share similar components: workshops, facilitated discussions, shared objectives and a willingness for staff at all levels to make contributions and to 'buy in' to solutions.

In the UK, CSA/CRSA has been used since the late 1980s. Early implementation of CSA occurred through the work of Tom Oxley in the early 1990s (the UK partner of Leech) and others. As early implementations were primarily a practitioner-led development, there is little documentary evidence of its success (or otherwise). However, postgraduate students at CUBS have recorded and analysed their experiences and these examples are useful.^{44 45 46}

Internationally, there are diverse views of the place of CSA. In North America, CSA has developed rapidly and widely, to the extent that the IIA CSA conference is among its best attended events (over 500 in 1995 and in 1996), and a specialist group was established in 1996. The large external auditing firms have formed partnerships with the best known practitioners (Deloitte Touche and former members of the MAPCO audit team, KPMG and Leech's MCS for example.) Obviously, many internal auditors see this connection as threatening. In this early stage of its development, CSA may become a separate discipline from either type of audit practice. More positively, links between internal and external auditors may form the basis of a new assessment profession, which has common and equal links with both sets of players.

Control systems have traditionally been evaluated through testing and measurement of system components against control objectives derived from agreed levels of compliance with checks and controls. While CSA has amended

this approach through participation and team solutions, much of systems auditing still relies on controls which originated in manual and accounting systems. Although the underlying concepts are still correct, modern business systems with their technologised processing and reduced supervision require a different set of measurements. In computerised information systems for example, the traditional binary definition of integrity (that information and data are either held in a complete and original state or they are not) has been challenged by List and Melville.⁴⁷ The authors suggest that management need information which is sufficiently accurate at the time it is used, not rigid faith in incorruptible systems. Using this dictum, it is better for management to receive information which they know to be inaccurate at the time when it is most useful rather than rely on complete accuracy at a time when it is delivered too late for corrective action. Obviously, management must also set their definitions of sufficiency to acceptable levels. In order for management to measure the effectiveness of their information systems, the paper sets out specific targets in order for management to make decisions. Unlike traditional definitions of information systems security where control is a function of effective *input* control and proper management of resources, List and Melville propose that control of integrity is based on sufficient trust of *output* control.^{48 49 50} This approach has the potential to develop to meet the challenges of data mining and shared resources; rigid input controls have the major disadvantage of being directly in conflict with what future systems will offer: openness, shared resources, networked information provision and direct control from the end user. Further research into standards relevant to integrity showed that most standards available were outdated, insufficient or over prescriptive. In addition,

a comparison of available standards to a model of information systems components showed many gaps where technological progress had brought new factors which have yet to be addressed.⁵¹

1.4.7 Facilitation and Consulting Skills

Undoubtedly internal auditing has been moving towards a 'proactive', consultancy style for some time, and the 2002 *Standards* include consulting as part of its definition of internal auditing.⁵²

Apart from Gray (1994), little formal research has been carried out into this area.⁵³ Internal consultancy is not new, and there are strong links to positive organisational change and development. For organisations which have reengineered or are undergoing rapid and profound change, traditional audit advice may not be sufficient to enable their new systems to be controlled. This can be problematic: external, financial audits are by their nature backward looking and systems auditing which is not based on a proper understanding of systems may offer only partial or inadequate solutions.

A major problem for auditors is that a model consulting approach specific to their needs has not been accepted by the professional bodies who set standards, although individual attempts to solve this problem have been made. This is unsurprising given the lack of an accepted methodology for systems auditing; without this, no standardisation of work methods can occur. CSA will require a quantum leap in the range and expertise of consulting skills which many (if not

most) auditors (external and internal) will not achieve. The skills and techniques necessary for effective facilitation, modelling, negotiation and evaluation must be delineated and researched so that auditors involved in CSA are able to satisfy the needs of their customers.

A useful model has been described by Williams and Woodward as the '1 + 7 Model'.⁵⁴ This model identifies seven additional, supportive elements to the main consultancy role. As well as focusing on the clients' needs, a consultant must also be executive, researcher, tutor, educator, powerbroker, conciliator, and synergist. Obviously, there are potential conflicts for internal auditors (who are specifically required to maintain independence and objectivity from the systems they review) and external auditors are required to provide an opinion of the financial statements for the benefit of shareholders. But the consultative role which is essential for CSA is clearly set out. Internal auditors must be prepared to define their role so that assurance is given across the whole spectrum of performance measurements: financial, operational, social and environmental. In particular, in a climate of change and growth internal auditors must take the initiative for ensuring control systems either retain or improve their effectiveness even if the client does not see this as a priority. This will require a shift in emphasis and structure of audit activity which will make the current rigid demarcation between various types of auditor redundant. In a business environment where only core activities are seen as necessarily carried out by full time, tenured staff, auditors have two options: to make themselves a core activity or redefine the structure of audit work so that the activities necessary for effective control are carried out by a range of core and consultative staff. If audit

is seen as a core activity as suggested by Yiannakis (2001), then the traditional systems audit approach is probably outmoded, given the virtually unquantifiable benefits it brings.⁵⁵ There is a real risk that organisations will revert to defensive compliance reviews, where check lists of prescribed control activities are used to demonstrate that all due professional care has been taken to prevent disaster in the event of legal action. Systems auditing is a staff intensive and long term activity which is perceived as an imposition on management. Given the inherent flaws in this approach (the lack of formal methodology, the apparent conflict between external and internal auditors, and the increasingly complexity of systems to be reviewed) it is probably not possible to improve current practices; the whole process must be reengineered to meet the requirements of modern enterprises.

If audit makes the shift to assessment suggested by MacInnes, it may be that a range of control and consulting activities can be divided between external and internal auditors under the supervision of an audit committee responsible for corporate governance and control. This cannot happen without the acceptance by senior management and stakeholders that control is essential for corporate health.

1.4.8 Group Decision Systems Software (GDSS) and Anonymity

Although automation of current practice is not a solution for long term needs, the use of technology has had a great impact on the work of auditors. For CSA, software has been used to enable anonymous voting on key issues by all the

main consultancies. It is without doubt a useful tool, and applied properly can reduce inhibition and fear from discussions of sensitive areas.

If the future role of auditors is to enable and facilitate group work, a better understanding of dynamics and the potential advantage of technology is necessary. Finnegan and O'Mahony reported in 1996 that while decision support software assisted group discussions, there was also a place for face to face contact.⁵⁶ This may be because the technology has yet to reach a stage where its use is transparent to the user; alternatively it may be because participants actively welcome the presence of other people.

1.5 Significance of the study

For internal auditors to meet the challenges presented by modern business systems and in order to meet the skill and contribution of external auditors, the perception and position of their activities must be moved from a concentration on operational and tactical risk areas to a focus on strategic objectives and the linkage with performance. Operational and tactical control issues can be given to managers who are directly responsible for those systems.

In his best-selling book *Reengineering the Corporation* Michael Hammer describes a 'High ratio of checking and control to value adding' as an activity which fragments business processes:

A lot of work goes on in organisations that does not add value to the company's products or service. We have a simple test for distinguishing work that adds value from work that does not. Take the customer's perspective and ask, 'Do I care?' If the answer is no, the work adds no value. Does the customer care about a company's internal controls, audits, management, and reporting? Absolutely not. That sort of checking and control work doesn't benefit the customer, only the company.⁵⁷

That such a statement could be made by one of the world's best known management authors demonstrates the huge gap that exists between auditors and other control experts and those whose focus is primarily on performance. (Whether this assertion would stand up to empirical analysis is of course another matter, and is outside the scope of this thesis.) More importantly, Hammer illuminates the central problem with traditional means of evaluating effectiveness, that of financial performance and current market value. If managers are effectively forced into inefficient and uneconomic practices because of their rigid systems and objectives - as Hammer rightly suggests - moving measurements for performance to the balance sheet through streamlining processes and reducing blockages simply forces these inadequacies to a senior level. Instead of an operational or tactical manager using false or misleading measurements to manage their fragmented systems, the underlying syndrome is delegated to a higher level while simultaneously reducing any direct control from below. Decoupling subsystems to reduce entropy, while linking others to construct new systems is probably an effective management method for performance improvement. Reducing or removing feedback loops and systemic information is probably not.

If internal auditors are to make a paradigm shift from a backward facing, historical view of organisations and their systems to a continuing, real-time review, the systems audit approach must be reengineered to enable this. This change may include a revision of the current division between external and internal auditors.

Systems auditing has been preferred by many internal auditors as an effective replacement to compliance auditing. Much has been written on the wide range of applications of this approach (most importantly by Chambers in the UK and Sawyer in the USA).^{58 59 60} The logic of examining and evaluating systems of control as a means to measure their effectiveness is sound, although financial and external audits have retained aspects of compliance and inspection. With the large volumes of transactions produced by modern enterprises the systems approach is often the only available technique for both internal and external auditors to evaluate controls.

Unlike systems analysis and design (a very closely related discipline) where several well known formal methodologies have been constructed, there is no commonly accepted systems audit methodology. The systems auditing methodologies which are available have mostly been designed at an organisational level for specific purposes by government or by individual enterprises. (For example, the *Government Internal Audit Manual* produced by HM Treasury).⁶¹ A further anomaly is that systems audit approaches rarely - if ever - adopt a foundation in general systems theory (GST) or Soft Systems Methodology (SSM). Until 1996, the IIA UK professional qualification did not include any study of GST, although it forms a minor percentage of the CIA programme. This leads to a paradox which uncorrected devalues the product of systems auditing:

systems auditing is a method of evaluating systems which does not require its practitioners to have a formal knowledge of how systems function. A simple example might be where an auditor considers each element of an accounting system and confirms that each is meeting its individual objective. Such a review concentrates only on the subsystems, and would not identify areas where decoupling may improve efficiency, economy and effectiveness. Conversely, an audit review may support a management desire to outsource non-core operations through direct comparison of costs to benefits but miss potential synergies and opportunities which may arise from redesign of control systems. A misunderstanding of how systems work is a potentially fatal flaw, as is illustrated by Baring Brothers Bank where a failure to see the performance of a component in the context of its environment led to a complete failure of control. (The Bank of England and Singapore reports on the failure of Barings give excellent analyses of these failings.)^{62 63}

Systems auditing is now reaching a stage of maturity. It is the norm for most internal auditors and many external auditors use the systems approach in their work. Indeed, for formal systems of control, designed and maintained by management in an unchanging environment it is effective and efficient. Reviewing the organisation's internal control systems enables an objective measurement of performance against objectives. But paradoxically, in an environment of change, structured audit plans become impractical, business systems increase in complexity and management may have neither the resources nor the desire to wait for scheduled reviews of their operations. A second paradox has emerged from this situation: internal control systems are under increasing pressure through management's attempts to reduce costs and improve their organisations' performance during the most vulnerable time for any enterprise. Rapid

change may be when traditional control elements are discarded or reduced, due to rapid technological development or significant changes in staffing through downsizing or outsourcing. So far the internal audit side of the debate has tended towards the defensive, with increased emphasis on IT literacy, and reaction to the threat to internal audit autonomy posed by the outsourcing consultancies. Conversely, the outsourcing consultancies (mainly though not entirely accounting firms) are marketing their services as 'partnership', or 'co-sourcing'. It is important to consider the potential place of audit (internal and external) in the modern organisation and its environment of change and competition. Handy describes the new organisation as the 'existential company', where corporate governance is controlled through independent committees reporting to the board.

Furthermore,

Effective and independent control systems are critical to the governance of self-governing bodies. The powers need to be even more visibly separated and separately staffed in an existential company. It may be necessary to put the judicial or auditing power in the hands of an independent regulator.⁶⁴

This leads to a third paradox: competition between external and internal auditors for traditional work means that both parties run a high risk of loss. But a completely redefined role, where internal and external auditors act in partnership to carry out essential control review activity may mean a rewarding and effective activity for both. The redefinition of audit has been addressed by the ICAS in their research report *Auditing into the 21st Century*.⁶⁵ This paper suggests a radical restructuring of the audit process so that a proper assessment of internal control can take place; in its turn, this

restructuring requires a strong internal audit function reporting to a special committee. While this paper did not address the internal audit position in detail, several of the current issues in auditing (the expectations gap, fraudulent management and the going concern) are potentially resolved.

Corporate governance has been addressed in three important reports: the Treadway committee (USA), the Cadbury committee (UK) and the Canadian ICA report on Corporate Control (CoCo). Each report suggests a model for effective corporate control which if followed would greatly assist a move towards good corporate control. Unfortunately, control is more often seen as an unnecessary overhead and a restriction to be removed. For example, in his seminal paper 'Reengineering Work' Michael Hammer describes how the Ford Motor Company reduced headcount in Accounts Payable by introducing a system of 'invoiceless processing', whereby goods were received and recorded using a large database.⁶⁶ At first glance, the revised system appears more straightforward and efficient, although a more thorough analysis shows that the system itself has not changed its nature. Rather, responsibility for control has been pushed upstream into the suppliers' systems. Although this does not necessarily imply that the new system is not controlled, Hammer takes a frighteningly simplistic view of control systems:

Our elaborate systems for imposing control and discipline on those who actually do the work stem from the post-war period since literate, entry-level people were abundant but well educated professionals hard to come by, the control systems funnelled information up the hierarchy to the few who presumably knew what to do with it.⁶⁷

Hammer identifies two discrete populations: the 'well-educated professionals', who it is implied force discipline and control on the other group, the 'people who actually do the work'. This analysis of control places a clear division between management and managed (which may be accurate) for which the solution is to reduce the number of tasks, and concentrate on processes. A reactive audit function has no response to such damning criticism, apart from a rush to reduce headcount and middle management in its own realm. Clearly this cannot be accepted without consideration of the risks and benefits. Control systems must not be perceived as blocks and obstacles on otherwise effective processes; neither must auditors look to the past for models of control.

Attempts to provide structure and methodology to audit work have developed in two main directions: adapting and adopting a methodology from information systems or engineering, and through guidance from manuals produced by professional bodies, large firms of accountants and HM Treasury. These can only be partial solutions as they address only the internal mechanisms of an audit. CSA was developed in order to ensure that solutions to business problems were accepted by internal customers through their active participation in the audit process.

Technological and social change over the last decade has seen a transformation of the workplace in Western societies. Inevitably these changes have been exported to less developed economies in the East and South. In many ways, these changes have been positive: outmoded and repetitive tasks can now be carried out by robots, and the increased quality of telecommunications has enabled the developing world to gain a stake in application programming work. Yet the control implications of the changing workplace are insufficiently addressed by management. Concentration on only one

performance measurement (return on investment) ignores other, equally important measurements (control, quality and social issues). Within the audit arena, external auditors and internal auditors focus on protection of their individual interests at the expense of the benefits of increased co-operation and synergy. In the short term, this may produce one 'winner'; in the longer term, both sides will lose unless a more relevant method of evaluating and assuring an enterprise's performance is designed. CSA may be the method through which a holistic audit approach develops, with the various parts of the balanced score card evaluated and assessed by the most appropriate auditor.

1.6 Limitations of study

This research does not address the following areas:

- specific strategic management issues, apart from where they are linked with control and audit
- specific implementation of the BSC
- practical CSA issues, in particular with regard to implementation
- external auditing (apart from where external audit firms are involved in CSA)

1.7 Structure of the Thesis

The remainder of the thesis is structured as follows:

Chapter 2 is a review of the literature that formed the foundation for the study. Specific issues reviewed were:

- Strategy
- The Balanced Scorecard
- Business Process Reengineering
- Benchmarking and Standards
- Control Models
- Control Self Assessment
- Group Decision Support Systems
- Consultancy and Facilitation

Chapter 3 explains and presents the research propositions.

Chapter 4 describes the methodology and questionnaire design.

Chapter 5 presents summarised descriptive statistics, and gives an overview of the sample and the respondents.

Chapter 6 presents the testing of the research propositions, and the results of the statistical testing.

Chapter 7 provides the conclusions and implications of the study, and suggests areas for future research.

There are three appendices, Appendix A comprises the survey questionnaire and covering letters; Appendix B contains the additional comments that were made by respondents, and Appendix C presents the full descriptive statistics.

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Chapter 2

Literature Review

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2.1 Overview

This chapter surveys the literature, and addresses the current and future role of internal auditors in the three commonly accepted levels of management: strategic, tactical and operational. In order to make a clear separation between the current role and activities of internal auditing and the proposed future role, the chapter is structured in terms of a current and a proposed internal audit paradigm. This term is preferred to 'model' or 'methodology' as it includes the underlying theories, methodologies and accepted practices that are the foundation for traditional internal auditing.

The discussion is placed in the context of a changing business environment where absolute principles are evolving to become relative. For auditors, this has meant that the key principles and practices which underpin their work have been transformed. Corporate governance initiatives have proposed clear guidelines for management disclosure of factors other than financial performance. The growth of outsourcing means that the separation of internal and external audit functions may no longer exist, with major ramifications for independence and objectivity. With globalisation, organisations now have management which must control activities many thousands of miles from their headquarters, where traditional supervision and monitoring of performance cannot be applied. As a response to the changing business environment audit must also change in order to continue to provide a service to their newly defined customers and stakeholders.

Current Auditing Paradigm

2.2.1 External Auditing

The traditional role of the external, financial auditor is typically perceived to be that of the independent verifier of accounts prepared by an organisation's management. Using professional skill and judgement, financial records are evaluated for fairness and truthfulness according to recognised standards. While the roots of the profession are clearly based in practice, authors have addressed the issue of an underlying theoretical framework. Mautz and Sharaf (1961) examined the philosophical foundation of auditing, using five key concepts to discuss their audit philosophy:

- evidence
- due audit care
- fair presentation
- independence
- ethical conduct

In the context of their time, Mautz and Sharaf provide clear insight into the issues facing the profession. Changes in technology, and in the way companies in North America were financed led the authors to question the role and practice of auditors:

At the present time, auditing is plagued with a number of perplexing problems involving a wide variety of subjects. For example, are the customary tests and samples on which the auditor relies sufficient to justify his opinion? ¹

For Mautz and Sharaf, auditing is an objective, independent comparison of what is real and what can be proved to be a genuine representation of reality; so books of account and financial records should reflect what actually occurred and systems of internal control should as much as possible encourage correct representation.

Truth in auditing may be defined as conformity with reality as the auditor can determine reality at the time of his examination and with the evidence available

(Italics in the original) ²

and

A good system of internal control will reduce the possibilities for irregularities and may even reduce the probability to a small fraction, but it can never guarantee their prevention ³

Defining the role of audit as an independent service which uses the evaluation of representations of reality to support an opinion about the performance of a real entity is reasonable if those representations are accurate, based on provable fact and are undistorted. In simple terms, where assets are tangible, audit testing can prove or disprove their existence. For assets which are not tangible, auditors need to develop their practices to obtain evidence which will support their opinions. This can only happen if the entity under review is *auditable* and the information used by the auditor is *verifiable*. ⁴

The concept of verifiability is fundamental to the work of auditors. The test of the quality of audit work is underpinned by the belief that another body of examiners, using the same data, would make very similar conclusions and recommendations. Furthermore, auditability implies that evidence to support auditors' (and management's) assertion about their work is both objective and independent: with this interpretation, it follows that external auditors merely report what exists, and that measurable data used to support audit opinions is inferred objectively from management systems. Power argues that while this view is commonplace, it is more likely that 'audit evidence is not just "out there" but must be constructed to count.'⁵ Other authors argue strongly that accounting is not, and cannot be, an objective and scientific interpretation of 'facts', but rather that through the interpretation and construction of financial reports accounting is intrinsically linked with the entity from which it is deemed to be separated.^{6 7}

Power discusses a system of audit knowledge: 'creating a legitimate surface of auditable facts in the form of a management system'.⁸ Within this framework auditors can decide whether their work is truly an independent and objective systematic review, or a subjective and self-fulfilling service:

The question is whether controls, measurement systems and their associated forms of documentation pre-exist the audit process or have been created with a view to making the organisation auditable.⁹

Obviously, Power's discussion is focused on the role of external auditors (whose objectivity can be assured by their externality to their client organisations). But

interesting questions are raised about the objectivity of traditional control systems. If control mechanisms and procedures are in place only because of their importance to establishing auditability and verifiability, then they may only address the concerns of an externally constructed interpretation of an organisation and its transactions. Furthermore, if this measurement and interpretation of controls is given credence by the physical separation of the external evaluator of the control environment, the independence which traditionally reinforces objectivity risks becoming the factor that reduces the ability of management to control their activities through the use of a much wider variety of management information than financial performance.

The Institute of Chartered Accountants of Scotland, in response to criticism of the effectiveness and role of external auditors and the publication of the Cadbury Report in 1992, published *Auditing into the 21st Century*. This report responded to recommendations by Cadbury for reforming audit practice by suggesting that even those proposed were insufficient to ensure a continuing trust in auditors: 'changes of a more fundamental nature are required to improve the effectiveness of auditing in providing reassurance to the public'.¹⁰

McInnes extends the scope of audit work to include not only shareholders and managers, but also 'stakeholders, creditors, pensioners, employees and the public generally'.¹¹

With regard to the list of audit principles suggested by Mautz and Sharaf, McInnes finds particular difficulty with three: namely due audit care, independence and ethical conduct:

In our opinion the corporate governance framework within which external auditors operate is deficient. We believe it is reasonable for the public to expect that external auditors are independent of the directors of companies being audited. Within the present corporate governance framework it is not clear that this is the case ¹²

For companies to gain assurance that management information and internal control systems are reliable and relevant, McInnes suggests that 'each company should establish and maintain a strong internal audit function under the direction of a Chief Internal Auditor'. Furthermore, the internal audit team should be 'significantly stronger than is typically found in UK listed companies at the present time.' ¹³ To enhance independence, the internal auditors would report to a Financial reporting and Audit Committee comprising non-executive directors. This committee *inter alia* would also approve the appointment and dismissal of the Chief Internal Auditor. The IIA has referred to the positive affirmation of independence implied by the board's power to appoint and dismiss the CIA in both the 1978 *Standards* (Standard 110) and the 2002 version:

Independence is enhanced when the board concurs in the appointment or removal of the chief audit executive. ^{14 15}

2.2.2 Internal Auditing

Unlike external, financially-oriented audit, internal audit in most countries is not a statutorily regulated function (with very few exceptions, such as Greece and Israel). While there have been similarities in the approach of the two disciplines since the Institute of Internal Auditors was formed in 1941, there are key differences between them. Lawrence B Sawyer, author of the key internal auditing textbook, describes similarities and differences which are summarised as follows: ¹⁶

Table 2.1

Internal Auditor	External Auditor
Employed by organisation	Independent contractor
Serves needs of organisation	Serves third parties who need reliable financial information
Focuses on future events	Focus on accuracy and understandability of historical events
Directly concerned with the prevention of fraud	Incidentally concerned with prevention and detection of fraud, mainly when material weakness in financial statements
Independent of activities audited but responsive to needs of management	Independent of management and board
Reviews activities continually	Review records supporting financial statements usually annually

The table is an accurate representation of the current state of the art of auditing, although changes in the professions through outsourcing and consulting work is inevitably affecting the delineation.

While internal auditors are not obliged to be members of the IIA, more than 70,000 auditors in more than 100 countries were members in 2001. In addition, the IIA Control Self Assessment Center, launched in 1997 has had membership from 40 different countries. (IIA Annual Report, 1997) Unlike accountancy bodies, which are usually constituted nationally, the IIA is committed to representing the profession of internal auditing on a 'global' basis. Internal auditors who are members of the IIA are required to comply with the *Standards for the Professional Practice of Internal Auditing* (first published in 1978 and completely revised in June 2000), as well as the *Code of Ethics* of 1988 (also revised June 2000) regardless of their country of origin or where they are employed.¹⁷ Internal auditing according to the 1978 version of the IIA *Standards* is

an independent appraisal function established within an organisation to examine and evaluate its activities as a service to the organisation¹⁸

This definition was modified in the 2000 version as follows:

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.¹⁹

Some significant changes were made to the 1978 definition: the words 'assurance' and 'consulting' have been added to reflect the movement in both external and internal auditing towards the provision of assurance services, often by the use of outsourced staff. There are also changes to the emphasis on a 'systematic' approach,

and the range of internal audit activity is extended to address 'risk management, control, and governance processes'.

2.3 Strategic Level

2.3.1 Strategy and Control

Early authors linked control and structure, so that controlled enterprises are perceived as following the bureaucratic model of Weber.²⁰ This model reinforces a command and control management style which builds in control through direct supervision and authority. In modern organisations, where employee empowerment and the reduction of middle management the emphasis on a control infrastructure is inappropriate. Furthermore, this structure is inappropriate for senior management, who by the nature of their role make decisions which may be supported by highly probabilistic ('soft') rather than deterministic ('hard') data. Traditional controls over supervision and authority levels cannot support strategic decision making and planning. Some elements of a structural foundation for control remain appropriate for auditing purposes, most importantly, segregation of duty and effective supervision, even though modern organisations are tending towards less rigid systems. In these situations, strategic management may be negatively affected by excessively formal control. On the other hand, it is the duty and responsibility of senior management to encourage and institute management control systems throughout their organisations and to give clear guidelines on ethical and practical issues. The paradox of these apparently contradictory objectives leads to a practical and philosophical dilemma for initiating and defining control mechanisms and

monitoring systems for strategic management: the long term, probabilistic focus of senior management would be adversely affected by the need to comply with short term, deterministic procedures and reporting requirements. In a different context, Hampel describes this as putting accountability before profitability.²¹

Ouchi, in 1977, suggested that control was achieved not through structure, but through monitoring and evaluating outputs. This view separates the bureaucratic structures which are the foundation of an organisation from the supervision and monitoring mechanisms. Most importantly, control is linked with clearly defined and agreed targets for all staff:

In order to apply behaviour control, the organisation must possess at least agreement, if not true knowledge, about means-ends relationships. The process through which inputs are transformed into outputs must be felt to be known before supervisors can rationally achieve control by watching and guiding the behaviour of their subordinates.²²

Ouchi recognises the importance of controls within processes, as well as structural and input controls and concludes that control should be seen as 'essentially an evaluation process rather than as an attribute of structure'.²³

An examination of links between strategy and performance by Govindarajan and Gupta (1985) focused on the rewards achieved by successful senior management. The authors found that long term performance targets supported the success of a developing business but hampered their effectiveness in more mature operations.²⁴ While Govindarajan and Gupta do not address control and

strategy directly, they do provide a foundation for developing a control and measurement framework for strategic management through non-structural, flexible methods. In contrast, Hrebiniak and Joyce (1986) suggest structure as a solution to 'management myopia', the excessive concentration on the short term. The authors find that structural measures may be helpful in improving decision-making in the short and longer terms, although they also state that 'structural decisions alone are insufficient for the effective management of myopic thinking'.²⁵ It is clear that an imposed set of rules and procedures are inadequate, and probably damaging, in attempting to encourage control in strategic management practice.

Govindarajan (1988) made a further investigation of the links between strategy and controls in different strategic business units (SBUs). In particular, uncertainty and complexity were identified as the fundamental problem in strategy implementation. Three attempts to resolve the problem of uncertainty have been suggested:

- designing organisational structure
- designing control systems
- selecting managers

Govindarajan proposed a varied approach to control, depending on the objectives of the SBU:

as tasks vary in uncertainty, the behaviours necessary for effective performance also vary ... superior performance can best be achieved by tailoring control systems to task uncertainty.

Furthermore,

instead of assuming a deterministic relationship between strategy and administrative mechanisms - that there is a one best way to design administrative mechanisms to implement a given strategy - proponents of the equifinality approach argue that multiple design alternatives may exist for effectively implementing a given strategy.²⁶

The argument that deterministic measurement of performance at the strategic level is less effective than appropriate allocation of the right management skills to selected SBUs was extended to address the links between management performance and behaviours.²⁷ Govindarajan examined the proposition that 'superior performance can be achieved by selecting managers whose skills, knowledge and behaviours are congruent with the requirements of particular strategies' and concluded that management styles and experiences could be directly related to success in the management strategies suggested by Porter: that is, differentiation and cost.^{28 29} Interestingly, Govindarajan concluded that experience in general management was beneficial overall, but experience of finance and accountancy had a negative effect on performance.³⁰ The inference to be drawn from this finding may support the proposition that measurement of performance expressed in accounting and financial terms may be less than

helpful to strategic management; the corollary may be that general management experience enables instinctive and intuitive evaluation of performance. In either case, for control to be effective it must be measurable and based on actual events and transactions; whether these are accounting or nonfinancial or a combination is the responsibility of senior management. The means by which senior management implement control systems must be decided on the basis of best practice for the SBU as deduced from knowledge of the processes and operations, and from appropriate management information about a variety of performance indicators: financial and nonfinancial.

Govindarajan and Fisher found that strategy and control systems could be linked with effectiveness, and that either a focus on outcome measurement or behavioural may be appropriate in SBUs with differing objectives. The authors recommend that a standard control system should not be used across all areas of an enterprise; rather, the control systems should match the need and objectives of individual SBUs.³¹

A paradox which results from the gap between academic theory and management practice was identified by Goold and Quinn.³² By its nature, strategic management is future-oriented and is not amenable to control by traditional measurements such as budgets and profit targets.

Despite this, the underlying cycle of control is similar and can be described as:

- agree objectives
- monitor performance against objectives
- feedback results
- incentives and sanctions to encourage management³³

Goold and Quinn suggest that

Strategic controls may be concerned with competitive benchmarks and with nonfinancial performance measures, as well as with long-term outcomes. This has implications for the sort of data required (softer, more external), the sort of analysis undertaken (less routine, more concerned with options), and for the action consequences (less programmable)³⁴

The difficulties of devising a control system for strategy are recognised by the authors.

Four key problems are:

1. devising strategic controls that can accommodate uncertainty and flexibility in the implementation of strategy
2. defining strategic goals that are suitable for motivating managers
3. ensuring that strategic control systems assist, rather than attempt to replace, management judgement
4. building a strategic control system that enhances, rather than destroys, mutual confidence between management levels³⁵

While the four measures outlined by Goold and Quinn are sound and potentially useful for management, their broad nature and soft objectives mean they would not be seen as useful by management who may prefer more tangible measurements. This has led to research into links between quality management and strategy. Daniel and Reitsperger produced a comparative study of quality practices in the USA and Japan. The authors found that there were identifiable links between the type of information received by management and the quality strategy adopted (zero defect versus economic conformance level).³⁶ A wider survey, (Ittner and Larcker, 1990) which included North America, Japan and Germany recommended that strategic control systems should be adapted to the competitive environment, and identified two key problems in controlling strategy:

Firms experienced two primary problems with respect to the performance measures used for strategic control: (1) incorrect measures focused attention on the wrong objectives, and (2) improvements in strategic performance measures could not be linked to the desired strategic outcomes³⁷

The results of this work show clearly that measurement and evaluation of performance at the strategic level must be based on a methodology that can provide both clear and measurable objectives that linked strategy with outcomes. Two proposed solutions to this problem are Business Process Reengineering and the Balanced Scorecard. These are discussed in the next two sections of this chapter.

2.3.2 Business Process Reengineering

Hammer's original paper on Business Process Reengineering (BPR) was a call to streamline business operations across disciplines, so that emphasis is placed on processes not departments.³⁸ Much of the underlying theory of BPR is founded on Hammer's view that modern technology and business needs are not served by processes and management structures which were developed in the past. Mere automation of processes does not resolve the problem identified by Hammer: rather a fundamental restructuring is necessary. In Hammer's words:

Many of our job designs, work flows, control mechanisms, and organisational structures came of age in a different competitive environment and before the advent of the computer. They are geared toward efficiency and control. Yet the watchwords of the new decade are innovation and speed, service and quality.³⁹

BPR has obvious potential advantages for management who wish to improve and streamline their systems, and the case studies provided by Hammer contain impressive progress in effectiveness and efficiency. But even in this early paper, there are indications of the risks to control systems which are inherent when basic audit objectives such as segregation of duty and supervision are reduced or removed. For example, the case of MBL used by Hammer as a model to demonstrate how to improve the effectiveness of an admittedly inefficient and unwieldy system, replaced an inefficient and ineffective system with one that from an audit standpoint was potentially uncontrolled: 'shared databases and computer networks could make many different kinds of information available to a single person, while expert systems could help people with limited experience

make sound decisions'.⁴⁰ The advantages of speed and increased throughput were not balanced with proper organisational and personnel controls, and while empowerment enabled 'individuals to process entire applications' Hammer does not address the fundamental control of segregation of duty. Indeed, removing segregation of duty is included in Hammer's first and second principles of reengineering:

Organise around outcomes, not tasks... have one person perform all the steps in a process

Have those who use the output of the process perform the process.

(Emphasis in the original)⁴¹

Subsequent papers extended the initial idea into practical advice for organisations to reduce the costs and size of non-core activities (support functions such as accounts payable) and redirect efforts towards customers.^{42 43}

Despite the initial enthusiasm for BPR, only three years after Hammer's first paper other authors were finding reasons for criticism. In a review of more than 100 companies, consultants at McKinsey's found mixed results: 'In all too many companies, reengineering has been not only a great success but also a great failure'.⁴⁴ These authors cite examples where efficiency improves but profitability declines. Other authors link BPR success with an overall culture of change management, where successful reengineering is only possible where management react positively to change.^{45 46} Duck uses the example of empowerment to demonstrate the importance of changing management mindsets

as well as systems. Pushing responsibility downwards may be a management objective, but if handled badly it can cause more problems than it solves.:

Empowerment does not mean abandonment. Giving people permission to do something differently is not helpful if they are unable to do it. That permission just sets them up to fail. ⁴⁷

The use of IT as an enabler for BPR has clear links with Hammer's research of the early 1990s, where the distinction between improving efficiency (automation) and making a paradigm shift in effectiveness (obliteration) was first suggested. Where competition can be seen as a major driving force for change, IT is seen as a major factor in successful reengineering. Teng, Grover and Fiedler examine the role of IT in implementing BPR strategies, suggesting an integrated model for BPR which aligns IT and strategy. ⁴⁸ This model links systems analysis and design with innovation and implementation. The authors extend this work to address coupling of business processes to ensure optimisation across processes rather than individuals. The potential loss of control, which was not addressed in Hammer's early work, is included in their deliberations:

the BPR movement has generated many success stories and virtually no discussion on the potential harms it might cause. For instance, task specialisation in traditional functional hierarchies may slow down business processes, but separation of duties is an effective safeguard against fraud. Extensive reliance on process generalists in reengineered processes, therefore, may increase the likelihood of foul play and even embezzlement ⁴⁹

This observation raises the issue of whether organisations can rely on traditional control mechanisms in modern management structures. If operations are to be streamlined across functions in order to enhance competitiveness controls and control systems must be designed which support efficiency and effectiveness, not reduce them. The outcome of this could be a reengineering of audit practices and techniques which either meets or exceeds the speed of change in management structures. This in turn may best be achieved by a synthesis of other management measures, including TQM and the Balanced Scorecard. Teng *et al* address links with both strategic and operational measures:

To appropriately apply strategic direction to reengineering, performance measures for redesigned processes should be consistent with the firm's long term strategic goals ...Typically, this involves setting performance goals related to service quality and customer satisfaction.⁵⁰

Clear links between quality and strategy were also found by Sinclair and Zairi, whose study of TQM based performance measurement concluded that

Successful use of performance measurement appears to be closely linked with the integration of TQM into strategic and operational management. This supports the finding that the most important elements of the performance measurement system appear to be strategy development and goal deployment, and process management and measurement.⁵¹

Clearly, auditors would be able to make a significant contribution to organisations' performance evaluation using their expertise in setting and measuring objectives. TQM and other quality frameworks might be used to

provide an explicit framework through which all levels of management control systems could be evaluated.

BPR also has implications for public sector and not for profit organisations. Halachmi and Bovaird (1997) found that although targets may be different (due to the lack of a profitability measurement) the underlying objectives were similar.⁵² In a more extensive study Willcocks, Currie and Jackson (1997) concluded that the Hammer and Champy model has a limited role in public sector organisations due to an excessive focus on a senior management view of how change should be implemented.⁵³

While subsequent research in BPR has focused on its potential advantages to an organisation, apart from Frigo (1995) and Marcella (1995) few authors have questioned the impact of BPR on internal control systems.^{54 55}

2.3.3 The Balanced Scorecard

The Balanced Scorecard (BSC) is a method for evaluating performance in organisations which extends the information used for decision making and appraisal purposes beyond that used by traditional management accounting. The term was defined by Kaplan and Norton in 1992 as a reaction to ineffective and dysfunctional management information.⁵⁶ Kaplan and Norton extended their initial work over the next five years in both academic and professional journals, and published a well received textbook in 1996.^{57 58 59 60} Their

position on the importance of management information for evaluation purposes is clear:

Many people think of measurement as a tool to control behaviour and to evaluate past performance ... the measures on a Balanced Scorecard should be used as a communication, informing and learning system *not* a controlling system.⁶¹

Assuming the authors interpret 'control' as the negative, bureaucratic and backward facing environment which they criticised earlier, this is a statement which has positive implications for audit. Measurements can be seen as positive encouragement for effective performance, and the role of performance evaluation is repositioned from an operational focus to the strategic:

Every measure selected ... should be part of a link of cause and effect relationships, ending in financial objectives, that represents a strategic theme for the business unit.

Furthermore,

The objective of any measurement system should be to motivate all managers and employees to implement successfully the business unit's strategy

and

a successful Balanced Scorecard is one that communicates a strategy through an integrated set of financial and nonfinancial measurements⁶²

A balanced score card for auditing could adapt the concept of key controls and the construction of control matrices. This method has been extensively covered, notably by Chambers and Rand (1994) although the foundations are still based on traditional controls: segregation of duty, supervision, management, and operational checks.⁶³ This was not problematic when organisations were sufficiently staffed, properly motivated and supervised in secure positions. But in a downsized, outsourced, automated and extremely competitive environment any control which ultimately depends on individual human action cannot be relied upon. Furthermore, any control which slows the speed of an operation is likely to be seen as a threat to efficiency not an aid to effectiveness.

The risks and shortcomings of traditional management accounting and the use of management information in decision making were described by Kaplan in 1984, eight years before he proposed the balanced scorecard as the potential solution.

⁶⁴ In a review of the history of management accounting from 1850 to the 1980s, Kaplan draws attention to shortcomings in significant academic and professional practice, including agency theory and information economics. In the context of agency theory, Kaplan gives an illuminating insight into his future work:

Omitted from agency theory/contracting models is the role of knowledge and innovation to create value in the firm. Agency theory assumes a static technology. It misses the options for entrepreneurial managers to make major changes in their environment through product and process improvements. Also missing is the role for managers to increase value through enhanced marketing activities, training and motivating their employees, and improved quality and maintenance policies⁶⁵

The missing measures - marketing, training and motivation, quality improvement - can be seen as the precursors of the four elements of the balanced scorecard:

- the *financial* perspective
- the *internal business* perspective
- the *innovation and learning* perspective
- the *customer* perspective

Figure 2.1 shows a graphical representation of the balanced scorecard:

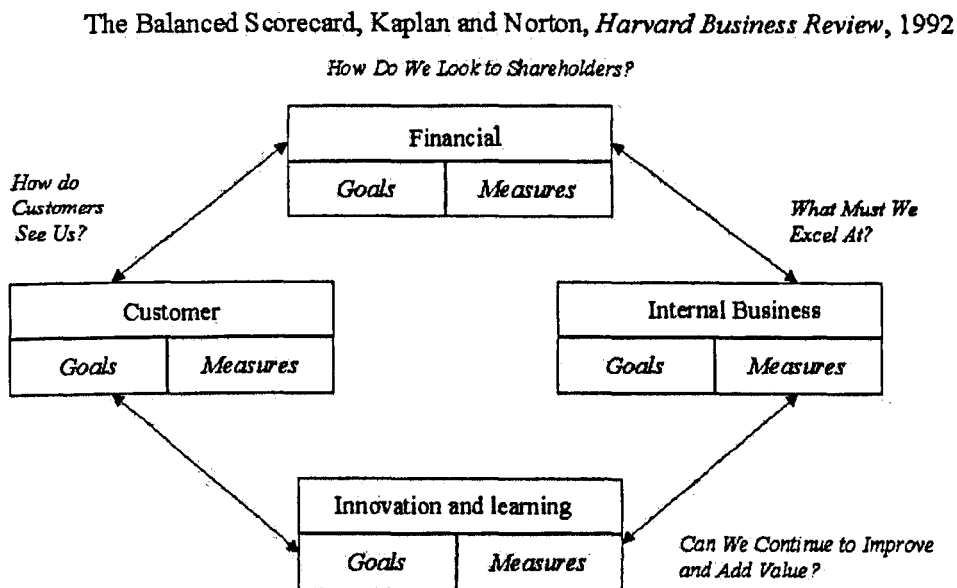


Figure 2.1

Other authors also note the inadequacy of traditional management and accounting information systems for modern organisations. Eccles (1991) and Eccles and Pyburn (1992) criticise concentration on rigid financial indicators and

suggest that only by using broader measurements will management be able to make informed decisions.^{66 67}

A key event in the development of broader and nonfinancial measurements can be seen as the publication of Johnson and Kaplan's 1987 paper *Relevance Lost*, a polemical text which criticised the narrowness and inefficiency of management accounting.⁶⁸ Johnson and Kaplan use the history and development of management accounting as a basis for suggesting *inter alia* that total quality management (TQM) could be used to replace traditional management accounting systems. Johnson returned to the theme of 'relevance Lost' in 1992, when his views had crystallised even more:

I now believe that accounting abstractions - no matter how free of distortions, no matter how timely - can tell a business nothing about the processes required to be profitable and competitive⁶⁹

The linkage between relevant management information and TQM which was only hinted at in 1987, has changed now to a full endorsement: not only is traditional management accounting information irrelevant, it is also damaging in a fast-moving enterprise. Only TQM systems can provide sufficiently relevant an appropriate information for management decisions.

Mahmoud Ezzamel commented on the paper, drawing attention to the seemingly uncritical support for TQM. Ezzamel identifies cultural and management problems with the rejection of management accounting systems and the adoption of what he sees as a 'top down' and largely imposed

management discipline.⁷⁰ Other commentators also highlight difficulties with Johnson's thesis: Williams et al give practical examples of where they see weaknesses in his argument; Yuthas and Tinker make an epistemological review of Johnson and Kaplan's work, concluding that a fundamental misunderstanding by them of economic reality diminishes the relevance of their work.^{71 72} But whatever the critical response, the significance of this paper is the shift in Johnson's thinking that is important, and the changed focus on the type of management information that he now considers necessary.

Subsequent research has suggested that the concept of the BSC might be extended into strategic management or tailored for individual organisation's needs.^{73 74} There may also be scope for the BSC to be redesigned to include a control dimension. An amended BSC could provide the spine for measuring the effectiveness of the linkage between strategy formulation, process and control, in particular if it were linked to control models and CSA activities.

2.4 Tactical Level

2.4.1 Benchmarking and Standards

Benchmarking can be defined as the continuous comparison of performance with fixed and variable targets, within and external to an organisation, with the intention of improving quality. Standards are formally documented descriptions of best practice or accepted method and may be produced internally or by the many standards setting bodies throughout the world. The importance of

standards and benchmarks to the reengineering of audit lies in the need to establish criteria for the measurement and setting of best practice objectives, which can then be used to construct control models to be used in CSA workshops.

Probably the best known and most widely accepted standard is the ISO 9000 series (Total Quality Management). This standard is used to demonstrate an organisation's commitment to quality practices. Internal auditors have been among the strongest supporters of TQM although there is also an element of scepticism about whether TQM can actually achieve what its proponents suggest it can.^{75 76} Other quality management standards have been produced by the European Foundation for Quality Management and the Malcolm Baldrige Award, awarded for achievements in quality management to USA companies.

^{77 78}

The growth of TQM in the 1980s was both welcomed and derided by commentators. Although its history can be traced back to the immediate post war work of Deming and the later writing of Crosby (1979) it was regarded as so quintessentially representative of the decade that by the mid 1990s 'beyond TQM' papers were beginning to appear.^{79 80 81 82} But the need for clear guidelines for management quality targets in an era of increasing competition remains, and it is in this specific area where internal and external standards and guidelines are most needed. In particular, where audit work is based on CSA, senior management must be assured that working practices at all levels are comparable with the best players in their sector. A 'common sense' approach is

unlikely to be sufficiently rigorous to be useful, even where management practices are similar to a formal TQM method.⁸³

This section discusses the view that reengineered auditing practices must be linked to formal quality and benchmarking procedures, in order to reduce the potential for a misreading of actual performance and to support the objective of achieving best practice. In order to extend this objective beyond financial performance, standards and guidelines should be adapted for corporate governance, ethical and nonfinancial measurement purposes too. In effect, the auditor needs to be able to supply acceptable answers to questions about performance in a much wider range of activities than hitherto.

The TQM Standards and the Baldrige Award criteria can be used as a foundation for management to build quality into their activities. The Baldrige Award, which began in 1987, measures over thirty different activities ranging from strategic issues and 'tone at the top' to customer satisfaction. This list 'codifies the principles of quality management in clear and accessible language'. Furthermore, according to Garvin (1991) 'it provides companies with a comprehensive framework for assessing their progress toward the new paradigm of management and such commonly acknowledged goals as customer satisfaction and increased employee involvement'.⁸⁴ Not all authors agreed with Garvin, and responses to his article ranged from favourable to completely antipathetic.⁸⁵

Black and Porter examined ten critical factors for TQM, in a framework which is similar to the Baldrige model.⁸⁶ Their study noted that very little empirical work has been carried out into TQM frameworks:

Only a handful of researchers have made scientifically based attempts to provide suitable frameworks for TQM ... it remains a fundamental weakness that there is still no established, valid or accessible methodology for developing such a framework⁸⁷

Their list of critical factors, like Baldrige, covers all levels from senior management to customer relationships:

- Corporate Quality Culture
- Strategic Quality Management
- Quality Improvement Measurement System
- People and Customer Management
- Operational Quality Planning
- External Interface Management
- Supplier Partnerships
- Teamwork Structures
- Customer Satisfaction Orientation
- Communication of Improvement Information

The range of the ten factors enables a complete view of an organisation's commitment to TQM. A similar model may be useful to measure a commitment to control activities.

Apart from the importance of TQM to operational performance, it has also been associated with strategic management. Writing in 1995, Powell concluded that

although TQM programs can produce performance advantages, they do not address the needs of all organisations, and they are fraught with pitfalls for firms that lack the requisite complementary resources ... it is quite possible for firms to prosper outside the confines of the TQM ideology and vocabulary, *so long as they nurture the intangible resources critical to survival and success.* (Emphasis added)⁸⁸

TQM then, is not a perfect solution to management problems. Powell's conclusion that 'intangible resources' need to be nurtured is similar to the reasons for implementing CSA and the BSC: even when management set excellent objectives, and ensure proper measurement of performance, soft issues may be overlooked. But that TQM acts as a positive force for organisational performance is supported by Easton and Jarrell's 1998 survey of firms which implemented TQM between 1981 and 1991. They conclude that there is 'clear evidence that the long term performance of firms that implemented TQM is improved'.⁸⁹

2.4.2 Control Models

If the systems audit is reengineered to enable a more balanced evaluation of control systems, it will be necessary to construct models of control and standards for their measurement. This will require auditors to accept TQM principles and methods and focus upon processes rather than results. A balanced

score card as suggested by Kaplan and Norton could be modified to include a view of the organisation's control systems. The integrated control model and score card would incorporate appropriate standards and objectives derived from extant and potential sources.

An approach to control modelling was suggested by Gadh, Krishnan and Peters in 1993.⁹⁰ Their paper extends the work of Bailey in modelling some ten years earlier.⁹¹ In many ways their paper is a reinterpretation of risk analysis and in the two commentaries by Abdolmohammadi and Houghton following the paper, both their methodology and content were criticised.^{92 93} Some form of control modelling remains an essential component for a reengineered systems audit approach and in its favour Gadh *et al* at least attempt to impose a systematic discipline on an otherwise amorphous entity. It might be that rather than a risk-oriented model (where assurance is directed at acceptable risk) a control-based model (assurance is directed at doing the right things) is more appropriate. Interestingly, the two major CSA consultancies direct their work primarily to risk (Tim Leech and MCS) or control (Paul Makosz and PDK).⁹⁴ Internal audit control models are typically based upon the *Internal Control Integrated Framework* (COSO, 1992) or the *Guidance on Control* (CoCo, 1995) corporate governance frameworks.^{95 96} Research carried out by Roth (sponsored by IIA Inc.) provides some initial insight into the success of internal auditors implementing COSO and CoCo.⁹⁷ Roth found that a major impediment to successful implementation of control models was the language barrier which separated auditors and management (COSO was considered by one respondent to be written in 'auditorese', and therefore inaccessible to non-auditors.)

An early attempt at instilling scientific measures into business systems was suggested by Cushing, in a 1974 paper in *The Accounting Review*.⁹⁸ This paper drew upon the discipline of reliability engineering, which developed with the USA space exploration projects of the 1950s. Reliability engineering uses statistical modelling and analysis in order to enforce and manage reliability in hardware components (which may be impossible or extremely expensive to replace once they are in use.) In much the same way as TQM principles have been adapted to business systems, Cushing suggested that control systems might be seen as analogous to physical systems. In the following year, Bodnar (1975) extended and elaborated upon this method.⁹⁹ In particular, both Bodnar and Cushing considered that the distance between 'hard' engineering and 'soft' business systems mean that no direct application of control automation is possible. While similarities exist, human involvement brings specific potential problems such as fraud and collusion.

In addition, while mechanical systems may include an in-built capacity for recovery, so that errors are corrected on subsequent reprocessing,

the concept of control failure may differ considerably from that envisioned by classical reliability theory. Indeed, in most cases the system may fail, and no-one is aware of it (as in the case of an embezzlement)¹⁰⁰

Nonetheless, these authors were making a serious attempt to counter the innate subjectivity of traditional audit practice. Bodnar addressed the fundamental

element of an internal control system: segregation of duty, finding this problematic. Segregation of duty ('personnel redundancy') is threatened materially by friendship, reliance on one element of the segregated function and a diminution of personal responsibility. But even given these fundamental weaknesses, Bodnar still considered reliability modelling to offer 'concepts and generalisations which, when coupled with basic control principles and professional judgement, provide an effective framework for evaluating internal control systems'.¹⁰¹

A formal method of control model design was suggested by Bailey *et al* in their 1985 paper which describes 'TICOM' (The Internal Control Model).¹⁰² TICOM is an attempt to automate existing audit practice, rather than a fully reengineered process. Bailey *et al* describe TICOM as

a computer-assisted method of modelling the information system and querying that model in order to aid the auditor in evaluating the internal control system.¹⁰³

Given the available technology, TICOM was by no means an end-user tool. Rather, it was a move to increase objectivity through more complete models of control and to provide some mathematical rigour which was not seen as possible using manual methods. The authors make clear that any initial evaluation and review would be done manually; only if more exhaustive analysis was required would TICOM be applied.

Analysis of internal controls using TICOM mirrored traditional manual methods, although some emphasis was also given to 'dynamics' (the contexts and nonaccounting elements of a control system):

Internal control evaluation consists of examining the system for the presence of specific characteristics that reasonably assure that accounting controls are properly implemented and enforced. Examples of such characteristics are the concepts of separation of duties, controlled access to assets, supportive documentation for business transactions, authorisations and independent comparisons between accounting documentation and actual assets.¹⁰⁴

TICOM set the pattern for subsequent authors to apply modelling techniques in other contexts, albeit with the objective of automating traditional audit techniques in financial operations rather than making a radical change to the audit paradigm. Later papers by Srinidhi and Vasarhelyi, (1986) and Meservy, Bailey and Johnson (1986) investigated links with reliability and internal control and suggested improvements to the TICOM model by using expert systems.¹⁰⁵ Srinidhi and Vasarhelyi divided the audit process into three discrete stages, *Identification*, *Evaluation*, and *Interpretation* and suggested that the second stage, where system components are aggregated in order for reliability to be evaluated, was where the strength of a control system is measured.

Conceptually, the aggregation of evidence into a system reliability measure can be modelled as an objective statistical process. Its interpretation in terms of audit planning .. is a process in which the training and experience of an auditor are important.¹⁰⁶

So even where evaluation systems and tools were applied, objectivity is still subordinate to auditor judgement. Meservy, Bailey and Johnson (1986)

investigated the ways experienced auditors evaluate control systems, taking the TICOM model into an expert system, where rules could be defined and used to construct a logical representation of sound audit practice. The use and application of expert systems was discussed by Abdolmohammadi, as a means of automating 'semi-structured' audit tasks (that is, those that are carried out by less experienced or qualified staff under the direction of senior managers). Furthermore, decision support systems (DSS) were suggested as a means of standardising audit opinions.¹⁰⁷

A key review of contemporary literature was published by Felix and Niles, in 1988¹⁰⁸ This paper reviews internal control theory and practice, and links the movement towards modelling with improved practical techniques for evaluating internal controls in accounting systems. The authors also link the quantitative and the qualitative elements of internal control systems: 'internal control activities consist of a combination of complex qualitative and quantitative judgements'.¹⁰⁹ (This is a crucial distinction: while accounting systems traditionally relied upon authorisation, separation of function and supervision (much of which can be codified and measured) management theory and practice at the end of the 1980s was moving towards systems where responsibility was delegated downwards, and the layers of middle management usually responsible for checking operations were removed in the movement away from 'control and command' systems. Control models, they found, had not grown in importance as might have been expected: control models 'have not found a great deal of acceptance either in practice or as research technologies'.¹¹⁰

The early work on control models instigated by Bailey *et al* in 1985 was continued by Gadh, Krishnan and Peters in 1993. Their paper described an extension and revisiting of Bailey's TICOM model, adding refinements to the technological platform and recommending wider use of the model.¹¹¹ This paper was not well received, and two responses were openly critical about the usefulness of their research. Indeed, Abdolmohammadi was unconvinced that their work constituted 'research' at all.^{112 113}

The most commonly used control frameworks in CSA/CRSA are the *Internal Control, Integrated Framework* (COSO) and the *Guidance on Control* published by the Canadian Institute of Chartered Accountants (CoCo). These are supported by the total quality management standards (ISO 9000) and award schemes (Malcolm Baldrige, European Fund for Quality Management, for example). Research in this area by Roth recommends that organisations consider seven key issues in working towards compliance with COSO and CoCo:

- Evaluate the five components and three objectives of COSO and all 20 criteria of CoCo
- Include self assessment in evaluations
- Base evaluation on risk assessment
- Make implementation a cultural change
- Include internal control training
- Tailor practices to the specific needs of the organisation
- Ensure benefits of implementing control frameworks meet or exceed expectations¹¹⁴

Assessment of soft and hard controls according to these seven principles can be seen to require auditors to move from a straightforward evaluation of control measures and corporate objectives to a position where audit work not only measures, but changes processes and has a direct, positive impact on corporate

culture. Makosz's view that control is affected by its environment, and that control measures must reflect these changes is supported by Ross Ashby's theory of 'requisite variety' where variety within systems must be at least as great as the environmental variety against which it is attempting to regulate itself. If systems do not have sufficient variety they cannot adapt to change and will eventually fail.¹¹⁵ Radical change in business systems (through BPRE, downsizing and technological change) must be accompanied by equally radical changes in the assessment of control systems to avoid entropy and inevitable decline. This point is made forcibly by Hammer:

Control itself is still an important corporate element, but we have to separate the *mechanism* of control from the *goal* of control. Controls don't exist to eliminate the theoretical possibility of there being any abuse, but to create a situation in which the aggregate amount of abuse is in the right ratio to the cost of preventing that abuse [Emphasis in original]¹¹⁶

'Soft' controls (effective communication, management philosophy and the quality of information) are likely to lead the auditor into a more consultative role:

the audit group's role should be to help the organisation shape the soft control environment. They should be process design consultants, advising management on how to create a culture in which people believe you have to be accurate and ethical in the first place¹¹⁷

Given that Hammer's well-known position of radical redesign of business processes risked forcing control measures out of management's immediate reach, this statement shows great insight into the changed audit environment.

Much of the literature of the 1980s and earlier reflects a concentration on financial systems, and an external audit approach. With the work of the Treadway Committee on fraudulent financial transactions and the subsequent publication of *Integrated Control, Integrated Framework* in 1992, awareness of the importance of the control environment as a whole was raised. Marden, Holstrum and Schneider examined the links between the control environment (CE) and how auditors evaluated risk.¹¹⁸ widened the definition of control to include both accounting and structural controls and 'tone at the top' controls, such as management integrity, philosophy and attitude.

Within this framework, traditional accounting controls were inadequate; control models which do not include tone at the top are incomplete:

The problem is that despite the control environment's overall importance, even if auditors adequately evaluate control environment strengths and weaknesses, there is some question as to the differential effect that variations in the CE condition have on the assessment of risks.¹¹⁹

Much of the extant literature is focused on financial, external audit situations. Internal audit research in the area was prompted by the emergence of corporate governance control models (CoCo, COSO and Cadbury) in the 1990s. The IIA Research Foundation commissioned a study into the use and application of control models which closely examined the use of control models in 50 companies. This work provides an insight into the growth of control models which address nonfinancial and governance issues as well as traditional controls.

2.5 Operational Level

2.5.1 **Control Self Assessment**

Control Self Assessment (CSA) began in the 1980s as a tool for more effective auditing in Gulf Canada.¹²¹ Makosz, the general auditor, found that as Gulf's internal audit staff represented only 1% of the total in the organisation, coverage of specialised and wide ranging operations was difficult if not impossible. In addition, traditional audit methods such as compliance tests and narrow focus on financial operations meant that informal practices and controls (that is, those practices and measures which were not directly related to procedures and accounting practices: IT, management style, ethical framework and organisational structure) were not reviewed, even though it was apparent that such controls were at least as necessary as those laid down formally:

The traditional paradigm of internal control assumes a direct relationship between the level of internal control and the existence of formal control measures. Audits confirm the existence of formal controls and the degree of compliance with them. Audit recommendations tend to promote the use of more formal mechanisms.¹²²

Makosz developed a workshop approach to internal control assessment where agreement was reached through analysis and negotiation of audit objectives, rather than the confrontational style used hitherto. In its first years CSA was perceived as being successful:

Control is not seen as procedures and dogma, but as a constantly changing condition, as portrayed by the current level of the elements.¹²³

In practice, CSA changes the focus of an audit review from a structured, objective appraisal of an organisation's controls systems where internal auditors carry out analysis and testing of individual operations to a workshop based forum for discussion and agreement across a wide range of activities. Instead of a focus on procedural and imposed controls where auditors review the levels of compliance with management instructions, CSA enables auditors to act as enablers and facilitators and include auditees in any discussion and evaluation of systems and controls. Glenda Jordan, another early practitioner of CSA, describes the CSA process as follows:

A formal documented process in which

- the management and/or work teams directly involved in a business function
- judge the effectiveness of the processes in place and
- decide if the chance of reaching some or all business objectives are reasonably assured¹²⁴

IIA UK give a more detailed definition:

A CSA programme is a process which allows individual line managers and staff to participate in reviewing existing controls for adequacy ... and recommending, agreeing and implementing improvements ... to existing controls. It is likely to include the application of risk criteria to the process of control assessment, and may extend to confirming that key, identified controls and processes are operating efficiently and effectively¹²⁵

The IIA UK links CSA with two other key management practices: *risk assessment* and *quality*: CSA should include ‘an analysis of risk (and) an assessment of both control *and quality* as quality management is inseparable from control management’ (emphasis in the original).¹²⁶ These links provide the foundations for the two main threads of CSA, as exemplified by the methodologies used by Makosz (based on clearly defined control models) and Tim Leech (based on assessment of acceptable risk levels).¹²⁷

After this original work, CSA was developed further in several other North American organisations. It was also partially adopted in some large UK organisations such as BT, local and national government.

In the early 1990s, CSA was perceived by audit practitioners as more of a tool than an alternative approach; while the professional literature contains several useful case studies of CSA in practice, very little academic study was made. An early study in the implementation of CSA was carried out by Davies, who used BT as a case in a postgraduate project.¹²⁸ Other practitioners wrote of their experiences for the IIA journals; favourably by Clark and Baker, and unfavourably by Cowan.^{129 130 131} For Clark, CSA was a ‘quantum leap in the way we do our work’, so that organisations could comply with corporate governance guidelines such as Cadbury, and also to include newly empowered staff in control discussions.¹³² For Baker and Graham, CSA is the continuous *assessment* of control, rather than *accurate measurement*.¹³³

At present, it is clear that current perceptions of a workshop based, participative audit approach to self assessment can be divided between an emphasis on risk (Leech and MCS) and on organisational development (Makosz and MCS). For simplicity, these approaches will be described in this chapter as CRSA and CSA. Using the publicity material for their consultancies, an insight into the objectives of their chosen methodologies can be clarified.

Leech contrasts the 'Historical/Traditional' audit approach with CRSA; while many of the characteristics of CRSA are redolent of those of Makosz, the objectives of CRSA are explicitly defined: primary audit objectives are to

- raise the control and quality assessment and design skills of all staff
- provide accurate and complete information to the Officers, the Board and external stakeholders on the state of control, quality and audit
- assist staff at all levels to design and maintain better, more optimal control and quality frameworks

Management and staff have the mission to see that 'Control and quality management are ... synonymous terms'.¹³⁴

Makosz defines CSA as a process where

control is ... complex and variable. It fluctuates with every change in the internal and external environment. The best we can do is *assess* it continuously, looking out for early indications of emergent risk and taking prompt corrective action. Unlike others, we believe assessment is incomplete without a clear understanding of organisational strengths because therein lies understanding of balance and the ability to overcome the weakness¹³⁵

Despite the fundamental differences in the philosophical foundations of CSA and CRSA they contain key common elements. Among the most significant are:

- control models
- workshops and facilitated meetings
- software support for workshops
- links with quality management
- benchmarking

2.5.2 Group Decision Support Systems and Facilitation

Group Decision Support Systems (GDSS) are systems which provide conferencing and voting facilities to group members. Their advantages include anonymity, maintenance of detailed records of discussions and speed. The two main types are keypad voting systems, (for example, *Option Finder*) and more sophisticated workshop style systems (for example, *Ventana Systems Group Systems*). An early description of GDSS was provided by DeSanctis and Gallupe:

A GDSS aims to improve the process of group decision-making by removing common communication barriers, providing techniques for structuring decision analysis, and systematically directing the pattern, timing, or content of discussion. The more sophisticated the GDSS technology, the more dramatic is the intervention into the group's natural (unsupported) decision process.¹³⁶

In practice, GDSS is likely to become a key feature of CSA workshops, where open and frank discussion is an essential element of effective decision-making

on control issues. With natural /unsupported groups, there is always the risk that the presence of senior management or other individuals will inhibit or otherwise have a negative impact on debates. For this reason, the role of facilitator is allocated to a CSA participant in order to manage discussions. Unfortunately, not all auditors have effective facilitation skills and not all managers are willing to reduce their influence on what are often sensitive discussions. Using GDSS may be seen as a solution to this problem; it reduces the influence of personality, and provides an environment where discussion can take place openly. GDSS should be seen then as a tool for more effective meetings and discussions, rather than automation of an existing situation:

The greater the degree of change in communication introduced by the technology, the more dramatic the impact on the decision process and, presumably, the decision outcomes... if the GDSS merely automates what occurs in the normal (unsupported) course of events (e.g., such as electronically soliciting and tallying the votes in a legislative session) then the impact on the group's exchange processes will be minimal. On the other hand, if the technology determines who speaks when, in what order, to whom, and for how long, the impact on the decision process will be substantial.¹³⁷

Early work in GDSS was carried out by Jay Nunamaker at the University of Arizona. Nunamaker *et al* use five perspectives to discuss GDSS:

- systems-based: a focus on systems theory, in particular the work of Checkland
- organisational: a focus on group behaviour and dynamics
- human communication: a concentration on issues, idea generation, choice and negotiation
- decision making: an emphasis on more complete and better considered decisions
- management science: a focus on choices and quantitative analysis ^{138 139}

Nunamaker further defined the theoretical foundation of GDSS to be dependent on four contingencies:

- the group: size, proximity, composition
- the task: idea generation, decision choice, complexity
- the context: culture, time pressures, critical or supportive tone
- the Electronic Meeting System (EMS) design: anonymity, functionality ¹⁴⁰

The conclusions Nunamaker *et al* reached can be seen to have strongly positive implications for auditors working in CSA.

Table 2.2 shows Nunamaker’s conclusions and suggests potential impacts for auditors and CSA practitioners:

Nunamaker	IA Impact
<i>Parallel communication promotes broader input into the meeting process and reduces the chance that a few people dominate the meeting</i>	CSA workshops can address a complete range of control and audit issues, enabling a cross-functional view to be developed
<i>Anonymity mitigates evaluation apprehension and conformance pressure, so that issues are discussed more candidly</i>	Participants in workshops can suggest options or inform the group of potentially sensitive situations without fear of reprisal or criticism
<i>Process structure helps focus the group on key issues and discourages irrelevant digressions and unproductive behaviours</i>	Meetings and workshops can be managed more effectively, with potential improvements in participation
<i>Task support and structure provides information and approaches to analyse it</i>	Workshop participants can make contributions appropriate to their level of insight not their level of organisational status

Table 2.2 (Based on Nunamaker *et al* 1991)

Nunamaker’s work has been with sophisticated systems, while CSA workshops carried out by the two leading consultancies in the area have tended towards voting systems, where facilitators guide participants towards a choice from a list of options. Given the comparatively early stage of the development of both GDSS and CSA there is little or no empirical evidence that the sophistication of the technology is a major influence on the success or otherwise of CSA implementation. Nevertheless, the role of the facilitator seen as an essential part of CSA workshops is described by Nunamaker as possibly being ‘the buggy whips of the horseless carriage phase’ of GDSS development.¹⁴¹ This picturesque image neatly encapsulates the threats to the progress of GDSS: if GDSS is seen as merely a tool for automating otherwise manual procedures - in

audit terms, giving an electronic efficiency to interviews and information gathering - the real gains to be made in a full reengineering of the process may be lost. A more positive analysis of the role of the facilitator has been provided by Anson, Bostrom and Wynne (1995).¹⁴² These authors found that facilitated groups showed improved cohesion and performance compared to groups which relied only on Group Support Systems (GSS). Anson *et al* conclude that:

1. Facilitation is critical to improving GSS effectiveness ... Active facilitation is especially important when using less restrictive GSS tools
2. The quality of facilitation makes a difference - a higher quality facilitator can significantly improve outcomes compared to no facilitator at all, whereas a lower quality facilitator may have little effect
3. Training and experience is essential to building high quality facilitator skills¹⁴³

The area of facilitation skills is linked to the potential role of auditors as consultants. In accordance with the recommendations of Anson *et al*, it is likely that CSA workshop organisers need to consider the implications of both the type of GDSS used (full conferencing versus option selection) and the level of expertise of the workshop leaders. The view that automation alone is insufficient is supported by Niederman, Beise and Beranek which concluded that

Although in some circumstances GSS might aid a group to overcome group process difficulties, in general, adding technology to the meeting is best done in combination with other beneficial meeting practices¹⁴⁴

Good facilitation may support group effectiveness, but it is clear that electronic communication reduces the informal exchange of information and social conventions found in non-supported meetings and workshops. Chidambaram (1996) found that computer-supported groups form relationships despite the disadvantages of the electronic medium, although such relationships needed more time to develop.¹⁴⁵ The importance of relationships should not be underestimated; even when GDSS supported groups work more effectively than unsupported groups, optimal solutions may not be found. Reasons for this may include some of the advantages that GDSS bring: anonymity, for example, may mean that an idea or suggestion is not supported by the group because of a lack of confidence in the participant who makes it. In a study of information exchange and use, Dennis (1996) concluded that although GDSS supported groups used information more effectively, than unsupported groups given the same data, optimal solutions were rare.¹⁴⁶ Anonymity may also lead to negative behaviour, such as 'free riding' and polarisation of opinions.¹⁴⁷ The implications of this for CSA workshops supports the need for more investigation into identifying optimal solutions, in particular for the type of unstructured problems often faced in audit.

A further element of GDSS is the type of task addressed by participants. Little research has been carried out in this area, but two studies by Hwang (1998) and Huang and Wei, (1997) conclude that the type of task has a significant impact on the effectiveness of outcome measured by improved communication and speed, and that GDSS benefits intellectual tasks, but not decision making.^{148 149}

2.6 The New Internal Audit Paradigm

Organisational change, complexity, technological progress and a growing interest in control issues from governments and international bodies mean that traditional auditing - internal and external - is now neither adequate nor appropriate for providing senior management with the assurance that their organisations are properly controlled. This section attempts to describe and define a new audit paradigm, where a shift in the boundaries and disciplines of auditing and a reengineered approach enable an effective response to the changed audit environment. Peter Drucker predicted in 1988 that the 'typical large business 20 years hence will have fewer than half the levels of management of its counterparts today, and no more than a third of the managers'.¹⁵⁰ Moving into the second decade of his prediction, it would appear that he was largely correct: downsizing and delayering have changed the environment in which auditors work irrevocably. Ashby's 'law of requisite variety' states that in order to maintain effectiveness and efficiency in systems in a changing environment control mechanisms are required which have an equal variety in response to the variety in the environment.¹⁵¹ To establish requisite variety, auditors (both external and internal) must change their methods accordingly. In what Drucker defines as the 'information based company', with little or no middle management, structures and information management need to be appropriate to the needs of senior management and other stakeholders.

In a complex organisation, goals and objectives need to be simplified and measurable:

Information-based organisations ... require clear, simple, common objectives that translate into particular actions an information-based business must be structured around goals that clearly state management's performance expectations for the enterprise and for each part and specialist and around organised feedback that compares results with these performance expectations so that every member can exercise self-control ¹⁵²

The scenario outlined by Drucker contains three key assumptions:

- effective management of complexity depends upon clearly defined objectives which can be linked directly to performance
- management information systems need to provide clear indications of performance at all levels
- control is the responsibility of all individuals, not only for those who supervise

The first assumption links neatly with the use of the Balanced Scorecard, where strategic goals are set and measured in the full range of an organisation's activities. Rather than bureaucratic regulation, such a structure would enable measurements of performance against both internal and external benchmarks and standards. Traditional internal audit activities, usually focused at the operational and tactical levels, might be extended so that internal auditors might also be able to contribute to strategic decision making and planning.

Drucker's second assumption addresses management information systems. Problems with complex systems are magnified by the complexity of information provided to management. Traditional control systems and performance measurements have the disadvantage that they cannot provide a view on the 'soft' controls of corporate

governance, ethics and communications. In order to comply with Ashby's law, management information must be at least as flexible in its variety as its environment. A one or two dimensional view of an organisation's performance through financial and output performance is less amenable to a changing environment than a balanced view which also considers strategic, organisational and learning perspectives. The use of control models and standards to provide a structured, yet flexible framework for management decision making and analysis may assist management to link tactical activities with their strategic objectives.

Drucker's final assumption neatly summarises the key issue behind Control Self Assessment. Controls in a changing environment cannot be instituted as rigid and fixed rules; rather they must be integrated into the working practices of all levels of staff. Auditors who are trained as facilitators and enablers of good control practices are likely to be more effective than those whose focus is entirely on strict regulation.

2.7 Summary and conclusions

This research will investigate how organisations can develop more effective methods for controlling the three levels of management, in particular, at the strategic level. These levels of management will be examined in the contexts of the Balanced Scorecard, Control Models and Control Self Assessment.

Control issues are not widely addressed in the strategic literature, and the work of internal audit almost never. Given the implications of corporate governance, regulation, and the reputational risks that face organisations this is a serious weakness. With the

growing popularity and acceptance of the BSC and other management frameworks there would appear to be opportunities for internal auditors to ensure that control issues are given a more respectable profile.

At the tactical level, control models may act as the link between strategic management and its implementation at the operational level. With the continuing growth in interest in CSA the potential role of internal auditors could be to assure management that their strategic objectives are effective through all levels.

Finally, the inclusion of quantitative controls in an organisation's range of measurements may prove to give significant advantages to both governance and performance.

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Chapter 3

Research Propositions

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3.1 Introduction

This chapter introduces and discusses the development of the research propositions. The term proposition is used in preference to hypothesis as respondents' opinions were considered as important as factual responses to an understanding of the state of the art of Control Self Assessment, control models, and the Balanced Scorecard.

3.2 Overview

The objectives of this research are as follows:

- to examine the actual and potential contribution that internal auditors make to strategic management
- to investigate the awareness and potential benefits of control models
- to assess the impact and success of CSA

The research propositions are divided among three related elements: audit and strategy, control models and CSA practice and implementation. These elements are broadly analogous to the three generally accepted levels of management: strategic (formulation of policies and plans), tactical (implementing policies and managing processes) and operational (controlling and supervising operations).

Table 3.1 shows the linkages between the research objectives and propositions:

Table 3.1: Research Objectives and Propositions

Level	Objective	Proposition
Strategic	Potential IA contribution to senior management	1, 2, 3
Tactical	Awareness and benefits of control models	4, 5, 6
Operational	Impact and success of CSA	7, 8

3.3 Strategic Level

This section addresses two main issues: the role of auditors in strategic management, and the awareness and use of the BSC. Without substantial support from senior management, any internal audit initiative to improve the quality of the assurance that they provide would be ineffective. Furthermore, a major factor in an organisation's choice to implement CSA is the level of assurance it can provide on soft control issues. The propositions for this element of the research address the overall contribution internal auditors can make to strategic management, and the methods that might be used to evaluate soft controls.

3.3.1 Proposition 1

Internal auditors make a positive contribution to strategic management

This proposition was designed to assess the extent to which internal auditors are involved in senior management activities, in particular the

outputs of the planning and policy development processes. Responses would include both statements of fact (what is currently happening in their organisations) and opinion (the extent to which internal auditors influence senior management).

In order to evaluate the extent of control activities at the strategic level, two sub-propositions are used:

- 1.1 *The performance of strategic management is enhanced when internal auditors are actively involved in developing and monitoring strategic objectives*
- 1.2 *Effective performance measurements include both quantitative and qualitative objectives*

3.3.2 Proposition 2

The Balanced Scorecard provides an effective foundation for control activities

Several alternative methods for including nonfinancial performance measures have been suggested, most importantly but not exclusively the Balanced Score Card (BSC) proposed by Kaplan and Norton (1992).¹ If controlling strategy is to be measurable by both financial and nonfinancial criteria then a modified BSC may enable these measurements to form the foundation for a system of control which can be constructed to meet the objectives and needs of all levels of management. At the strategic level, controls are soft and highly probabilistic; even so, auditors should be able to support senior

management through their review of the BSC components and evaluation of the outputs of strategic planning.

To assess the levels of awareness and the potential relationships between the BSC and control, two sub-propositions are used:

2.1 *A high organisational awareness of the BSC is beneficial for effective control activities*

2.2 *The BSC can be used to support corporate governance*

3.3.3 Proposition 3

The BSC enhances the quality of audit work

Reporting on nonfinancial controls is a key factor in the decision to implement CSA. As the BSC encourages managers to assess performance using a wide range of measures (financial and nonfinancial) there is a potential relationship between the use of the BSC and control activities.

Two sub-propositions address the issue of soft control and potential links to control objectives:

3.1 *The BSC enables senior management to address qualitative ('soft') controls*

3.2 *The BSC can be linked to control objectives*

3.4 Tactical Level

This area of the research is primarily concerned with control models. Control models can provide a link between strategic level policies and their successful implementation. Three propositions have been designed to evaluate this level.

3.4.1 Proposition 4

Control models enhance the ability of auditors to address both qualitative and quantitative systems

Control models provide clear guidance for internal control policies and practice. The most common bases for control models are the major corporate governance reports: COSO, CoCo and Cadbury although some control models are based on specific organisational requirements. The main benefit to auditors is the support for objective and structured reviews which is an essential component of CSA workshops.

Two sub-propositions have been designed to evaluate the importance of control models to corporate governance and to assess the importance to corporate governance of using nonfinancial as well as traditional, financial controls.

4.1 *A high awareness of control models positively supports corporate governance*

4.2 *Corporate governance is enhanced when both qualitative and quantitative controls are addressed*

3.4.2 Proposition 5

Successful implementation of CSA is enhanced when control models are used

This proposition evaluates the potential relationship between control models and successful implementation of CSA. Two sub-propositions evaluate the relationship between control models and audit effectiveness, and their use in assurance on corporate governance issues.

5.1 *Control models improve the effectiveness of internal auditors*

5.2 *Control models provide a benchmark for the evaluation of corporate governance*

3.4.3 Proposition 6

Assessing risk and controls through CSA is most effective when the process is based on control models

This proposition addresses the effectiveness of CSA in the evaluation of qualitative and nonfinancial controls.

Three sub-propositions were designed to evaluate specific areas in the level of assurance provided, qualitative controls and strategy

6.1 *Reviews of qualitative controls improve the level of assurance provided to management by internal auditors*

6.2 *CSA enables qualitative objectives and targets to be measured*

6.3 *CSA workshops can address strategic as well as operational issues*

3.5 Operational Level

This area is concerned with CSA implementation and practices. The propositions are divided into two areas: the use of facilitation and the importance of anonymity.

3.5.1 Proposition 7

CSA workshops are most effective when facilitation is used

A potential practical problem with CSA workshops is that auditors may be skilled practitioners in internal control, but might also be poor communicators. Effective decision making in groups may be enhanced by good facilitation, and it may be advantageous for workshop leaders to be trained in facilitation skills.

Three sub-propositions address this area in more detail.

7.1 Facilitation provides clear structures and objectives for CSA workshops

7.2 Facilitated workshops enable participants to address a range of risks and controls in their systems

7.3 Internal auditors can provide effective facilitation

3.5.2 Proposition 8

CSA workshops are most effective when anonymity is assured

A major objective of CSA is to ensure that staff who have direct knowledge of operational systems can make positive contributions to discussion and decisions about the improvement of controls. An open and productive environment, where staff are able to make criticisms or draw attention to control weaknesses may not be encouraged if their management are participating in the same workshop. Confidentiality may be enhanced by decision support software, either voting or group decision support systems (GDSS). Alternatively, anonymity may enable participants to behave negatively.

To be effective, CSA workshops must be conducted in a manner which encourages openness and objectivity. This is often addressed by using anonymous voting systems (such as Option Finder) and conferencing systems (such as Ventana Group Systems). The two main tools are different by nature: Option Finder enables a group to select an option from a prepared list; GDSS enable discussion and voting in a wider context. If no IT support is available, anonymity is reduced (or non-existent) and issues may not be as effectively discussed before a conclusion is reached. But because workshops which use voting systems force decisive action, they may encourage participants to focus on decision making rather than debate.

Two sub-propositions address these specific areas.

- 8.1 *IT support tools that support workshops enhance the effectiveness of CSA workshops*
- 8.2 *Anonymity encourages a full discussion of issues in workshops*

¹ Kaplan and Norton, 1992

Chapter 4

Methodology and Questionnaire Design

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4.1 Introduction

Data was collected by a survey of the membership of the CSA Center, a special interest group of the IIA. Members are mainly, though not entirely, internal auditors. Other members include external auditors, consultants and those from other professions who have an interest in CSA.

4.2 Choice of Methodology

A key objective of this thesis was that it should reflect the current state of the art of internal auditing, in particular in the specialised area of CSA but also its participation and influence in strategy. Two possible methodologies were considered: a case study approach, and a survey. Case studies enable researchers to focus on individual entities, and ascertain the views of subjects through qualitative research methods.¹ Furthermore, case studies can be used to support generalised findings, and the technique of 'triangulation' described by Stake reinforces the empirical nature of this methodology.²

Surveys are a well known technique, and are considered by Singleton as the most effective means of social description.³ They are straightforward to construct, and responses can be analysed rigorously using specialised statistical analysis. Their main disadvantages are their rigidity once constructed, and the risk that the size of the sample is insufficient to enable confidence in the results.

The three related areas that underpin this thesis could not be guaranteed to be sufficiently and proportionally represented in individual organisations. Using the survey method, a sufficient range of organisations could be reached to ensure a representative sample was selected from a broad population. Jankowicz (1991) has defined a sample as the deliberate choice of a number of people, with the intention to provide generalisable data that is representative of the whole population.⁴ While ideally a sample should achieve a very high response rate (as near to 100% as possible) in order to be a true representation of the population this is rarely practical. For the purposes of this research, the survey was intended to obtain *expert opinions as a proxy for innovative and leading edge professionals* with a high interest in both internal auditing generally, and in Control Self Assessment specifically. With a purposive sample such as this it is not practical (or indeed desirable) to use results as a basis for generalised statements that relate to the whole population. Rather, the intention of this survey was to evaluate and identify the views of a discrete interest group. While some or all of the findings may be generalisable to the whole population of internal auditors, this is not the primary focus.

The sample was derived from the membership of the IIA Inc. CSA Center, a special interest group comprising a population with interests and specialist knowledge in both internal auditing and CSA. The members are drawn from a wide range of business types, and previous studies had shown that there was sufficient interest and willingness among the membership to ensure a reasonable response rate.⁵ In addition, the earlier study had ascertained that the respondents were highly motivated to play a positive role in the research process. Given the restricted size of the sample, the scope of the research is limited to those active to some degree in CSA.

4.3 Overview of CSA Center listing

The sample was based on the 2000 issue of the membership listing of the IIA CSA Center membership, a total of 698 individuals. Six respondents wrote to say they were unable to complete the questionnaire, through being retired, or having left this type of work. My own entry was also excluded. Analysis of the questionnaire is therefore based on a usable population of 691.

Table 4.1: CSA Center Details

Membership of CSA Center	698
Less WRM and negative responses	7
Usable population	691

4.3.1 **Geographical breakdown of population**

There are 33 separate countries represented in the CSA Center. For the purposes of this survey, the listing was aggregated into three regions: USA (including Puerto Rico), Canada, and the Rest of the World. This was necessary to give meaningful sub-sample sizes.

Table 4.2: Regions

Region	Number	%
Canada	125	17.9
Rest of the World	94	13.8
USA	472	68.3
	691	100

4.4 Questionnaire Design

4.4.1 Overview

The questionnaire was designed to obtain both factual information and opinions. The full questionnaire forms Appendix A.

The use of questionnaires is a common research tool, and they have the advantage of ease of production and completion. The questionnaire included both closed questions (regarding factual matters or where a straightforward choice was necessary) and open questions, where a Likert scale was used to measure the level of agreement/disagreement with statements of practice or opinion. As a means of gathering background and practical information about the three major topics to be addressed in the survey (the BSC, Control Models, and CSA) interviews were carried out with specialist practitioners in CSA and BSC users and consultants in Europe and the USA. These interviews were carried out in the summers of 1999 (Control Models) and 2000 (CSA), and February 2000 (BSC).

The questionnaire was drafted in June 2000, and pilot tested with colleagues and postgraduate students before being distributed in July 2000. Comments were generally favourable, but ambiguities, grammatical errors and inappropriate question types were identified and corrected. The initial review also enabled the survey form to be reduced in size and complexity, which was considered to be a major factor in ensuring responses.

4.4.2 Section A: Background

This section was designed to collect background and personal information. All questions required factual answers.

Question A1: About yourself and your organisation

Respondents were asked for their name and job title, and the name and headquarters location of their organisation. Location was used to identify the region of respondents.

Question A2: Main Business of Organisation

The questionnaire contained ten options, including one for 'other'. (Table 4.3 refers). After receipt of completed forms, the classifications were rationalised into thirteen as some sub-groups were of a significant size to separate (healthcare, telecommunications/high-tech/media. and retail) and others were too broadly defined (conglomerate) or not specific enough (consultancy versus audit consultancy). (Table 4.4 refers) .

Table 4.3: Main business categories

Code	Description
1.	financial services
2.	manufacturing/oil
3.	chemicals
4.	government/local government
5.	education/training
6.	not for profit
7.	assurance services/external audit
8.	consultancy
9.	conglomerate
10.	other

Table 4.4: Main business categories (revised)

Code	Description
1.	financial services/banks/insurance/ pensions
2.	manufacturing/oil/gas production/mining
3.	chemicals
4.	government/local government
5.	education/training
6.	not for profit
7.	assurance services/external audit
8.	audit consultancy
9.	utility/energy/gas transportation
10.	retail/customer services
11.	telecommunications/hi-tech/media
12.	healthcare
13.	Other (e.g., Airline)

Question A3: Size classifications

Organisations were stratified into five size classifications as shown in Table 4.5. The classifications were chosen to enable analysis of all the enterprises that form the CSA Center. These range in size from one-person consultancies to the multinational companies.

Table 4.5: Size classifications

Category	Size
Micro	<1,000
Small	1,001 – 2,999
Medium	3,000 – 7,499
Large	7,500 – 9,999
Very large	>10,000

Question A3a): Employment as Internal Auditor/Non-Internal Auditor

This question separated the respondents and directed them to discrete questions: question 4 for internal auditors and question 5 for non-internal auditors.

Question A4: for Internal Auditors

These questions were designed to record the respondents' experience in auditing. Respondents were asked to specify to number of years they had worked in internal audit, how many years with their current employer and the number of internal auditors employed in their departments.

Question A5: for non Internal Auditors

These respondents were asked to specify their experience of auditing (internal and external), and their current primary duties.

4.4.3 Section B: Audit and Strategy

This part of the questionnaire asked for respondents to select the extent to which they agreed or disagreed with seven statements using a four point Likert scale. A fifth option was 'don't know' (DK).

All the questions in this section relate to Proposition 1:

Internal auditors make a positive contribution to strategic management

1.1 The performance of strategic management is enhanced when internal auditors are actively involved in developing and monitoring strategic objectives

1.2 Effective performance measurements include both quantitative and qualitative objectives

Table 4.6: B1 Statements

No.	Statement
B.1	Internal auditors make a positive contribution to strategic management
B.2	Internal auditors make an active contribution to the development of strategic objectives
B.3	Internal auditors are actively involved in evaluating the effectiveness of strategic decisions
B.4	Senior management have clear and measurable performance targets
B.5	Internal auditors review the performance of senior managers
B.6	Objectives for senior managers include both financial and nonfinancial targets
B.7	Senior internal audit staff have regular contact with senior management who are responsible for developing and monitoring strategy

The first two statements were designed to elicit the respondent’s opinion of the place of internal audit within their organisation. The other five required factual answers.

4.4.4 Section C: Awareness and Use of the Balanced Scorecard (BSC)

This section addresses the Balanced Scorecard. The first part of the section assesses personal knowledge of the BSC, and the second their organisation’s knowledge and awareness. Respondents were given four options, ranging from a high awareness to no awareness.

The statements were designed to elicit factual responses and to address Proposition 2:

The Balanced Scorecard provides an effective foundation for control activities

- 2.1 *A high organisational awareness of the BSC is beneficial for effective control activities*
- 2.2 *The BSC can be used to support corporate governance*

Table 4.7: Personal Awareness of BSC

No.	Statement
C1.1	High good knowledge of key texts, attendance at training courses, direct experience of working with BSC)
C1.2	Medium (aware of BSC, but no direct experience or detailed knowledge of key texts)
C1.3	Low (little awareness of BSC at any level)
C1.4	No awareness or knowledge

Table 4.8: Organisational Awareness of BSC

No.	Statement
C2.1	High (your organisation has implemented the BSC)
C2.2	Medium (your organisation has some awareness, has investigated the potential benefits, at least one senior manager is aware of the BSC)
C2.3	Low (little awareness)
C2.4	None (If you mark this box, please go to Section D)

Respondents whose organisations had no awareness of the BSC were requested to go to Section D.

The third part of this section relates to the BSC. All statements were designed to elicit the respondent's opinions on BSC issues and relate to Proposition 3:

The BSC enhances the quality of audit work

- 3.1 *The BSC enables senior management to address qualitative ('soft') controls*
- 3.2 *The BSC can be linked to control objectives*

Table 4.9: Section C3 Statements

No.	Statement
C3.1	Enables management to address both financial and nonfinancial objectives
C3.2	Encourages better use of management information
C3.3	Enables management to assess the whole range of risks in their systems
C3.4	Encourages senior management to address qualitative ('soft') controls
C3.5	Provides benefits that are objectively clear and measurable
C3.6	Can be adapted to my organisation's needs
C3.7	Can be used to address corporate governance and control issues.
C3.8	Can be adapted to include issues relevant to audit and control
C3.9	Enables the effective use of control frameworks
C3.10	Can be linked to control objectives
C3.11	Is a useful tool for audit purposes
C3.12	Provides information useful for control evaluation by auditors

4.4.5 Section D: Control Models

This section addresses Proposition 4, control models. Statements 1, 2, 7 and 10 were designed to elicit a factual response with the remaining six designed to obtain an opinion.

Control models enhance the ability of auditors to address both qualitative and quantitative systems

4.1 *A high awareness of control models positively supports corporate governance*

4.2 *Corporate governance is enhanced when both qualitative and quantitative controls are addressed*

Table 4.10: Section D Statements

No.	Statement
D1	My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives
D2	Control models are used widely in my organisation
D3	Control models provide an effective basis for control system reviews
D4	Control models enable objective review and evaluation of control systems
D5	Control models support a risk-based approach to auditing
D6	Control models improve the levels of compliance with corporate governance frameworks
D7	Internal auditors in my organisation review financial systems only
D8	Internal auditors in my organisation address qualitative issues in their work (for example, communication, management information, ethical issues, equal opportunities)
D9	Reviewing and reporting on qualitative controls improves the level of assurance sought by management
D10	Senior management in my organisation actively require reviews of qualitative areas

4.4.6 Section E: General CSA Questions

This section addresses CSA. All statements were designed to evaluate opinion, and relate to Proposition 5:

Successful implementation of CSA is enhanced when control models are used

- 5.1 Control models improve the effectiveness of internal auditors*
- 5.2 Control models provide a benchmark for the evaluation of corporate governance*

Table 4.11: Section E Statements

No.	Statement
E1	CSA workshops increase the effectiveness of evaluation of control systems at all levels of management
E2	CSA is an effective method for assessing risks and controls in organisation-wide processes
E3	CSA is best used to determine levels of risk and control in specific operations
E4	CSA is an effective method of addressing strategic level issues

4.4.7 Section F: CSA Implementation

This section addresses Proposition 6, CSA implementation. This section requested factual responses to the first five questions, with the remaining two requiring opinions.

Assessing risk and controls through CSA is most effective when the process is based on control models

- 6.1 *Reviews of qualitative controls improve the level of assurance provided to management by internal auditors*
- 6.2 *CSA enables qualitative objectives and targets to be measured*
- 6.3 *CSA workshops can address strategic as well as operational issues*

Table 4.12: Section F Statements

No.	Question
F1	How long have you used CSA in your organisation? <12 months 13-24 months 25 – 36 months >36 months
F2	How many times has CSA been repeated? Never Once Twice More than twice
F3	Who is involved in CSA? Internal Auditors External Auditors Consultants Users
F4	How is CSA used? As a replacement for ALL traditional internal audits As part of traditional audit activities As a special exercise
F5	How much of your planned annual audit activity is allocated to CSA? <25% 26 - <50% 50 - <75% >75%
F6	How far do you consider implementation of CSA in your organisation to have been successful? Unsuccessful Partially successful Successful Very successful
F7	If CSA implementation was successful, please rank the following factors: Management support at top level Users were included in the preparation Participant training was effective Positive image of internal auditors

4.4.8 Section G: Questions on CSA Practice

This section addresses CSA practice. Respondents were asked to give their opinions on two key areas of CSA practice: facilitation and anonymity.

The section was designed to address Propositions 7 and 8:

- 7. *CSA workshops are most effective when facilitation is used*
- 7.2 *Facilitation provides clear structures and objectives for CSA workshops*
- 7.3 *Facilitated workshops enable participants to address a range of risks and controls in their systems*
- 7.4 *Internal auditors can provide effective facilitation*
- 8. *CSA workshops are most effective when anonymity is assured*
- 8.2 *IT support tools that support workshops enhance the effectiveness of CSA workshops*
- 8.3 *Anonymity encourages a full discussion of issues in workshops*

Table 4.13: Section G Statements

No.	Statement	Prop. ref.
G1	CSA workshops are most effective when facilitation is used	7
G2	Facilitated CSA workshops provide clear structures and objectives	7
G3	Facilitation encourages participants to address the whole range of risks and controls in their systems	7
G4	Facilitation is a skill which requires specific training	7
G5	Internal auditors can provide effective facilitation	7
G6	Rigid management of workshops has a negative influence on participants	7
G7	CSA workshops are most effective when they are based on control models	7
G8	Anonymity enhances the effectiveness of CSA workshops	8
G9	Anonymity increases the likelihood of open and frank discussion	8
G10	Anonymous discussions enable a wide range of views to be heard	8
G11	CSA workshops are most effective when IT support tools that enable anonymity are used	8

4.4.9 Section H: Further Information and Contact Details

The final section of the questionnaire requested any additional comments that respondents may wish to make. A summary of these comments can be found in Appendix B.

4.5 Data collection

The survey took place in July 2000. Two mailings were carried out, using fax, email and post. 84 responded to the first mailing, which was carried out on the first week of July, and a further 70 to the second which was carried out three weeks later. This gave a response rate of 22%, representing 154 of the total population.

While authors such as Singleton and Jankowicz suggest that near 100% response rates are achievable, smaller response rates can be accepted if they are representative of a clearly defined group.^{6 7} This research was designed to collect data from a specific self-defining sample of professionals with strong interests in internal auditing and CSA. The response rate is considered to be sufficient for the purpose of the survey.

Table 4.14: Responses

Responses	Number	%
1 st Mailing	84	12.16
2 nd Mailing	70	10.13
Total	154	22.29

4.6 Statistics used in Data Collection

4.6.1 **Descriptive**

Descriptive statistics were prepared that presented an analysis of the responses in terms of factual information (for example location, type of industry, length

of experience in internal auditing), perception and awareness (for example, the awareness of the BSC for individuals and their employers) and for opinions (for example, the success or otherwise of CSA, the internal audit role in strategy). These statistics were prepared to give a broad picture of the sample.

Responses were analysed and presented in the following ways:

- by questionnaire section
- subgroups within each section

The summarised descriptive statistics form Chapter 5, and the full results form Appendix C.

Figures are rounded to two decimal places.

4.6.2 Inferential

Inferential statistics were prepared to provide the foundation for the conclusions that were drawn from the research. The propositions were tested for significance using the chi-square method. Results were analysed using SPSS, and the assumptions of associations were accepted if the chi square values were significant at 0.05 and below.

The results of the tests form Chapter 6.

4.7 Conclusions

The methodology was chosen as the most effective means of collecting and evaluating facts and opinions from a group of specialist professionals. Using statistical analysis provided the rigour needed to make inferences and to assess the generalisability of the conclusions. The next two chapters present the descriptive statistics that provide an overview of the respondents, and a detailed analysis of the research propositions.

4.8 References

¹ Erickson, 1986

² Stake, 1995 Chapter 7

³ Singleton, 1993

⁴ Jankowicz, 1991

⁵ Hafen, 1999

⁶ Singleton, 1993

⁷ Jankowicz, 1991

Chapter 5

Summarised Descriptive Statistics

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5.1 Overview of Survey Responses

The full questionnaire forms Appendix A. Results are presented in the order of the questionnaire, and are described under their main headings. A full analysis of descriptive statistics forms Appendix C.

5.2 Section A: Background and Personal Information

Respondents were asked to supply personal details (name and job title) and the name, location and main business of their employing organisation. They were also asked to confirm if they were currently working within internal auditing.

5.2.1 **Question 1: Location of Organisation**

Approximately 60% of respondents worked for organisations based in the USA. 22% were based in Canada, with the remainder from the 31 other countries in South America, Europe, Africa, Asia and Australasia. (Table 5.1)

Table 5.1: Geographical breakdown of respondents

	Total number	Internal Auditors	% of sample	Non- Internal Auditors	% of total
Sample size	154	132	85.71	22	14.29
USA	92	76	49.35	16	10.38
Canada	34	32	20.77	2	1.30
Rest of the World	28	24	15.58	4	2.61

5.2.2 Question 2: Main Business

Of the thirteen revised categories, the largest number of responses came from the Financial Services (31%), Manufacturing (21%), Government (29%) and utility/energy (16%) sectors. These four categories comprised nearly three quarters of the sample. (Table 5.2)

Table 5.2: Main business of Organisation

Code	Description	No.	%
1.	financial services/banks/insurance/ pensions	47	31
2.	manufacturing/oil/gas production/mining	21	14
3.	Chemicals	5	3
4.	government/local government	29	19
5.	education/training	8	5
6.	not for profit	5	3
7.	assurance services/external audit	2	1
8.	audit consultancy	5	3
9.	utility/energy/gas transportation	16	10
10.	retail/customer services	4	3
11.	telecommunications/hi-tech/media	8	5
12.	Healthcare	3	2
13.	Other (Airline)	1	1
	Total	154	100

5.2.3 Question 3a: Size of Organisation (by Number of Employees)

The size of respondents' organisations was stratified into five levels. The number of respondents from the 'Large' classification was markedly smaller than those of the other four. (Table 5.3)

Table 5.3: Number of Employees

Category	Size	No.	%
Micro	<1,000	24	16
Small	1,001 – 2,999	33	21
Medium	3,000 – 7,499	36	23
Large	7,500 – 9,999	12	8
Very large	>10,000	49	32
Total		154	100

5.2.4 Question 3b: Classification of respondents: internal auditors and non-internal auditors

132 respondents (86%) were currently working in internal audit. (See Table 5.1)

5.2.5 Question 4a) Respondents' internal audit experience (Internal Audit Respondents)

Internal audit respondents' experience ranged from a low of one year to 36 years, with the average being approximately 12 years. Table 5.4 shows a stratified summary.

Table 5.4: Years' Experience of Internal Auditing (Stratified)

Years' Experience	No.	% IA Responses	% All Responses
1-2	6	5	4
3-5	23	17	15
6-9	19	14	12
10-15	45	35	30
16-20	23	17	15
21+	16	12	10
	132	100	86

5.2.6 Question 4b) Current experience with this employer (Internal Audit Respondents)

The longest time with the current employer was 31 years, and the lowest one year. Table 5.5 shows a stratified summary.

Table 5.5: Time with current employer (Stratified)

Time with Current Employer	No.	% IA	% All
1-2	27	21	18
3-5	46	35	30
6-9	14	11	9
10-15	26	19	16
16-20	9	7	6
21+	8	6	5
Not answered	2	2	2
	132	100	86

5.2.7 Question 4c) Size of internal audit departments of respondents' organisations

The range for the size of internal audit departments was 0 (for a 'Micro' organisation) to 650 (in a 'Very Large' organisation).

Table 5.6 shows a stratified summary.

Table 5.6: Size of Internal Audit Departments (Stratified)

Size	No. of IA (High)	No. of IA (Low)	Mean
Micro	6	0	2
Small	35	0	6
Medium	50	1	10
Large	50	3	13
Very large	650	0	70

5.2.8 Question 5a: Total experience of auditing (non-internal auditors)

The most experienced non-internal auditor had 20 years' experience in auditing, with the lowest being 0. The average was 10.

Table 5.7: Total experience of auditing (Non Internal Auditors (Stratified)

Audit Experience (Total)	No.	% NonIA	% All
0/NR	3	14	2
1-2	0	0	0
3-5	4	18	3
6-9	2	9	1
10-15	6	27	4
16-20	6	27	4
21+	1	5	1

5.2.9 Question 5b: Total experience of auditing 'This Employment' (non-internal auditors)

The experience of audit in the current organisation ranged from 0 to 10, with a mean of approximately 3 years.

Table 5.8 shows a stratified summary.

Table 5.8: Audit Experience This Employment (Stratified)

Audit Experience (Current)	No.	% NonIA	% All
0/NR	10	45	7
1-2	0	0	0
3-5	8	37	5
6-9	2	9	1
10-15	2	9	1
16-20	0	0	0
21+	0	0	0

5.2.10 Question 5c: Primary duties

There were ten separate categories of primary duty:

- Assurance/other consultancy
- Business process review
- Consultancy/Risk Management
- Control services
- Corporate and Financial Policy/CSA
- CSA consultancy (6)
- Education (3)
- Other consultancy (2)
- Prepare financial statistics
- Senior management

5.2.11 Summary of Section A

These responses show that North America is the largest geographical region in the sample. This is not unexpected, given the longer history of CSA in the USA and Canada.

The main industry groups for the sample were financial services, manufacturing, government and utilities. Again, this is not surprising given that these are areas with a mature history of internal auditing, and the fact that larger organisations were among the first to include CSA as part of their activities.

The experience of respondents provides a sophisticated level of knowledge of the areas that the questionnaire addresses.

5.3 Section B: Audit and strategy

Section B of the questionnaire used a five point scale to establish the extent of agreement with statements on a range of questions on audit and strategy as they were used within the respondents' organisations.

Table 5.9: Audit and Strategy (Total Sample)

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	9	6	26	17	55	36	58	38	6	4
2.	11	7	46	30	62	40	28	18	7	5
3.	11	7	46	30	62	40	26	17	9	5
4.	2	1	31	20	72	47	43	28	6	4
5.	19	12	57	37	56	36	17	11	5	3
6.	3	2	17	11	49	32	75	49	10	7
7.	5	3	19	12	51	33	75	49	4	3

5.3.1 Statement B1: Internal auditors make a positive contribution to strategic management

Approximately two thirds of respondents (113) agreed or strongly agreed with this statement. One third (35) disagreed or strongly disagreed.

5.3.2 Statement B2: Internal auditors make an active contribution to the development of strategic objectives

Slightly less than 60% of the sample supported the statement, with 37% disagreeing.

5.3.3 Statement B3: Internal auditors are actively involved in evaluating the effectiveness of strategic decisions

The response to this statement was almost identical to statement B2, with slightly more respondents marking the 'Don't Know' column. 57% supported the statement, with 37% disagreeing.

5.3.4 Statement B4: Senior management have clear and measurable performance targets

More than three quarters of the sample supported the statement (115) with less than a quarter (33) disagreeing.

5.3.5 Statement B5: Internal auditors review the performance of senior managers

The response to this statement is divided evenly, with 76 respondents disagreeing and 73 in support.

5.3.6 Statement B6: Objectives for senior managers include both financial and nonfinancial targets

The response was overwhelmingly in support of this statement, with 124 in agreement and only 20 disagreeing.

5.3.7 Statement B7: Senior internal audit staff have regular contact with senior management who are responsible for developing and monitoring strategy

Again, an overwhelming majority were in support of the statement (126) with only 24 not in agreement.

5.3.8 Summary of Section B

The results show a high agreement with the statement that internal auditors make a positive contribution to strategic management and achievement of strategic objectives. (B1) While the percentage of respondents who consider internal auditors make an active contribution to developing strategic objectives is somewhat lower, it is still a clear majority. (B2) A similar percentage of respondents consider that they are actively involved in evaluating the effect of strategic decisions. (B3) It can be concluded from these responses that while internal auditors consider themselves to be able to make a positive contribution

to strategic management, this is not always followed through to the practical activity of setting and monitoring objectives.

The performance targets of senior management are perceived to be clear and measurable by a clear majority of respondents (B4). Against this figure, only approximately half of respondents review the performance of senior management (B5). This would appear to imply that there is still a gap between targets set for senior management and the role of internal auditors in evaluating and measuring performance against these targets.

A significant majority of respondents reported that their organisations' targets include both financial and nonfinancial targets. This has strong implications for the role of internal auditors in corporate governance and BSC activities, where reporting on qualitative and nonfinancial systems is an essential part.

5.4 Section C: Awareness of the Balanced Scorecard

Statements C1 and C2 were designed to ascertain personal, organisational and potential benefits of the Balanced Scorecard.

5.4.1 **Statement C1 Your organisation's awareness of BSC is High, Medium, Low, None**

Personal awareness of the BSC was measured using a four part scale:

- **High** (good knowledge of key texts, attendance at training courses, direct experience of working with BSC)

- **Medium** (aware of BSC, but no direct experience or detailed knowledge of key texts)
- **Low** (little awareness of BSC at any level)
- **None:** No awareness or knowledge

More than 80% of respondents had some level of personal awareness of the BSC. (Table 5.10)

Table 5.10: Personal Awareness of BSC

	No.	%
High	35	23
Medium	57	37
Low	20	13
None/NR	42	27

5.4.2 **Statement C2: Your organisation’s awareness of BSC is High, Medium, Low, None**

Organisational awareness was measured using a similar four part scale:

- **High** (your organisation has implemented the BSC)
- **Medium** (your organisation has some awareness, has investigated the potential benefits, at least one senior manager is aware of the BSC)
- **Low** (little awareness)
- **None** (Respondents who marked this box were asked to go to Section D)

Almost three quarters of respondents’ organisations had some level of awareness of the BSC. (Table 5.11)

Table 5.11: Organisational Awareness of BSC

	No.	%
High	29	19
Medium	49	32
Low	35	23
None/NR	41	27

5.4.3 Section C3: Statements about the BSC

This statement used a five point scale to evaluate the extent to which respondents agreed with a series of statements relating to the BSC. The statements included general management and specific audit-related points. All statements refer to Table 5.12.

Table 5.12: Overview of Section C3 (112 completed responses)

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	44	40	53	47	15	13
2.	0	0	3	3	54	48	37	33	18	16
3.	2	2	14	13	44	39	29	26	23	21
4.	1	1	10	9	47	42	32	29	23	21
5.	0	0	6	5	51	46	35	31	20	18
6.	0	0	2	2	52	46	36	32	22	20
7.	1	1	6	5	57	51	27	24	21	19
8.	0	0	9	8	60	54	21	19	21	19
9.	2	2	9	8	58	52	20	18	23	21
10.	1	1	4	4	57	51	27	24	23	21
11.	1	1	5	4	57	51	25	22	24	21
12.	0	0	7	6	54	48	31	28	20	18

5.4.4 Statement C3.1: The BSC enables management to address both financial and nonfinancial objectives

87% of respondents agreed or strongly agreed with this statement. There were no negative responses. 13% had no opinion or did not complete this part.

5.4.5 Statement C3.2: The BSC encourages better use of management information

More than 80% of respondents agreed or strongly agreed with this statement, with only 3% disagreeing (none strongly). 16% had no opinion or did not complete this part.

5.4.6 Statement C3.3 The BSC enables management to assess the whole range of risks in their systems

70% of respondents supported this statement, with 15% disagreeing or strongly disagreeing. 21% had no opinion or did not complete this part.

5.4.7 Statement C3.4: The BSC encourages senior management to address qualitative ('soft') controls

More than 70% of respondents supported this statement. 10% of respondents disagreed (1% strongly). 21% had no opinion or did not complete this part.

5.4.8 Statement C3.5: The BSC provides benefits that are objectively clear and measurable

More than 75% agreed or strongly agreed with this statement. 5% disagreed, none strongly. 18% had no opinion or did not complete this part.

5.4.8 Statement C3.6: The BSC can be adapted to my organisation's needs

Nearly 80% of respondents agreed with this statement. Only 2% disagreed, none strongly. 20% had no opinion or did not complete this part.

5.4.9 Statement C3.7: The BSC can be used to address corporate governance and control issues.

75% of respondents agreed with this statement. 6% disagreed, and 19% had no opinion or did not complete this part.

5.4.10 Statement C3.8: The BSC can be adapted to include issues relevant to audit and control

73% of respondents supported this statement. 8% disagreed, none strongly. 19% had no opinion or did not complete this part.

5.4.11 Statement C3.9: The BSC enables the effective use of control frameworks

70% of respondents agreed with this statement. 10% disagreed. 21% had no opinion or did not complete this part.

5.4.12 Statement C3.10: The BSC can be linked to control objectives

75% of respondents agreed with this statement. 5% disagreed. 21% had no opinion or did not complete this part.

5.4.13 Statement C3.11: The BSC is a useful tool for audit purposes

73% of respondents agreed with this statement. 5% disagreed. 21% had no opinion or did not complete this part.

5.4.14 Statement C3.12: The BSC provides information useful for control evaluation by auditors

More than 75% agreed with this statement. 6% disagreed, none strongly. 18% had no opinion or did not complete this part.

5.4.15 Summary of Section C

Medium or high awareness of the BSC among individual respondents was 60%, with 40% stating that they had no knowledge or awareness (C1). For their organisations it was slightly lower at 51%, with 27% reporting no awareness (C2) But clear majorities had at least some personal and organisational awareness. Given the relative novelty of the BSC this is not in itself significant.

Responses to the statements about specific areas of the BSC showed clearly that it is perceived as a positive tool. Nearly 90% of respondents agreed that the BSC enables management to address both financial and nonfinancial objectives (C3.1). More than 80% believed that the BSC encouraged better use of management information (C3.2), with 70% agreeing that it enabled management to assess the whole range of risks (C3.3). These responses show that the BSC can support management – and by extension, internal auditors – in more effective and thorough reviews of the performance of all types of system.

Qualitative measures are crucial to effective corporate governance, and respondents showed a clear majority in support of the statement that the BSC enables management to assess these ‘soft’ controls (C3.4)

Generally, respondents are strongly in favour of the BSC and its potential implications for internal audit work. A large majority of respondents consider that the BSC can be used to address corporate governance and control issues (C3.7) and a similar proportion feel that the BSC can be adapted to include control and audit issues (C3.8). There are very interesting implications for the future development of the BSC, in particular given the original authors’ view that it can be used as a strategic tool. Furthermore, responses to the final three statements show that the BSC is considered to support internal audit work at the practical level of control frameworks and control objectives, and can be a useful tool for audit (C3.9, C3.10 and C3.11).

5.5 Section D: Control Models

This section used a five point scale to evaluate respondents' views on control models. The questions included specific statements on control models and more general questions on qualitative controls.

Table 5.13: Overview of Section D responses

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	15	10	64	42	47	31	25	16	2	1
2.	21	14	77	50	35	23	17	11	3	2
3.	3	2	7	5	64	42	76	50	3	2
4.	0	0	5	3	68	44	77	50	3	2
5.	1	1	9	6	53	35	89	59	3	2
6.	2	1	10	7	68	44	61	40	12	8
7.	85	56	53	35	6	4	4	3	5	3
8.	5	3	18	12	49	32	76	50	5	3
9.	1	1	3	2	66	43	80	52	3	2
10.	10	7	44	29	64	42	27	18	8	5

5.5.1 **Statement D1: My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives**

The responses to this statement were reasonably balanced, with 52% disagreeing or strongly disagreeing and 47% agreeing or strongly agreeing. Only 1% had no opinion.

5.5.2 Statement D2: Control models are used widely in my organisation

The responses to this statement tended more towards the negative, with 64% of respondents disagreeing or strongly disagreeing. 44% agreed or strongly agreed, and only 2% had no opinion.

5.5.3 Statement D3: Control models provide an effective basis for control system reviews

Only 7% of respondents did not support this statement. 92% agreed or strongly agreed, with only 2% having no opinion.

5.5.4 Statement D4: Control models enable objective review and evaluation of control systems

More than 90% of respondents supported this assertion. Only 3% disagreed, none strongly. 2% had no opinion.

5.5.5 Statement D5: Control models support a risk-based approach to auditing

93% of respondents agreed or strongly agreed with the statement. Only 7% disagreed. 2% had no opinion.

5.5.6 Statement D6: Control models improve the levels of compliance with corporate governance frameworks

84% of respondents agreed or strongly agreed with the statement. 8% disagreed or strongly disagreed. 8% had no opinion.

5.5.7 Statement D7: Internal auditors in my organisation review financial systems only

91% of all respondents disagreed with this assertion. 56% strongly disagree, 35% disagree). Only 7% agreed or strongly agreed, with 3% having no opinion.

5.5.8 Statement D8: Internal auditors in my organisation address qualitative issues in their work (for example, communication, management information, ethical issues, equal opportunities)

More than 80% of respondents agreed or strongly agreed with the statement. 15% disagreed or strongly disagreed. 3% had no opinion.

5.5.9 Statement D9: Reviewing and reporting on qualitative controls improves the level of assurance sought by management

Only 3% of the respondents did not support this statement. 95% agreed or strongly agreed, with 2% having no opinion.

5.5.10 Statement D10: Senior management in my organisation actively require reviews of qualitative areas

60% of respondents agreed or strongly agreed with this statement. 36% disagreed or strongly disagreed, with 5% having no opinion.

5.5.11 Summary of Section D

There is a measurable difference between the respondents' support for the potential benefits of control models and their actual use and implementation. The balance between high and low awareness of control models in organisations was balanced, with a significant minority of organisations that do not use control models widely (D1 and D2). Only very small minorities disagreed that control models are effective for control reviews (D3 and D4), for enabling a risk-based approach (D5) and for improving levels of compliance with corporate governance frameworks (D6).

The second part of this section addressed opinions of qualitative and nonfinancial issues. Almost all respondents stated that their organisations review nonfinancial systems, with a majority stating that they address qualitative issues at the request of their management and report on these issues (D7, D8 , D9 and D10).

It can be seen that the range of internal audit work includes nonfinancial systems, and that this is done with the active support of senior management.

Control models on the other hand, are strongly supported by internal auditors but are not as strongly encouraged by their organisations.

5.6 Section E: General CSA Questions

This section requested opinions on four aspects of CSA practice, again using a five point scale. The objective was to ascertain broad views on CSA.

Table 5.14: Summary of Section E Responses

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	1	7	5	60	39	76	49	10	6
2.	1	1	8	5	58	38	80	52	7	5
3.	0	0	23	15	75	49	47	31	9	6
4.	1	1	11	7	69	45	59	38	13	8

5.6.1 **Statement E1: CSA workshops increase the effectiveness of evaluation of control systems at all levels of management**

Nearly half of the respondents strongly agreed with this statement, with 39% agreeing. 6% of respondents disagreed or strongly disagreed, with 6% having no opinion.

5.6.2 Statement E2: CSA is an effective method for assessing risks and controls in organisation-wide processes

90% of respondents supported the statement, with nearly half of the total response in strong agreement. 6% did not agree, with 5% having no opinion.

5.6.3 Statement E3: CSA is best used to determine levels of risk and control in specific operations

80% of the respondents supported the statement. 15% disagreed (none strongly) and 6% had no opinion.

5.6.4 Statement E4: CSA is an effective method of addressing strategic level issues

83% of respondents supported this assertion. 8% of respondents disagreed or strongly disagreed. 9% had no opinion.

5.6.5 Summary of Section E Responses

CSA is generally seen as being a positive tool. Only a small minority of respondents disagreed that CSA workshops increase the effectiveness of control systems at all levels of management (E1). Significant majorities also support the statements that CSA is an effective method for assessing risks and controls in organisation-wide processes and consider CSA an effective method for determining risks (E2 and E3).

CSA is also seen as being potentially effective in addressing strategic as well as operational activities (E4).

5.7 Section F: CSA Implementation

This section comprises seven questions relating to implementation of CSA. The questions are a balance of specific issues and requests for opinions.

5.7.1 **Question F1: How long have you used CSA in your organisation?**

While 30% of respondents were new to CSA, more than 40% had experience of at least two years.

Table 5.15: Experience of CSA (F1)

	No.	%
No response	11	7
< 12 months	45	30
13 – 24 months	34	22
25 – 36 months	23	15
> 36 months	41	27

5.7.2 **Question F2: How many times has CSA been repeated?**

Slightly less than 50% had repeated CSA once or not at all, but as 30% of respondents had less than 12 months' experience of CSA this figure is not surprising. More importantly, 43% had repeated CSA twice or more. This figure is important as it shows that CSA was not an experiment or a one-off event.

Table 5.16: Repetition of CSA (F2)

	No.	%
No response	13	8
Never	56	36
Once	17	11
Twice	18	12
More than twice	50	32

5.7.3 Question F3: Who is involved in CSA?

More than 85% of respondents indicated that internal auditors were involved in CSA. More than 60% of users were involved, which shows that CSA is an effective method of developing participation in the audit process. A significant proportion of consultants was involved, although the percentage of external auditors was the lowest to be involved.

Table 5.17: Involvement in CSA (F3)

	No.	%
No response	21	14
Internal auditors	133	86
External auditors	11	7
Consultants	30	19
Users	97	63

(The percentages do not add up to 100 as respondents were asked to tick all that applied.)

5.7.4 Question F4: How is CSA used?

A small percentage of respondents used CSA as a replacement for all IA activity, but the main thrust appears to be a partial replacement or special exercise.

Table 5.18: How CSA is used (F4)

	No.	%
No response	3	2
Replacement	12	8
Part	79	51
Special exercise	85	55

5.7.5 Question F5: How much of your planned audit activity is allocated to CSA?

CSA was allocated less than 25% in more than 60% of respondents' organisations. 21% of respondents used CSA between 25% and 50% of their allocated time budgets. Only six respondents allocate more than 75% of their time to CSA.

Table 5.19: Allocation of Time (F5)

	No.	%
No response	22	14
<25%	95	62
26 - <50%	24	16
50 - <75%	7	5
>75%	6	4

5.7.6 Question F6: How far do you consider implementation of CSA in your organisation to have been successful?

Only 13% of respondents considered CSA implementation to have been unsuccessful, while a similar percentage perceived implementation to be very successful. Nearly two thirds of respondents considered implementation to have been at least partially successful.

Table 5.20: Success of CSA Implementation (F6)

	No.	%
No response	17	11
Unsuccessful	20	13
Partially successful	61	40
Successful	35	23
Very successful	21	14

5.7.7 Question F7: If CSA implementation was successful, please rank the following factors.

Management support at top level was the first choice of more than half of respondents, with a further 20% making it their second choice.

Involvement of users was the first choice of a third of respondents, with a further 28% making it their second choice.

A positive image of internal audit was chosen by nearly a quarter of respondents, with a further 29% making it their second choice.

The least popular choice was the effectiveness of participant training, which may raise questions on the value of specialist software support and investment in facilitation training.

Table 5.21: Factors for successful CSA implementation (F7)

	1 st	2 nd	3 rd	4 th
1. <i>Management support at top level</i>	54	20	8	13
2. <i>Users were included in the preparation</i>	34	28	21	10
3. <i>Participant training was effective</i>	17	22	32	21
4. <i>Positive image of internal auditors</i>	24	29	20	17

5.7.8 Summary of Section F

The responses show that CSA use is reasonably balanced in this survey, but with a significant proportion having more than 12 months' experience.

Repeated CSA exercises are a good indicator of the successful implementation of CSA, and the 43% of respondents who had repeated CSA exercises more than twice is a highly significant result.

CSA has developed into an established audit method, as demonstrated by the 40% of respondents who had more than two years' experience (F1). A further indication of the maturity of CSA is the number of repetitions, and the respondents showed that more than 40% had repeated CSA twice or more (F2).

The players involved in CSA are primarily internal auditors, although other agencies (in particular consultants) also play significant roles (F3).

CSA is not generally used as a replacement for all traditional internal audit activities, with special exercises and partial implementation being the norm (F4).

At this stage of the history of CSA this is not unexpected. For the majority of respondents the allocation of internal audit time was between 25% and 50%.

This again is to be expected at this stage of the development of CSA (F5).

The perceived success of CSA is clear, with 63% of respondents stating that it was at least partially successful, and only 13% describing CSA implementation as unsuccessful (F6). Reasons given for success or otherwise included management support, a positive image of internal audit and to a lesser extent, training (F7).

5.8 Section G: CSA Practice

Section G used a five point scale to establish the perceived importance of facilitation, anonymity and IT support to the success of CSA.

Table 5.22: CSA Practice (Section G)

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	1	0	0	44	30	94	64	8	5
2.	0	0	3	2	40	27	93	63	11	7
3.	1	1	1	1	65	44	66	45	14	10
4.	1	1	7	5	39	27	94	64	6	4
5.	2	1	3	2	72	49	63	43	7	5
6.	5	3	25	17	60	41	42	29	15	10
7.	4	3	29	20	57	39	38	26	19	13
8.	3	2	24	16	54	37	42	29	22	15
9.	5	3	24	16	54	37	42	29	22	15
10.	4	3	16	11	63	43	39	27	25	17
11.	7	5	30	20	40	27	39	27	31	21

5.8.1 Statement G1: CSA workshops are most effective when facilitation is used

This statement was supported virtually unanimously, with 94% in agreement (64% strongly). Only one respondent disagreed, with 5% having no opinion.

5.8.2 Statement G2: Facilitated CSA workshops provide clear structures and objectives

90% of respondents agreed with this statement, with 63% strongly agreeing. Only 2% disagreed, with 7% having no opinion.

5.8.3 Statement G3: Facilitation encourages participants to address the whole range of risks and controls in their systems

Almost 90% of respondents agreed or strongly agreed with this statement.

Only 2% disagreed, with 10% having no opinion.

5.8.4 Statement G4: Facilitation is a skill which requires specific training

More than 90% of respondents supported this assertion. 6% disagreed, with

4% having no opinion.

5.8.5 Statement G5: Internal auditors can provide effective facilitation

More than 90% agreed with this statement. 3% disagreed, and 5% had no opinion.

5.8.6 Statement G6: Rigid management of workshops has a negative influence on participants

70% of respondents supported this statement. 20% disagreed, with 10% having no opinion.

5.8.7 Statement G7: CSA workshops are most effective when they are based on control models

This statement was supported by 65% of respondents. 23% disagreed, and 13% had no opinion.

5.8.8 Statement G8: Anonymity enhances the effectiveness of CSA workshops

This statement was supported by approximately 66% of respondents. 18% disagreed, with 15% having no opinion.

5.8.9 Statement G9: Anonymity increases the likelihood of open and frank discussion

66% of respondents agreed with this statement. 19% disagreed, with 15% having no opinion,

5.8.10 Statement G10: Anonymous discussions enable a wide range of views to be heard

This statement was supported by 70% of respondents. 14% disagreed, with 17% having no opinion.

5.8.11 Statement G11: CSA workshops are most effective when IT support tools that enable anonymity are used

Opinion on this statement was more balanced. 54% of respondents supported the statement, with 25% disagreeing. 21% had no opinion.

5.8.11 Summary of Section G

From the responses to this section, it can be inferred that facilitation is a key component of effective CSA practice. The very strong majorities in support of the first three statements indicate the importance of facilitation in CSA workshops (G1,G2 and G3). There was strong support for the statement that facilitation is a skill that requires specific training (G4)

While respondents are clear in their support for facilitation, it should be concluded that it should solely be an internal auditor's role. Rather, the response should be interpreted that facilitator training is the most important issue , as rigid management of workshops was perceived as negative (G5 and G6).

CSA workshops were considered to be most effective when they were based on control models (G7). This links with the significance of responses to statements on control models in Section D.

Anonymity was considered to be a key issue, and respondents felt that it increased the quality of discussion and effectiveness of workshops (G8, G9 and G10). IT support tools were not felt to be as significant as proper training for facilitators (G11).

5.9 Section H: Further Information

This section requested respondents to add any comments they felt were relevant to the research. While these comments do not directly influence the analysis and findings of the survey, it is planned to use them at a later date to identify any trends or issues that may stimulate future research. These points are summarised in Appendix B.

5.10 Summary and conclusions

The descriptive statistics can be summarised as follows:

- CSA is practised primarily in North America, in financial services, manufacturing, government and utilities
- Internal auditors already make a significant contribution to strategic management, although their actual involvement is not yet universal
- A majority of respondents had at least some personal awareness of the BSC, although awareness was lower in their organisations.
- Qualitative measures and controls are necessary for effective corporate governance.
- While control models are perceived as vital to effective internal audit work, their implementation is not yet general.
- CSA is seen as a mature internal audit tool, which can be used at all levels of management.
- Repetitions of CSA exercises demonstrate that CSA is becoming established, although as a support to internal audit activities rather than a replacement.
- Facilitation is an essential component of CSA.

It can be concluded from the descriptive statistics that there is some evidence that:

1. Internal auditors are involved in strategic issues, and have a sufficient awareness of the BSC to support any inferences that can be drawn from their responses.
2. Qualitative controls and measures are essential components of effective control systems
3. CSA is an effective internal audit tool.

Furthermore, it can also be stated that control models are a vital element in linking strategic and operational controls and measures.

Chapter 6

Testing of Propositions

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6.1 Introduction

This chapter presents a detailed analysis of the survey data, using non-parametric statistics. The research propositions are examined and conclusions drawn on whether or not they are supportable.

The technique used to evaluate the significance of the responses was chi-squares. These tests measure association, and the analysis includes both responses to individual sections of the questionnaire and to combinations of more than one area where the nature of the proposition required more than one variable to be tested.

6.2 Selection of the Sample

The sample was selected from a special interest group of internal auditors. This was deliberate, as the survey was designed to measure respondents' opinions and actual practice regarding specific issues in CSA.

6.3 Structure of the Chapter

The propositions have been constructed to assess the opinions and practice of CSA practitioners in three discrete levels of management: strategic, tactical and operational.

Each proposition is examined and tested in turn. Chi-squares are used to evaluate the significance of responses. For the purposes of this research, chi-square results are considered significant when the significance figure is 95% or above.

Due to the structure of the questionnaire, there is not an exact correlation between the statements and propositions and some sections of the questionnaire are used to address more than one proposition. For completeness, responses to each statement are included in this chapter.

6.3.1 Strategic Level

Propositions 1 and 2 have been designed to assess the potential and actual role of internal auditors in strategic management. The survey includes opinions and knowledge of the BSC. These propositions are evaluated through the analysis and testing of the data collected through Sections B and C of the questionnaire.

6.3.2 Tactical Level

The tactical level is evaluated by Propositions 3 – 6. These propositions are evaluated through the analysis and testing of the data collected through Sections C, D and E of the questionnaire.

Proposition 3 examines the links between the BSC and the role of internal audit at the tactical management level. Propositions 3.1 and 3.2 have been designed to evaluate the potential application of the BSC to internal audit work.

Proposition 4 was developed to test the effectiveness and use of control models. Proposition 4.1 assesses the impact of control models on corporate governance, and Proposition 4.2 was designed to address the potential links between qualitative controls and corporate governance.

Proposition 5 assesses the relationship between adoption of control models and successful CSA implementation. This is further tested by Proposition 5.1, which examines the links between control models and internal audit effectiveness. Proposition 5.2 examines the possibility of using control models in the evaluation of corporate governance.

Proposition 6 further investigates the importance of control models. Proposition 6.1 assesses the impact and effectiveness of qualitative controls to senior management. Propositions 6.2 and 6.3 ascertain the potential of CSA workshops to address qualitative objectives and strategic issues respectively.

6.3.3 Operational Level

This level is addressed by Propositions 7 and 8. These propositions are evaluated through the analysis and testing of the data collected through Sections F and G of the questionnaire.

Proposition 7 evaluates the importance of facilitation in CSA workshops. More detailed responses are addressed by Proposition 7.1, which specifically addresses the practical issues of organising CSA workshops and Proposition

7.2, which seeks opinions on the breadth of issues that can be covered in workshops. Proposition 7.3 seeks to ascertain whether internal auditors can provide effective facilitation.

Proposition 8 evaluates the importance of anonymity. Two related issues are addressed in Proposition 8.1, which addresses the role of IT support and Proposition 8.2 which addresses anonymity and the effectiveness of workshops.

6.4 Detailed Analysis of Propositions

6.4.1 **Internal Auditing and Strategic Management**

6.4.1.1 **Summary of Tests: Proposition 1**

Internal auditors make a positive contribution to strategic management

This proposition was tested by responses to Section B of the questionnaire, which addressed audit and strategy. Statements B1 and B2 were designed to evaluate opinions, while statements B3 – B7 addressed factual issues and were designed to test the sub-propositions.

Table 6.1: Section B Responses Chi-squares

No.	Statement	Chi Square	Sig.
B1	Internal auditors make a positive contribution to strategic management	119.312	.000
B2	Internal auditors make an active contribution to the development of strategic objectives	68.039	.000
B3	Internal auditors are actively involved in evaluating the effectiveness of strategic decisions	61.727	.000
B4	Senior management have clear and measurable performance targets	125.545	.000
B5	Internal auditors review the performance of senior managers	62.818	.000
B6	Objectives for senior managers include both financial and nonfinancial targets	155.273	.000
B7	Senior internal audit staff have regular contact with senior management who are responsible for developing and monitoring strategy	166.805	.000

The chi-square tests show that all the responses were significant.

The levels of agreement/strong agreement with the statements demonstrate that the proposition can be supported.

Propositions 1.1 and 1.2

- 1.1 The performance of strategic management is enhanced when internal auditors are actively involved in developing and monitoring strategic objectives*
- 1.2 Effective performance measurements include both quantitative and qualitative objectives*

Proposition 1.1 was tested by statements B3 – B6, and Proposition 1.2 by statement B6. There were high levels of agreement/strong

agreement with statements B1, B2, B4, and B7. Positive responses to statements B5 and B6 were lower, but still clearly in the majority.

There is sufficient evidence from the agreement/strong agreement with the statements to show that the proposition is supported.

Table 6.2: Summary of B1 Responses

No.	Statement	A/SA %	D/SD %
B1	Internal auditors make a positive contribution to strategic management	76	24
B2	Internal auditors make an active contribution to the development of strategic objectives	61	39
B3	Internal auditors are actively involved in evaluating the effectiveness of strategic decisions	68	32
B4	Senior management have clear and measurable performance targets	78	22
B5	Internal auditors review the performance of senior managers	52	48
B6	Objectives for senior managers include both financial and nonfinancial targets	52	48
B7	Senior internal audit staff have regular contact with senior management who are responsible for developing and monitoring strategy	85	15

6.4.1.2 Conclusions

The responses to these statements support Propositions 1, 1.1 and 1.2. This is a clear indication that internal auditors consider their role should include strategic issues, and that their contribution to senior management is enhanced when they are able to incorporate these duties into their work.

Importantly, not only did the results show that the contribution that internal auditors make to strategic management was not only a perception of their role, but one that they make actively already. This was further supported by the evidence showing that internal auditors evaluate the effectiveness of senior management performance.

These results show that effective performance measurement includes both qualitative and quantitative objectives. This has implications for the scope and range of activities of the internal audit function. If internal auditors include qualitative measures and controls in the scope of their work, then corporate governance can become an essential component of their work. In turn, the range of risks that form the basis of internal audit work need to be extended accordingly.

The overall results of testing this proposition clearly show that internal audit activities are effective at the strategic level of management, and address the full range of an organisation's systems.

6.4.2 The Balanced Scorecard and Control

6.4.2.1 Summary of Tests: Proposition 2

The Balanced Scorecard provides an effective foundation for control activities

This proposition was tested using Section C, statements 3.7 – 3.12. Agreement and strong agreement with these statements ranged from 87% - 94%. The following table shows the percentage of responses that agree and strongly agree, and disagree and strongly disagree with the statements:

Table 6.3: Section C Responses: (Excludes 'Don't Know' and incomplete).

No.	Statement	A/S A %	D/SD %
C3.1	Enables management to address both financial and nonfinancial objectives	100	0
C3.2	Encourages better use of management information	96	4
C3.3	Enables management to assess the whole range of risks in their systems	81	19
C3.4	Encourages senior management to address qualitative ('soft') controls	88	12
C3.5	Provides benefits that are objectively clear and measurable	94	6
C3.6	Can be adapted to my organisation's needs	97	7
C3.7	Can be used to address corporate governance and control issues.	93	7
C3.8	Can be adapted to include issues relevant to audit and control	90	10
C3.9	Enables the effective use of control frameworks	87	13
C3.10	Can be linked to control objectives	94	6
C3.11	Is a useful tool for audit purposes	94	6
C3.12	Provides information useful for control evaluation by auditors	93	7

The chi-square results are all significant.

Table 6.4: Full chi-square results Section C

No.	Statement	Chi-square	Sig.
C3.1	Enables management to address both financial and nonfinancial objectives	10.390	.001
C3.2	Encourages better use of management information	77.623	.000
C3.3	Enables management to assess the whole range of risks in their systems	37.104	.000
C3.4	Encourages senior management to address qualitative ('soft') controls	49.727	.000
C3.5	Provides benefits that are objectively clear and measurable	65.662	.000
C3.6	Can be adapted to my organisation's needs	76.727	.000
C3.7	Can be used to address corporate governance and control issues.	61.727	.000
C3.8	Can be adapted to include issues relevant to audit and control	77.623	.000
C3.9	Enables the effective use of control frameworks	49.182	.000
C3.10	Can be linked to control objectives	70.922	.000
C3.11	Is a useful tool for audit purposes	62.545	.000
C3.12	Provides information useful for control evaluation by auditors	62.584	.000

Proposition 2.1

A high organisational awareness of the BSC is beneficial for effective control activities

This proposition was tested by linking respondents with a high organisational knowledge of the BSC with statements C3.2 – C3.5, C3.7, C3.8, C3.11 and C3.12.

Table 6.5: High Organisational Awareness of BSC and Section C (29 respondents)

No.	Statement	A/SA %	D/SD %	DK
C3.1	Enables management to address both financial and nonfinancial objectives	100	0	0
C3.2	Encourages better use of management information	97	3	0
C3.3	Enables management to assess the whole range of risks in their systems	69	21	10
C3.4	Encourages senior management to address qualitative ('soft') controls	69	21	10
C3.5	Provides benefits that are objectively clear and measurable	93	3	3
C3.6	Can be adapted to my organisation's needs	93	0	7
C3.7	Can be used to address corporate governance and control issues.	83	10	7
C3.8	Can be adapted to include issues relevant to audit and control	90	7	3
C3.9	Enables the effective use of control frameworks	69	24	7
C3.10	Can be linked to control objectives	90	10	0
C3.11	Is a useful tool for audit purposes	83	10	7
C3.12	Provides information useful for control evaluation by auditors	83	14	3

Proposition 2.2

The BSC can be used to support corporate governance

This proposition was tested by responses to statements C3.1, and C3.7 – C3.10 (Table 6.5 refers). Agreement and strong agreement ranged from 87% to 100%.

Chi-square results show that responses are significant. (Table 6.4 refers.)

6.4.2.2 Conclusions

The results show that respondents consider the BSC to be an effective foundation for control activities, and that a high awareness of the BSC is beneficial to internal audit work. In addition, the BSC is seen as providing support for corporate governance.

As the BSC is still a relatively new management tool, and one of a number of tools that attempt to add structure to strategic management it is unlikely that it will provide the only method of incorporating control issues into the strategic planning and control process. But given the level of awareness in individual and organisational terms, it is desirable that internal auditors and those with an interest in control issues ensure that implementation of the BSC includes a control dimension.

6.4.3 The Balanced Scorecard and Internal Audit

6.4.3.1 Summary of Tests: Proposition 3

The BSC enhances the quality of audit work

Proposition 3 was tested by the responses to statements C3.11 and C3.12. (Table 6.3 refers). Agreement and strong agreement was 93%

and 92% respectively. As this statement was specifically designed for those with at least a partial awareness of the BSC the results exclude respondents with no knowledge of the BSC.

Chi-square results show that the responses are significant. (Table 6.4 refers)

Proposition 3.1

The BSC enables senior management to address qualitative ('soft') controls

This proposition was tested by responses to C3.3 and C3.4. Agreement and strong agreement was 82% and 88% respectively. (Table 6.3)

Chi-square results show that the responses are significant. (Table 6.4)

Proposition 3.2

The BSC can be linked to control objectives

This proposition was tested using statements C3.7 – C3.10. The responses show that a large majority of respondents who gave an opinion on these statements agreed/strongly agreed with them.

Table 6.6: Personal Awareness of BSC (C1)

	No.	%
None	28	18.18
Low	28	18.18
Medium	62	40.26
High	36	23.38

Table 6.7: Chi-square results C1

No.	Chi-square	Sig.
C1	20.234	.000

The chi-square of organisational awareness on the other hand showed that the responses were not significant. The distribution of responses to this statement shows that there is a very even spread over the four alternatives. No conclusions were drawn from this section of the results.

Table 6.8: Organisational Awareness of BSC (C2)

	No.	%
None	42	27
Low	35	23
Medium	48	31
High	29	19

Table 6.9: Chi-square results (C2)

No.	Chi-square	Sig.
C2	5.325	.150

Statements C3.1 – C3.12 were designed to assess specific issues regarding the internal auditor's role in strategic management. All statements were designed to measure opinions rather than factual statements. The chi-square results show that all the responses are significant. (Table 6.4)

As all these responses were significant, the proposition is supported.

6.4.3.2 Conclusions

Despite the insignificant chi-square of organisational awareness (Table 6.9), there is still sufficient evidence that overall that the propositions can be supported. Organisational awareness is divided approximately between none/low awareness and medium/high awareness, but that may be due to the relative novelty of the BSC.

The strong support and positive statements about the BSC support the proposition that it supports internal audit work.

There is strong evidence that respondents consider the BSC to enable both quantitative and qualitative issues, and financial and nonfinancial systems to be addressed. In practical terms, the support for the linkage of the BSC with control objectives means that internal audit reviews can be directly linked with strategic objectives and targets

Finally, there was strong support for the view that the BSC supports corporate governance.

6.4.4 Control Models

6.4.4.1 Summary of Tests: Proposition 4

Control models enhance the ability of auditors to address both qualitative and quantitative systems

This proposition was tested by statements D5 and D7 – D10 of Section D. Table 6.10 refers). Statement D7 assesses a negative response to the issue of auditing financial operations.

Table 6.10: Section D

No.	Statement	A/SA No.	A/SA %	D/SD No.	D/SD %
D1	My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives	72	48	79	52
D2	Control models are used widely in my organisation	52	34	98	66
D3	Control models provide an effective basis for control system reviews	140	93	10	7
D4	Control models enable objective review and evaluation of control systems	140	93	10	7
D5	Control models support a risk-based approach to auditing	142	93	10	7
D6	Control models improve the levels of compliance with corporate governance frameworks	129	92	12	8
D7	Internal auditors in my organisation review financial systems only	10	7	138	93
D8	Internal auditors in my organisation address qualitative issues in their work (for example, communication, management information, ethical issues, equal opportunities)	125	85	23	15
D9	Reviewing and reporting on qualitative controls improves the level of assurance sought by management	146	97	4	3
D10	Senior management in my organisation actively require reviews of qualitative areas	91	63	54	37

Table 6.11: Chi-square results Section D

No.	Statements	Chi-square	Sig.
D1	My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives	71.098	.000
D2	Control models are used widely in my organisation	88.510	.000
D3	Control models provide an effective basis for control system reviews	233.451	.000
D4	Control models enable objective review and evaluation of control systems	259.922	.000
D5	Control models support a risk-based approach to auditing	244.353	.000
D6	Control models improve the levels of compliance with corporate governance frameworks	178.941	.000
D7	Internal auditors in my organisation review financial systems only	222.863	.000
D8	Internal auditors in my organisation address qualitative issues in their work (for example, communication, management information, ethical issues, equal opportunities)	164.235	.000
D9	Reviewing and reporting on qualitative controls improves the level of assurance sought by management	265.451	.000
D10	Senior management in my organisation actively require reviews of qualitative areas	67.804	.000

All responses to Section D were found to be significant, and proposition 4 is supported.

Proposition 4.1

A high awareness of control models positively supports corporate governance

This proposition was tested by statements D1, D3, D4 and D6. All chi-square results were significant and the proposition is supported.

Proposition 4.2

Corporate governance is enhanced when both qualitative and quantitative controls are addressed

This proposition was tested by statements D6, and D8 – D10. All chi-square results were significant and the proposition is supported.

6.4.4.2 Conclusions

The results of all the tests for Proposition 4 are significant. While responses to the general statements regarding awareness and implementation of control models are reasonably balanced, the responses to specific questions show much stronger views.

The importance of addressing qualitative issues was strongly supported, with a small minority of respondents stating that only financial systems were subject to review, and a significant majority of respondents stating that the review of qualitative areas was actively sought by their senior management.

It can be inferred from these responses that control models are seen by internal auditors as an essential element in carrying out their work.

6.4.5 Control Models and CSA

6.4.5.1 Summary of Tests: Proposition 5

Successful implementation of CSA is enhanced when control models are used

This proposition was tested by selecting respondents who agreed/strongly agreed with statements D1 – D4 regarding their levels of awareness of control models, and analysing their responses to statements in Section F6, regarding CSA implementation. Respondents were asked to indicate whether CSA implementation was unsuccessful, partially successful, successful or very successful.

Statement D1: *My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives*

Slightly more than half of those respondents whose organisations had a high awareness of control models considered CSA implementation to be successful or very successful. The chi-square result was significant.

Table 6.12: Agree/Strongly agree D1 and F4 (67 respondents)

F4 Response	No	%
Unsuccessful	6	9.00
Partially Successful	27	40.30
Successful	22	32.84
Very Successful	12	17.91

Table 6.13: Chi-square results, D1/F4

Chi Square	Sig.
16.164	.001

Statement D2: *Control models are used widely in my organisation*

Again, slightly more than half of respondents considered CSA implementation to be successful or very successful. The chi-square result was significant.

Table 6.14: Agree/Strongly agree D2 and F4 (48 respondents)

F4 Response	No	%
Unsuccessful	3	6.25
Partially Successful	18	37.50
Successful	16	33.33
Very Successful	11	22.92

Table 6.15: Chi-square results D2/F4

Chi Square	Sig.
11.167	.011

Statement D3: *Control models provide an effective basis for control system reviews*

42% of respondents who considered control models to be an effective base for control system reviews also considered CSA implementation

to be successful or very successful; only 16% considered it to be unsuccessful. The chi-square result was significant.

Table 6.16: Agree/Strongly agree D3 and F4 (125 respondents)

F4 Response	No	%
Unsuccessful	20	16.00
Partially Successful	52	41.60
Successful	34	27.20
Very Successful	19	15.20

Table 6.17: Chi-square results D3/F4

Chi Square	Sig.
22.872	.000

Statement D4: *Control models enable objective review and evaluation of control systems*

Responses for this statement were similar to D3, with approximately 42% considering CSA implementation to be successful or very successful, and 16% to be unsuccessful. Chi-square results were significant.

Table 6.18: Agree/Strongly agree D4 and F4 (130 respondents)

F4 Response	No	%
Unsuccessful	20	15.38
Partially Successful	55	42.30
Successful	35	26.92
Very Successful	20	15.38

Table 6.19: Chi-square results, D4/F4

Chi Square	Sig.
25.385	.000

Proposition 5.1

Control models improve the effectiveness of internal auditors

This proposition was tested by statements D3, D4, D5, and D9. All chi-square results were significant and the proposition is supported. (Table 6.19 refers).

D3: *Control models provide an effective basis for control system reviews*

D4: *Control models enable objective review and evaluation of control systems*

D5: *Control models support a risk-based approach to auditing*

D9: *Reviewing and reporting on qualitative controls improves the level of assurance sought by management*

Proposition 5.2

Control models provide a benchmark for the evaluation of corporate governance

This proposition was tested by statements D6 and D9. Both chi-square results were significant and the proposition is supported. (Table 6.20 refers).

D6: Control models improve the levels of compliance with corporate governance frameworks

D9: Reviewing and reporting on qualitative controls improves the level of assurance sought by management

Additional Tests

In the interests of completeness, an analysis was carried out of respondents who disagreed/strongly disagreed with Section D statements. Responses were all significant, apart from those between Statements D4 and E1 – 4, and D5, E2 and E3, D6 and E4 – E5, and D9 and E1-4. Statements D4 and D5 refer to positive benefits of CSA, and E1 – 4 to the effectiveness of CSA. It is not possible to support an assertion that these two aspects of control models have a negative association with CSA practice. (Table 6.20 refers).

Table 6.20: Disagree/Strongly Disagree Section D Statements

	1		2		3		4		5		6		7		8		9		10	
No.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.	Chi Sq.	Sig.
E1	98.911	.000	121.245	.000	6.200	.045	1.800	.180	6.200	.045	4.500	.105	188.391	.000	17.304	.000	.000	1.000	70.111	.000
E2	103.772	.000	140.653	.000	9.800	.007	1.800	.180	1.600	.206	4.500	.105	208.739	.000	20.957	.000	1.000	.317	75.000	.000
E3	66.861	.000	79.980	.000	6.200	.045	1.600	.449	3.800	.150	1.500	.472	126.913	.000	12.565	.000	1.000	.317	39.000	.000
E4	64.582	.000	94.367	.000	6.200	.045	1.600	.449	9.800	.007	1.500	.472	159.826	.000	10.783	.005	.500	.779	52.333	.000

6.4.5.2 Conclusions

These results show that organisations that have a high awareness of control models also report at least partial success in the implementation of CSA, with only 16% of respondents reporting unsuccessful implementation.

The results also show that the effectiveness of internal audit is enhanced when control models are used. This in turn leads to better assurance to senior management. It is clear that high awareness and use of control models can be seen as a strong foundation for successful CSA implementation. Given the results from this study, it is not possible to extend this argument to state that low awareness and implementation of control models causes poor CSA implementation, although there are sufficient indications that this is likely.

6.4.6 Control Models, CSA and Risk Assessment: Proposition 6

6.4.6.1 Summary of Tests: Proposition 6

Assessing risk and controls through CSA is most effective when the process is based on control models

Proposition 6 was tested by measuring the opinion of respondents who agreed or strongly agreed with statements on control models use

(Statements D1 – D5) and the level of success of CSA implementation (Statement F5).

The chi-squares show that the responses were all significant.

Table 6.21: Control Models and CSA Implementation: Chi-squares

No.	Statement	Chi-square	Sig.
D1	My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives	16.164	.001
D2	Control models are used widely in my organisation	11.167	.011
D3	Control models provide an effective basis for control system reviews	22.872	.000
D4	Control models enable objective review and evaluation of control systems	25.385	.000
D5	Control models support a risk-based approach to auditing	25.220	.000

More than 90% of organisations that had a high awareness of control models reported at least partial success in implementing CSA, with more than 50% reporting that it was successful or very successful.

Where control models were widely used, more than 90% reported at least partial success in implementing CSA, with 56% reporting that it was successful or very successful.

Respondents who agreed that control models provide an effective basis for control system reviews reported at least partial success in 84% of

implementations, with more than 40% reporting that it was successful or very successful.

Respondents who supported the proposition that control models enable objective review and evaluation reported at least partial success in 85% of implementations, with 42% reporting it to be successful or very successful.

Finally, those that agreed with the proposition that control models support a risk-based approach to auditing reported at least partial success in 84% of implementations, with 42% reporting it to be successful or very successful.

Table 6.22: Control Models and CSA Implementation: Summary of Responses

	U		PS		S		VS	
	No.	%	No.	%	No.	%	No.	%
D1	6	9.0	27	40.3	22	32.8	12	17.9
D2	3	6.25	18	37.5	16	33.3	11	22.9
D3	20	16.0	52	41.6	34	27.2	19	15.2
D4	20	15.4	55	42.3	35	26.92	20	15.4
D5	20	15.7	54	42.5	34	26.8	19	15.0

Table 6.23: Responses to Section D

No.	Statement	Chi-square	Sig.
D1	My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives	71.098	.000
D2	Control models are used widely in my organisation	88.510	.000
D3	Control models provide an effective basis for control system reviews	233.451	.000
D4	Control models enable objective review and evaluation of control systems	259.451	.000
D5	Control models support a risk-based approach to auditing	244.353	.000
D6	Control models improve the levels of compliance with corporate governance frameworks	178.941	.000
D7	Internal auditors in my organisation review financial systems only	222.863	.000
D8	Internal auditors in my organisation address qualitative issues in their work (for example, communication, management information, ethical issues, equal opportunities)	164.235	.000
D9	Reviewing and reporting on qualitative controls improves the level of assurance sought by management	265.451	.000
D10	Senior management in my organisation actively require reviews of qualitative areas	67.804	.000

Given that the chi-square tests showed all responses to be significant, the proposition is supported.

Proposition 6.1

Reviews of qualitative controls improve the level of assurance provided to management by internal auditors

This proposition was tested by measuring the opinions of respondents who agreed or strongly agreed with statement D10 (*Senior management in my organisation actively require reviews of qualitative areas*) and with statement F6 on the successful implementation of CSA:

Table 6.24: Control Models: Chi-square of Qualitative Reviews and CSA Implementation

Chi-square	Sig.
14.205	.003

As the chi square is significant, it can be inferred that there is a link between support for qualitative reviews and successful implementation of CSA. Table 6.25 shows the result of the test. Of the 83 respondents who agreed/strongly agreed with the statement on management support of control models, only 13.3% have not repeated CSA. The remaining 86.7 have repeated CSA at least once.

Table 6.25: Control Models and CSA Implementation

How many times has CSA been repeated?	No.	%
Never	11	13.3
Once	32	38.6
Twice	26	31.3
More than twice	14	16.9

Proposition 6.2

CSA enables qualitative objectives and targets to be measured

This proposition was tested by statements E1 - E3. The majority of respondents agreed or strongly agreed with these statements: 88% (E1), 90% (E2) and 79% (E3). As the chi-squares were all significant the proposition is supported.

Table 6.26: Responses to Section E

No.	Chi-square	Sig.
E1	209.506	.000
E2	219.519	.000
E3	147.831	.000
E4	171.792	.000

Proposition 6.3

CSA workshops can address strategic as well as operational issues

This proposition was tested by responses to statement E3. The respondents agreed or strongly agreed in 79% of cases, and the chi-square was significant. The proposition is supported.

6.4.6.2 Conclusions

From these results it is clear that there is strong evidence that control models are a significant component of CSA. Furthermore, the use of control models has a positive effect on the ability of internal auditors to address and evaluate qualitative objectives and targets.

It is also apparent that CSA is not considered to be a replacement for operational level internal audit work, and that it can also be seen as a tool for strategic management.

The conclusions for this proposition link strategy, control models and CSA practice. Internal auditors have a potentially pivotal role in linking strategic and tactical objectives with their review at an operational level. This may be best achieved through using control models such as CoCo and COSO as the basis not only for CSA activities, but also in setting corporate governance policies.

6.4.7 CSA and Facilitation:

6.4.7.1 Summary of Tests: Proposition 7

CSA workshops are most effective when facilitation is used

This proposition was tested by responses to statements G1 – G7 of the questionnaire, which addressed CSA Practice. All statements measured opinion.

Table 6.27: Responses to G1 – G7

No.	Statement	A/SA %	D/SD %
G1	CSA workshops are most effective when facilitation is used	99	1
G2	Facilitated CSA workshops provide clear structures and objectives	98	2
G3	Facilitation encourages participants to address the whole range of risks and controls in their systems	98	2
G4	Facilitation is a skill which requires specific training	94	6
G5	Internal auditors can provide effective facilitation	97	3
G6	Rigid management of workshops has a negative influence on participants	77	23
G7	CSA workshops are most effective when they are based on control models	64	36

The majority of respondents agreed or strongly agreed with the statements.

Table 6.28: Chi-square results: G1 – G7

No.	Statement	Chi-square	Sig.
G1	CSA workshops are most effective when facilitation is used	224.275	.000
G2	Facilitated CSA workshops provide clear structures and objectives	199.686	.000
G3	Facilitation encourages participants to address the whole range of risks and controls in their systems	191.412	.000
G4	Facilitation is a skill which requires specific training	197.922	.000
G5	Internal auditors can provide effective facilitation	208.157	.000
G6	Rigid management of workshops has a negative influence on participants	77.294	.000
G7	CSA workshops are most effective when they are based on control models	57.569	.000

The chi-square results were all significant.

Proposition 7 is directly evaluated by Statement G1, and it is clear that this is supported.

Proposition 7.1

Facilitation provides clear structures and objectives for CSA workshops

This proposition was tested by responses to statement G2. As the responses showed strong support, and the chi-square was significant the proposition can be supported.

Proposition 7.2

Facilitated workshops enable participants to address a range of risks and controls in their systems

This proposition was tested by responses to statement G3. As the responses showed strong support, and the chi-square was significant the proposition can be supported.

Proposition 7.3

Internal auditors can provide effective facilitation

This proposition was tested by responses to statements G4 – G6. As the responses showed strong support, and the chi-square was significant the proposition can be supported.

6.4.7.2 Conclusions

The responses to these statements clearly show the importance of facilitation, and further support the contribution of control models. Facilitation is perceived as key to successful CSA practice, as it provides structure and objectives to participants. While internal auditors are able to provide facilitation, it is not something that can be done without specific training.

Facilitation is also seen as an important factor in workshop participants addressing the whole range of risks and controls, a factor that would improve the quality of assurance to be provided to senior management. However, it is also perceived that rigid control of workshops has a negative effect on CSA practice.

6.4.8 CSA and Anonymity

6.4.8.1 Summary of Tests: Proposition 8

CSA workshops are most effective when anonymity is assured

This proposition was tested by statements G8 – G10. The majority of respondents agreed/strongly agreed with the statements.

Table 6.29: Summary of Section G Responses

No.	Statement	A/SA %	D/SD %
G8	Anonymity enhances the effectiveness of CSA workshops	78	22
G9	Anonymity increases the likelihood of open and frank discussion	78	22
G10	Anonymous discussions enable a wide range of views to be heard	84	16

All the responses to these statements were significant, and the proposition is supported.

Table 6.30: Chi-squares results: G8 - 10

No.	Statement	Chi-square	Sig.
G8	Anonymity enhances the effectiveness of CSA workshops	59.647	.000
G9	Anonymity increases the likelihood of open and frank discussion	59.569	.000
G10	Anonymous discussions enable a wide range of views to be heard	77.686	.000

Proposition 8.1

IT support tools that support workshops enhance the effectiveness of CSA workshops

Proposition 8.1 was measured by responses to statement G11. 68% of respondents agreed/strongly agreed with the statement.

Table 6.31: G11 Responses

No.	Statement	A/SA %	D/SD %
G11	CSA workshops are most effective when IT support tools that enable anonymity are used	68	32

Table 6.32: Chi-square results: G11

No.	Statement	Chi-square	Sig.
G11	CSA workshops are most effective when IT support tools that enable anonymity are used	23.059	.000

The chi-square showed the response to be significant. A clear majority of respondents see anonymity as a benefit to CSA practice.

Proposition 8.2

Anonymity encourages a full discussion of issues in workshops

This proposition was tested by statements G9 – G11. The majority of respondents agreed/strongly agreed with the statements and the chi-squares showed that the responses were significant.

6.4.8.2 Conclusions

Anonymity is strongly supported by respondents, as are support tools that can assist in achieving it. Chi-square results show that all responses are significant.

A large majority of respondents saw IT support tools as an aid to anonymity. It is likely that facilitated meetings supported by IT tools will provide the best environment for CSA workshops.

6.5 Chapter summary

All the research propositions were supported by the evidence derived from the statistical analysis. A full discussion of the conclusions and implications forms Chapter 7.

Chapter 7

Summary, Conclusions, and Implications

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7.1 Introduction

This chapter summarises the findings of the research, presents the conclusions to be drawn from the results and finally suggests areas for future research.

7.2 Summary of Research Findings

The propositions addressed three levels of management: strategic, tactical and operational. Each level was linked to the Balanced Scorecard, control models and CSA respectively. A continuing thread in the construction of the propositions was that internal audit work has a role to play in strategic management, and that there were potential linkages between the BSC, control models and CSA

The results of the testing show that there is strong evidence of the following:

- Internal audit activities should include strategic issues; indeed, this is already the case in many organisations (Proposition 1)
- The BSC is an effective foundation for internal audit activities, and a high awareness of the BSC is beneficial to control activities and corporate governance (Proposition 2)
- The BSC enables qualitative and nonfinancial objectives to be addressed as well as quantitative and financial objectives (Proposition 3)
- The BSC enables strategic issues and the work of internal audit to be integrated through the relationship of the BSC to control objectives (Proposition 3)
- Assuring senior management on qualitative issues and targets is an integral part of internal audit work (Proposition 4)
- Control models are very important to internal audit work (Proposition 4)
- A high awareness of control models can be linked with successful implementation of CSA (Proposition 5)

- Internal audit work is more effective when control models are used (Proposition 5)
- Control models are an important component of CSA, and they enable internal auditors to assess qualitative objectives and targets (Proposition 6)
- While CSA is not a replacement for internal audit work at the operational level, it can be used to enhance their work with strategic management (Proposition 6)
- Facilitation is a vital element of successful CSA, especially when used in conjunction with control models but this should not necessarily be an internal audit role. Training in facilitation skills is seen as vital, whoever is involved in facilitation (Proposition 7)
- Anonymity enhances the effectiveness of CSA workshops; IT support tools can assist in assuring anonymity (Proposition 8)

7.3 Conclusions

The conclusions of the research can be summarised as follows:

- Adoption of the BSC has a positive effect on enabling internal auditors to become involved in strategic management
- A high organisational awareness of the BSC coupled with a high knowledge and use of control models leads to more successful and effective implementation of CSA
- The BSC can enable management to set and review targets and objectives that include quantitative and qualitative, and financial and nonfinancial systems
- Control models are a vital element of successful CSA
- CSA can enable all levels of management to become involved in corporate governance and control activities.

7.4 Implications

The research has implications for the role and position of internal auditing in the three levels that were addressed:

7.4.1 Internal auditing and strategy (Proposition 1)

It is clear that internal auditors already make a contribution to strategic management. While the effectiveness of this involvement was outside the scope of this research, the fact that internal auditors perceive themselves as having this role has a major implication for the future of their role.

It was also clear that internal auditors report on and provide assurance on nonfinancial areas to senior management. There were strong levels of support for nonfinancial controls and targets to be addressed as well as traditional financial and operational areas. Respondents were confident that involvement in strategic management positively benefited the quality of management activity at that level. This has implications for corporate governance practice, where it would be desirable to include nonfinancial issues in annual reports.

7.4.2 The BSC (Propositions 2 and 3)

Three major implications were identified through the research. Firstly, it was shown that the BSC can provide a foundation for internal audit activities. Because the BSC ensures that organisations address performance across a

broad range of qualitative and quantitative measurements of performance, the organisation by definition includes qualitative objectives and measurements. This is seen by the majority of respondents as beneficial to the work of internal auditors. Secondly, it is clear that a high awareness of the BSC for both internal auditors and their organisations is seen as beneficial and effective. Internal auditors should ensure that they are fully prepared for any potential implementation of the BSC. Finally, the research shows that the BSC would enable internal audit work to be integrated into the strategic focus of the organisation through linking internal audit's targets and measurement criteria (control and audit objectives) with the elements of the BSC. In particular, this enables the full range of quantitative and qualitative systems and targets to be reviewed.

7.4.3 Qualitative issues (Proposition 4)

It is clear from the research that a significant proportion of internal auditors already provide assurance to their senior management on qualitative issues. As well as the implications for involvement with the BSC, this shows that effective internal audit should address all aspects of an organisation. While in itself this is not a new finding, there are substantial implications for corporate governance practice and reporting.

7.4.4 Control models (Propositions 4, 5 and 6)

There are three main implications for the use of control models. Firstly and most simplistic, is that they are considered to be useful to the work of internal auditors and make their work more effective. This is because they enable logical and structured practice that can be linked with the strategic objectives of organisations. Secondly, the research showed a high level of support for a link between successful implementation of CSA and the use of control models. Finally, control models link CSA practice with the ability to evaluate qualitative objectives and targets.

7.4.5 CSA implementation (Proposition 6)

CSA is not considered to be a replacement for traditional internal auditing at the operational level but does have a potential application with strategic management. Internal auditors must ensure that CSA is not implemented as a means of reducing the costs of traditional internal audit activities, but rather is used as a method for adding value to control and corporate governance activities at all levels.

7.4.6 Facilitation and anonymity (Propositions 7 and 8)

These propositions were based on the premise that facilitation and anonymity were key elements of CSA practice, and the research supported these arguments. Interestingly, facilitation was seen as being particularly effective

when it was linked with control models; this further supports the importance of control models to internal audit work. It is likely that facilitation is among the most important elements of successful CSA practice, as the research showed that a trained facilitator was more important than whether or not they were internal auditors. Anonymity is vital to successful CSA. Again, IT tools although useful, were not perceived to be fundamental. Internal auditors and others involved in CSA practice should ensure that discussions are kept confidential. The use of IT tools is likely to grow as the technology becomes more widely available and cost effective.

7.5 Areas for Future Research

This research project was primarily focused on three main areas: strategy and the BSC, control models, and CSA. There are key issues that should be of interest to future researchers in all three areas.

7.5.1 Strategy and the BSC

The contribution that internal audit can make to controlling strategy

Very few authors have addressed the issue of control and strategy. As it is a function of top management, the perception is that control of the activities of this level of management should be based on rewards rather than through systematised measures. This viewpoint may be correct, but without specific investigation it is not a proven fact.

The BSC and potential links to organisation-wide corporate governance systems

With the BSC moving to a generally accepted and maturing management tool there are opportunities for researchers to investigate how it can be linked to corporate governance systems, in particular those that enable management to derive qualitative information about their operations.

Adding a control element to the basic BSC model

The Kaplan and Norton model addresses four main elements. Adding a control element would enable control to become a systemic activity rather than an additional layer of management. This would also encourage management to include qualitative measures in their assessment of the effectiveness of the organisation's systems.

7.5.2 Control models

Control models in Information Systems

Extant specific standards and publications exist that may potentially be used as control models for IS. In particular, the Control Objectives for IT (COBIT) published by the Information Systems Audit and Control Association (ISACA) appears to be appropriate.

Control models and CSA practice

CSA has been addressed primarily in professional literature, but is under-researched in academic studies. Given the high levels of agreement that control models are a vital component of CSA there is an opportunity to evaluate the rigour of this position.

7.5.3 CSA practice

CSA and senior management

CSA is generally perceived as an operational level activity, replacing or enhancing the work of internal auditors. Some respondents to the survey also include their senior management in workshop activities. There may be opportunities to investigate whether senior management participation improves the effectiveness of corporate governance, management communication and control systems.

The use of IT support in CSA workshops

While facilitation was seen by most respondents to be the key issue in workshop practice, the increasing availability of IT tools that enable anonymity may be an effective means of improving the quality of both process and output of workshops.

7.5.4 Replication of the research

Given the specific focus of this research to and the evolving membership of the CSA Center there is a good case for replicating this study using a different methodology. This could take one of the following forms:

- Further surveys of the CSA Center
- Enlarging the survey to address the whole membership of IIA Inc.
- Using case studies in a number of representative organisations

**Re-engineering Internal Audit: Strategy and Control, Control
Models and Control Self Assessment**

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Part 2

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Appendix A

Survey Letters and Questionnaire

Letter for First Mailing (Postal and email)

3rd July 2000

Dear Colleague

Control Self Assessment Questionnaire

The Centre for Internal Auditing at City University Business School is carrying out a major survey of the IIA CSA Center, as part of our continuing research into Control Self Assessment (CSA). Attached to this letter is a questionnaire which addresses key issues for those interested or actively involved in CSA. This questionnaire should not take more than 10 – 15 minutes to complete and will enable us to gain valuable information about the future direction of audit. As the questions seek to evaluate individual attitudes and opinions, please answer it even if a colleague has also received one.

Please return your completed for to my research assistant, , by fax,
(+44 (0) 20 7477 8717) or post to:

Centre for Internal Auditing, City University Business School, Barbican
Centre, London, EC2Y 8HB, UK

If you have any questions regarding completion of the questionnaire, please contact me by email, fax or telephone. If you have any problems opening the attached file, please email us at CIA-Research@city.ac.uk or call us on +44 (0) 20 7477 8646.

Thank you very much for sparing the time to support our research work.

Yours sincerely

Robert Melville
Director, MSc Internal Auditing and Management

Letter for second mailing

26th July 2000

Dear Colleague

Control Self Assessment Survey

Earlier this month we sent you a questionnaire which was designed to help the Centre for Internal Auditing at City University Business School to continue our research into Control Self Assessment (CSA). If you have already completed and sent this questionnaire, please accept my thanks and apologies for troubling you again. If you have not, please spare a few minutes to do so, as the quality of information which can be derived from surveys carried out on this scale is greatly improved with a high response rate.

We expect the results to be ready in draft form by September, so a response by the end of this month is ideal. Even if you cannot meet this deadline, your response is still important, as we will be continuously monitoring responses throughout the summer.

Please fax the completed survey to us at + 44 20 7477 8717, or post to the Centre for Internal Auditing, CUBS, Barbican Centre, London EC2Y 8HB, UK. If you would prefer to use email, please contact at cia-research@city.ac.uk and she will send you the email version.

Yours sincerely

Robert Melville
Director, MSc Internal Auditing and Management

Contact details:

, + 44 (0) 20 7477 8717 (fax)
Centre for Internal Auditing, City University
Business School, Barbican Centre, London
EC2Y 8HB, UK.
cia-research@city.ac.uk

QUESTIONNAIRE FOR CSA CENTER MEMBERS

This questionnaire is being sent to all members of the IIA CSA Center. As the questions are targeted at individual responses, please complete it even if a colleague has also received one. All data collected will be aggregated, and be kept strictly confidential. No individual respondent or organisation will be identifiable from any published results.

Please complete the form by placing an 'X' in the appropriate box, and by inserting your views where requested. Please return the completed questionnaire via email, fax or post.

Section A: Background

1. About yourself and your organisation

Name:	
Job Title:	
Organisation:	

Headquarters of organisation (city and country):	
---	--

2. Main business of organisation: (Mark one:)

financial services	
manufacturing/oil	
chemicals	
government	
education/training	
not for profit	
assurance services/ external audit	
consultancy	
conglomerate	
other (please specify)	

3. Number of employees in your organisation

Micro	< 1,000 (please specify)	
Small	1,000 - 2,999	
Medium	3,000 – 7,499	
Large	7,500 – 9,999	
Very large	> 10,000 Please Specify	

Are you <i>currently</i> employed as an internal auditor?	Yes: (please go to Question 4)	No: (please go to Question 5)
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4. Questions for Internal Auditors

Your audit department

Number of years employed in audit:		
With this employer:		
Number of internal auditors employed in your audit department:		

Please go to Section B

5. Questions for Non-Internal Auditors

a) Your experience of auditing (internal and external). Please state number of years:

In total:	
With this employer:	

b) Primary duties:

external auditing/assurance services	
CSA consultancy	
other consultancy	
education and training	
other (please specify)	

Section B: Audit and Strategy

Based on your experience please indicate the extent to which you agree or disagree with the following statements about strategy and audit as they apply in your organisation:

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

		SD	D	A	SA	DK
1	Internal auditors make a positive contribution to strategic management					
2	Internal auditors make an active contribution to the development of strategic objectives					
3	Internal auditors are actively involved in evaluating the effectiveness of strategic decisions					
4	Senior management have clear and measurable performance targets					
5	Internal auditors review the performance of senior managers					
6	Objectives for senior managers include both financial and nonfinancial targets					
7	Senior internal audit staff have regular contact with senior management who are responsible for developing and monitoring strategy					

Section C: Awareness and Use of the Balanced Scorecard (BSC)

1. Your personal awareness of the BSC is:

High (good knowledge of key texts, attendance at training courses, direct experience of working with BSC)	
Medium (aware of BSC, but no direct experience or detailed knowledge of key texts)	
Low (little awareness of BSC at any level)	
No awareness or knowledge	

2. Your organisation's awareness of BSC is:

High (your organisation has implemented the BSC)	
Medium (your organisation has some awareness, has investigated the potential benefits, at least one senior manager is aware of the BSC)	
Low (little awareness)	
None (If you mark this box, please go to Section D)	

3. Please indicate the extent to which you agree or disagree with the following statements.

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

The BSC:

		SD	D	A	SA	DK
1	Enables management to address both financial and nonfinancial objectives					
2	Encourages better use of management information					
3	Enables management to assess the whole range of risks in their systems					
4	Encourages senior management to address qualitative ('soft') controls					
5	Provides benefits that are objectively clear and measurable					
6	Can be adapted to my organisation's needs					
7	Can be used to address corporate governance and control issues.					
8	Can be adapted to include issues relevant to audit and control					
9	Enables the effective use of control frameworks					
10	Can be linked to control objectives					
11	Is a useful tool for audit purposes					
12	Provides information useful for control evaluation by auditors					

Section D: Control Models

Please indicate the extent to which you agree or disagree with the following statements about Control Models:

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

		SD	D	A	SA	DK
1	My organisation has a high awareness of control models; we have integrated the objectives of COSO/CoCo/Hampel into our corporate directives					
2	Control models are used widely in my organisation					
3	Control models provide an effective basis for control system reviews					
4	Control models enable objective review and evaluation of control systems					
5	Control models support a risk-based approach to auditing					
6	Control models improve the levels of compliance with corporate governance frameworks					
7	Internal auditors in my organisation review financial systems only					
8	Internal auditors in my organisation address qualitative issues in their work (for example, communication, management information, ethical issues, equal opportunities)					
9	Reviewing and reporting on qualitative controls improves the level of assurance sought by management					
10	Senior management in my organisation actively require reviews of qualitative areas					

Section E: General CSA Questions

Please indicate the extent to which you agree or disagree with the following statements about CSA:

(Key: SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral)

		SD	D	A	SA	DK
1	CSA workshops increase the effectiveness of evaluation of control systems at all levels of management					
2	CSA is an effective method for assessing risks and controls in organisation-wide processes					
3	CSA is best used to determine levels of risk and control in specific operations					
4	CSA is an effective method of addressing strategic level issues					

Section F: Questions about CSA Implementation

1. How long have you used CSA in your organisation?

< 12 months	
13 – < 24 months	
24 – < 36 months	
> 36 months	

2. How many times has CSA been repeated?

Never	
Once	
Twice	
More than twice (Please specify)	

3. Who is involved in CSA: (Tick all that apply)

Internal auditors	
External auditors	
Consultants	
Users	

4. How is CSA used?

As a replacement for ALL traditional internal audits	
As part of traditional audit activities	
As a special exercise	

5. How much of your planned annual audit activity is allocated to CSA?

<25%	
26 - < 50%	
50 - < 75%	
>75%	

6. How far do you consider implementation of CSA in your organisation to have been successful?

Unsuccessful	
Partially successful	
Successful	
Very successful	

7. If CSA implementation was successful, please rank the following factors:

(Key: *Highest = 1, Lowest = 4*)

1	Management support at top level	
2	Users were included in the preparation	
3	Participant training was effective	
4	Positive image of internal auditors	

Please specify any further success factors:	
---	--

Section G: Questions on CSA Practice

Based on your own experience, please indicate the extent to which you agree or disagree with the following statements about CSA Practice:

(Key: *SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree; DK = Don't Know/Neutral*)

		SD	D	A	SA	DK
1	CSA workshops are most effective when facilitation is used					
2	Facilitated CSA workshops provide clear structures and objectives					
3	Facilitation encourages participants to address the whole range of risks and controls in their systems					
4	Facilitation is a skill which requires specific training					
5	Internal auditors can provide effective facilitation					
6	Rigid management of workshops has a negative influence on participants					
7	CSA workshops are most effective when they are based on control models					
8	Anonymity enhances the effectiveness of CSA workshops					
9	Anonymity increases the likelihood of open and frank discussion					
10	Anonymous discussions enable a wide range of views to be heard					
11	CSA workshops are most effective when IT support tools that enable anonymity are used					

Section H: Further Information and Contact Details

Please add any specific or general comments on the issues raised in this questionnaire that you feel have not been sufficiently addressed. (Please use more space if it is necessary).

Would you be willing to take part in a short telephone interview to cover specific areas of the survey in more detail?

Yes	Telephone
-----	-----------

Thank you for taking the time to complete this questionnaire. If you would like to receive a copy of the results, please tick.

Yes	Email address	
	Postal address	

If you have any queries about this questionnaire, or if you would like to know more about the research activities at the Centre for Internal Auditing please contact me.

**Rob Melville, Centre for Internal Auditing, City University Business School,
London EC2Y 8HB, UK**

Please return to me via email: cia-research@city.ac.uk
or by fax, + 44 (0) 20 7477 8717

Appendix B

Section H: Additional Information: Summary of points made by respondents

These comments were elicited in order to collect respondents' opinions and suggestions for future projects, and to add completeness. Each respondent can be identified through their Survey ID, and further work may include interviews and case studies.

Survey ID	Comments
2	I have confined my comments (primarily) to the client where I am the consultant internal auditor that applies 'CSA' primarily to assess risks (and the need for control). In addition, I have a significant experience in CSA from at least two difference methodologies (my own and PDK's) and it is this experience that I have drawn on to complete the latter stages of the survey. My feeling is that there is so much diversity in CSA practice that 'themes' will be hard to define. For example, many people think that CSA can/need only relate to pen and paper (or electronic equivalent) surveys/questionnaires and go no further than that. Others use 'CSA' to develop audit plans and not for control improvements. I don't know how those people will respond to your survey. Practitioners have widely differing views about what constitutes 'facilitation' and can vary from the inept amateur to the competent professional.
5	My current organisation does not use CSA, and therefore I have not addressed these questions. I consider CSA and BSC to be generic names that encompass a number of possible tools. Therefore, when talking in the abstract, without a specifically defined approach, it was difficult to address some of the questions.
10	CSA must be implemented slowly, with clients that want to try it.
14	Section C – our company has developed their own BSC and that is what my answers are based on. If you are suggesting a specific BSC model then my answers for: #1 = No awareness or knowledge #2 = None, therefore answers in #3 would not apply.

21	We are starting to use CSA techniques to bring together other assurance providers in a more collaborative way. For example, External auditors, are reserve auditors, environmental and internal auditors are sharing scope items and schedules so as to avoid overlap and gaps in coverage of significant risks. CSA has been explained to all the assurance providers listed above, as a desired way to effectively manage risks at the business process level, rather than waiting for an auditor to manage your risks for you.
36	Risks raised in CSA Workshops belong to 2 categories, either: • risks that can be influenced by the participants (they are the risk-owners); • risks that cannot be influenced by them (need help of higher hierarchy levels, cause for risks is in other departments/processes, etc.) Most risks risen in CSA Workshops belong to the 2nd category. This is dangerous, because the workshop becomes a “complaint” instead of a “self” assessment.
37	See my article “Taking Control” in the IIA’s <u>CSA Sentinel</u> (Volume 4 – Number 2 – May 2000). Our organisation is undergoing a transition. Fidelity & Deposit Companies are being merged into Zurich Financial Services United States operations (known as Zurich U.S.). I have become part of their regional audit group and assumed responsibility for the Zurich U.S. audit activities in the Baltimore, Maryland area. Janet Marsico (Co-author of <u>CSA Sentinel</u> article) and I are considered the regional audit group’s CSA resources.
43	The degree to which anonymity in workshops is necessary for effectiveness relates to the general openness in the organisational culture and the selection of the participants.
45	There is a need to define what you mean by CSA. It means different things to different people. Some consider checklists to be CSA, some consider facilitated sessions about controls to be CSA, and some consider assessment of business risks to be CSA. I don't think you can apply the answers to the questions above to all these CSA options equally. (It depends on which option you were thinking about.)
46	Our team within AT&T provides business control and process consulting services to the Local Network Services unit. We use CSA techniques extensively. Anonymity has not been a major issue. However, in my previous company in which I was part of the Audit Services department, we found that anonymity was important wherever there was great disparity in the rank of the participants AND a high degree of sensitivity or potential controversy regarding the area to be covered. In these instances, the use of IT tools that permitted anonymity were critical to the success of the session.
51	As an early pioneer of CSA in the US, the process has much more potential than most companies have recognised to date. CSA could have been a significant change in IA but mostly became just another tool. Enterprise Risk Management will now take off and go where CSA could not go, which will be at a much more strategic level in the organisation.

63	I am aware of CSA, and believe it can be a useful tool, however, I have a concern about implementation. It will require facilitator training, and buy in from the auditees. We have experienced employee turn over and organisational changes. I have questions on how we determine that we have the right players in a CSA session. In addition, I have questions on the extent we can rely on an understanding of what the process is thought to be compare to testing what the process is.
73	We are aware of CSA but have not used it much yet.
75	I answered questions based on my definition of CSA, which may or may not align with your intent. It is critical to establish a common definition when sending out a survey or talking with other practitioners. I have conversations frequently with other companies and consultants. Establishing a common ground is always the first step.
76	CSA techniques are just one tool we use for audits. CSA is also one tool used for strategic planning, but there are others that can be just as successful. Depends on culture and organisational structure, e.g. hierarchy. No questions on culture or environment. Malcolm Baldrige is also a control model. No mention of % of resources organisation has donated to CSA.
80	The reason(s) for an unsuccessful implementation was not pursued.
89	My responses to CSA relate to my experience with this 2 years ago. We were in the process of implementing a CSA program (with facilitated workshops) and had experienced some success when we received a new general auditor who did not wish to continue the program. For the last 18 months we have focused our management self assessment efforts on a questionnaire approach only.
95	My experience with CSA was with my previous organisation. Our successful implementation of CSA was a result of our significant investment in learning about the process and obtaining the appropriate training. All of the references suggested by the IIA for the CCSA exam (which I will be taking July 28) were read and discussed at weekly meetings by the internal audit staff. Initially we prepared ourselves by attending seminars and courses such as Joan Pastor's Basic Facilitation Training and later on Intermediate and Advanced Facilitation Training. Also, we attended courses sponsored by our organisation in change management, Myers Briggs Type Indicator, Conflict Negotiation Etc. Internal audit management became more open soliciting input and staff participation in the department's decision making process. Our staff was encouraged to participate on the various organisation wide teams representing internal audit. We would seek opportunities that gave us a chance to become involved with the whole organisation. We took every opportunity to sell CSA to the organisation. We presented the tool to upper and middle management and anyone that would listen. Because of the negative implications associated with the name control our process was called Facilitated Self Assessment (FSA). After several years of our FSA preparation our organisation began a High Performance Organisation initiative. We utilised the various opportunities that this initiative presented to participate in and facilitated various teams throughout the organisation. This was the perfect opportunity we had been preparing for. Internal audit became the change agents and the time was right to use our FSA skills and knowledge. Our training finally paid off. I prepared the FSA audit program based on the World Bank approach and successfully conducted several workshops before leaving the organisation to join Colonial Williamsburg. The synergy and success of the workshop was phenomenal. The workshop began with a brief introduction on internal control. I

	then facilitated using a SWOT analysis and other facilitation tools. The evaluations or feedback about the FSA workshops were overwhelmingly positive.
96	Keys to success are: • comfort with the CRSA process • ease of facilitator in front of a group • preparation (know process, objective and have a validated process map). For us, anonymity does not seem to be a need; our key to open and honest discussion is what we do with the results – that is, there are no reprisals for being “open and honest”. If a reprisal were to happen, we would have a “people treatment incident” and have a discussion with the manager.
102	Internal Audit is encumbered wherein we report through the Controller, through the Chief Financial Officer and Chief Executive Officer before discussions with the Board of Directors. I have been unable to persuade the Controller and CFO to consider CSA.
105	At Clarica, we have customised the CSA approach to better suit our environment. We use a facilitative risk assessment approach.
110	Our office is independent of the County organisation and includes an elected County Auditor and six staff. We perform performance audits only. We have explored using COCO, COSO and CSA as ways to communicate better with County organisations. The County is results oriented and incorporates performance measurement into the budgeting process.
114	Regulated industries have control frameworks or other governance requirements imposed.
117	Experience showed that co-facilitation is the answer. Facilitator should not be completely “separate” himself from the work group – rather be part of the team. It makes participation and buy-in so much easier.
135	Currently, we are only using CSA to a limited extent in our IT audits.
136	We do not plan separate time for CSA as it is a part of our audit process. CSA (as it is traditionally known) is performed by others outside of Internal Audit. We also believe that anonymous responses lack the clarity needed to provide appropriate corrective action in some cases.
137	Comments regarding the following questions: Section C: 1. I was the manager of the BSC Implementation Project for the Department. Therefore my awareness is much higher than most internal auditors in the Department. 2. BSC is in the early project implementation. Section F: 1. CSA has been used only by myself in the Southern Ontario Region. The process was not accepted by IA management at HQ. 6. I consider CSA only partially successful, because we were able to do it only in the region. Also, it has become clear that for it to become truly successful, we must be able to help teams fully develop the action plans that result from the CSA session.

	GENERAL Comments: I have had two distinctly different experiences with CSA. From 1993-1997, I was the Area Audit Director, Land Force Central Area (essential the Canadian Army, Ontario Region, about 25% of the Army). From 1998-2000, I have been with Canada Customs and Revenue Agency (CCRA), responsible for a similar audit universe (25% of the Agency/Department's resources), with a similar relationship to HQ. (I have moved back and forth between the two departments throughout my career, 3 times with National Defence, 4 times with CCRA, so I know their cultures very well). National Defence was very, very supportive of CSA. The Army really liked it, both senior officers and enlisted men. Therefore, it was well received by IA management. CCRA IA was not and is not as supportive of CSA, nor facilitation processes generally. The workshops we conducted in my region were well received by staff and operational management. I called them Risk Management Workshops because that was the only way I was allowed to conduct them. CCRA has conducted hundreds of risk management workshops whose objectives were to train staff on risk management and identify risks. I was able to meet these objectives without compromising the CSA session and the benefits for staff. I am now responsible for the Risk Management function nationally and hope that I can change some these views over time.
141	CSA has been used on one part of the business to supplement the branch audit activity. A quarterly process is in place which combines both questionnaire based assessments and workshops, and the process is designed around areas of high risk to the business. We have been able to develop trend information and target specific processes for internal audit activity. We also ensure the integrity of the self assessment process through the independent audit activity.
144	Factors in successful CSA implementation: Appropriate / effective marketing of the CSA process including linking IT, the Audit Department, and our outputs to meet (and demonstrate) the needs of managing. Also, dedicating sufficient audit resources to IT was critical – we have a senior resource dedicated to its implementation. Staying away from “Audit Language” is key. Quality of facilitators is critical. NOTE: Internal auditors are not necessarily the best facilitators – training is important.

APPENDIX C

FULL DESCRIPTIVE STATISTICS

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1. **Introduction**

1.1. Overview of CSA Center listing

The sample was based on the 2000 issue of the membership listing of the IIA CSA Center membership, a total of 698 individuals.

Six respondents wrote to say they were unable to complete the questionnaire, through being retired, or having left this type of work. My own entry was also excluded. Analysis of the questionnaire is therefore based on a usable population of 691.

Table 1: Population

Membership of CSA Center	698
Less WRM and negative responses	7
Usable population	691

1.2. Data collection

Two mailings were carried out, using fax, email and post. 84 responded to the first mailing and a further 70 to the second.

Table 2: Responses

Responses	Number	%
1 st Mailing	84	12.16
2 nd Mailing	70	10.13
Total	154	22.29

1.3. Geographical breakdown of population

There are 33 separate countries represented in the CSA Center listing. (Table 3). For the purposes of this survey, the listing was aggregated into three regions: USA (including Puerto Rico), Canada (CDN), and the Rest of the World (ROW). (Table 4).

Table 3: Geographical breakdown of CSA Center listing.

Country	No.	%	Region
Argentina	1	0.1	ROW
Australia	16	2.3	ROW
Bahrain	2	0.3	ROW
Belgium	6	0.9	EUR
Brazil	1	0.1	ROW
Canada	125	18.0	CDN
Finland	5	0.7	EUR
France	3	0.4	EUR
Germany	3	0.4	EUR
Hong Kong	1	0.1	ROW
Indonesia	1	0.1	ROW
Ireland	2	0.3	EUR
Israel	1	0.1	ROW
Italy	1	0.1	EUR
Kuwait	1	0.1	ROW
Luxembourg	2	0.3	EUR
Malta	1	0.1	EUR
Netherlands	4	0.6	EUR
Norway	3	0.4	EUR
New Zealand	4	0.6	ROW
Pakistan	2	0.3	ROW
Philippines	1	0.1	ROW
Puerto Rico	1	0.1	USA
Qatar	1	0.1	ROW
Saudi Arabia	1	0.1	ROW
South Africa	8	1.2	ROW
Spain	3	0.4	EUR
Sweden	3	0.4	EUR
Switzerland	6	0.9	EUR
Trinidad & Tobago	3	0.4	ROW
Taiwan	2	0.3	ROW
UK	8	1.0	EUR
USA	476	69	USA
Total	698	100%	

Table 4: Regions

Region	No.	%
Canada	125	17.9
Europe	50	7.2
Rest of the World	46	6.6
USA	477	68.3
	698	100

1.4. Main business categories

The questionnaire requested respondents to tick one of ten categories (Table 5.1). After receipt of completed forms, the classifications were rationalised into thirteen (Table 5.2).

Table 5.1: Main business categories

Code	Description
1.	financial services
2.	manufacturing/oil
3.	chemicals
4.	government/local government
5.	education/training
6.	not for profit
7.	assurance services/external audit
8.	consultancy
9.	conglomerate
10.	other

Table 5.2: Main business categories (revised)

Code	Description
1	financial services/banks/insurance/ pensions
2	manufacturing/oil/gas production/mining
3	chemicals
4	government/local government
5	education/training
6	not for profit
7	assurance services/external audit
8	audit consultancy
9	utility/energy/gas transportation
10	retail/customer services
11	telecommunications/hi-tech/media
12	healthcare
13	Other (Airline)

1.5. Size classifications

Table 6: Size classifications

Category	Size
Very large	>10,000
Large	7,500 – 9,999
Medium	3,000 – 7,499
Small	1,000 – 2,999
Micro	<1,000

2. Section A: Background

2.1. Geographical breakdown of respondents (Question 1)

Table 7:

	Total number	Internal Auditors	% of sample	Non-Internal Auditors	% of total
Sample size	154	132	85.71	22	14.29
USA	92	76	49.35	16	10.38
Canada	34	32	20.77	2	1.30
Rest of World	28	24	15.58	4	2.61

2.2. Main business of Organisation (Question 2)

Table 8.1: Sector by Industry Code

Code	Description	No.	%
1.	financial services/banks/insurance/ pensions	47	31
2.	manufacturing/oil/gas production/mining	21	14
3.	chemicals	5	3
4.	government/local government	29	19
5.	education/training	8	5
6.	not for profit	5	3
7.	assurance services/external audit	2	1
8.	audit consultancy	5	3
9.	utility/energy/gas transportation	16	10
10.	retail/customer services	4	3
11.	telecommunications/hi-tech/media	8	5
12.	healthcare	3	2
13.	Other (Airline)	1	1
	Total	154	100

Table 8.2: Sector by Number of Responses

Code	Description	No.	%
1.	financial services/banks/insurance/ pensions	47	31
4.	government/local government	29	19
2.	manufacturing/oil/gas production/mining	21	14
9.	utility/energy/gas transportation	16	10
11.	telecommunications/hi-tech/media	8	5
5.	education/training	8	5
3.	chemicals	5	3
6.	not for profit	5	3
8.	audit consultancy	5	3
10.	retail/customer services	4	3
12.	healthcare	3	2
7.	assurance services/external audit	2	1
13.	Other (Airline)	1	1
	Total	154	100

2.3. Number of Employees (Question 3a)

Table 9:

Category	Size	No.	%
Micro	<1,000	24	16
Small	1,000 – 2,999	33	21
Medium	3,000 – 7,499	36	23
Large	7,500 – 9,999	12	8
Very large	>10,000	49	32
Total		154	100

Employing Organisation Size by IA/NonIA

Table 10:

Size	No. IA	%	No. NonIA	%
Micro	17	11.04	7	4.54
Small	32	20.78	1	0.65
Medium	30	19.49	6	3.90
Large	12	7.80	0	0
Very large	41	26.62	8	5.19
Total	132	85.73	22	14.28

2.4. Classification of respondents: internal auditors and non-internal auditors
(Question 3b)

Table 11:

	No.	%
Internal Auditors	132	85.71
Non-Internal Auditors	22	14.29

2.5. Respondents' internal audit experience: Internal Audit Respondents (Question 4a)

Table 12: Overview

Highest	36
Lowest	1
Average	12.23

Table 13: Stratified

Band	No.	% IA	% All
1-2	6	4.55	3.90
3-5	23	17.42	15.00
6-9	19	14.40	12.33
10-15	45	34.10	29.22
16-20	23	17.42	15.00
21+	16	12.12	10.40
	132	100.01	86.19

2.6. Current experience with this employer (Question 4b)

Table 14: Overview

Highest	31
Lowest	1
Average	7.4

(Includes two incomplete responses)

Table 15: Stratified

Band	No.	% IA	% All
1-2	27	20.61	17.76
3-5	46	35.11	30.27
6-9	14	10.69	9.21
10-15	26	19.08	16.45
16-20	9	6.88	5.92
21+	8	6.11	5.27
	130	98.48	84.88

2.7. Size of internal audit departments of respondents' organisations (Question 4c)

Table 16: Overview

Size	No. of IA (High)	No. of IA (Low)	Mean
Micro	6	0	2.21
Small	35	0	6.24
Medium	50	1	9.66
Large	50	3	13.17
Very large	650	0	69.97

2.8. Total experience of auditing: non-internal auditors (Question 5a)

Table 17: Overview

Highest	20
Lowest	0
Average	10.29

Table 18: Stratified

Band	No.	% NonIA	% All
0/NR	3	13.64	1.95
1-2	0	0	0
3-5	4	18.20	2.60
6-9	2	9.10	1.30
10-15	6	27.28	3.90
16-20	6	27.28	3.90
21+	1	4.50	0.65
	22	100.00	14.30

2.9. Total experience of auditing: non-internal auditors 'This Employment'
(Question 5a)

Table 19: Overview

Highest	10
Lowest	0
Average	3.10

Table 20: Stratified

Band	No.	% NonIA	% All
0/NR	10	45.45	6.50
1-2	0	0	0
3-5	8	36.37	5.20
6-9	2	9.09	1.39
10-15	2	9.09	1.30
16-20	0	0	0
21+	0	0	0
	22	100.00	14.39

2.10. Primary duties (Question 5b)

Table 21:

Primary Duties
Assurance/other consultancy
Business process review
Consultancy/Risk Management
Control services
Corporate and Financial Policy/CSA
CSA consultancy (6)
Education (3)
Other consultancy (2)
Prepare financial statistics
Senior management

3. Section B: Audit and strategy

3.1. Overview of responses

Table 22: Total Sample (154 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	9	5.84	26	16.89	55	35.71	58	37.66	6	3.90
2.	11	7.14	46	29.87	62	40.26	28	18.18	7	4.54
3.	11	7.14	46	29.87	62	40.26	26	16.89	9	5.19
4.	2	1.30	31	20.13	72	46.75	43	27.92	6	3.90
5.	19	12.33	57	37.01	56	36.36	17	11.03	5	3.25
6.	3	1.95	17	11.04	49	31.81	75	48.70	10	6.50
7.	5	3.25	19	12.33	51	33.11	75	48.70	4	2.60

3.2. IA responses

Table 23: (132 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	8	6.06	20	15.15	47	35.60	51	38.63	6	4.55
2.	9	6.82	41	31.06	54	40.91	21	15.91	7	5.30
3.	9	6.82	35	26.52	58	43.94	21	15.91	9	6.82
4.	2	1.52	27	20.45	63	47.73	36	27.28	4	3.03
5.	16	12.12	48	36.37	48	36.37	15	11.37	5	3.79
6.	3	2.27	14	10.60	44	33.33	62	46.97	9	6.82
7.	4	3.03	16	12.12	40	30.30	68	51.52	4	3.03

3.3. Non-internal audit responses

Table 24: (22 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	4.55	6	27.27	6	27.27	9	41.00	0	0
2.	2	9.10	5	22.73	8	36.36	7	31.81	0	0
3.	2	9.10	11	50.00	4	18.18	5	22.73	0	0
4.	0	0	4	18.18	9	41.00	7	31.81	2	9.10
5.	3	13.64	9	41.00	8	36.36	2	9.10	0	0
6.	0	0	3	13.64	5	22.73	13	59.10	1	4.55
7.	1	4.55	3	13.64	11	50.00	7	31.81	0	0

3.4 Breakdown by region

Table 25: Summary of Grades: Total sample (154 records)

Q	SD No.	SD %	D No.	D %	A No	A %	SA No.	SA %	DK No.	DK %
1.	9	5.84	27	17.53	53	34.41	59	38.31	6	3.90
2.	11	7.14	46	29.88	62	40.26	28	18.18	7	4.55
3.	11	7.14	46	29.88	62	40.26	26	16.88	9	5.84
4.	2	1.30	31	20.13	72	46.75	43	27.92	6	3.90
5.	19	12.34	57	37.01	56	36.36	17	11.04	5	3.25
6.	3	1.95	17	11.04	49	31.81	75	48.70	10	6.50
7.	5	3.25	19	12.34	51	33.11	75	48.70	4	2.60

Table 26: Summary of Grades: USA (92 records)

Q	SD No.	SD %	D No.	D %	A No	A %	SA No.	SA %	DK No.	DK %
1.	3	3.26	16	17.40	32	34.79	35	38.04	6	6.52
2.	5	5.43	25	27.18	39	42.40	17	18.48	6	6.52
3.	5	5.43	25	27.18	36	39.13	17	18.48	9	9.78
4.	1	1.09	14	15.21	40	43.48	33	35.87	4	4.35
5.	11	11.96	37	40.21	30	32.61	10	10.87	4	4.35
6.	2	2.17	8	8.70	28	30.43	49	53.27	5	5.43
7.	3	3.26	11	11.96	29	31.52	46	50.00	3	3.26

Table 27: Summary of Grades: Canada (34 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	2	5.88	8	23.53	12	35.29	12	35.30	0	0
2.	3	8.82	15	44.11	12	35.29	4	11.76	0	0
3.	2	5.88	14	41.18	15	44.11	3	8.82	0	0
4.	1	2.94	10	29.41	15	44.11	7	20.59	1	2.94
5.	6	17.65	14	41.18	11	32.35	3	8.82	0	0
6.	0	0	3	8.82	13	38.24	16	47.06	2	5.88
7.	1	2.94	4	11.76	13	38.24	16	47.06	0	0

Table 28: Summary of Grades: Rest of World (28 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	4	14.29	3	10.71	9	32.14	12	42.86	0	0
2.	3	10.71	6	21.43	11	39.29	7	25.00	1	3.57
3.	4	14.29	7	25.00	11	39.29	6	21.43	0	0
4.	0	0	7	25.00	17	60.71	3	10.71	1	3.57
5.	2	7.14	6	21.43	15	53.57	4	14.29	1	3.57
6.	1	3.57	6	21.43	8	28.57	10	35.71	3	10.71
7.	1	3.57	4	14.29	9	32.14	13	46.43	1	3.57

5.3. Breakdown by size of organisation**Table 29: USA Micro (16 records)**

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	5	31.25	7	43.75	4	25.00	0	0
2.	1	6.25	5	31.25	7	43.75	3	20.00	0	0
3.	0	0	4	25.00	8	50.00	4	25.00	0	0
4.	0	0	3	20.00	9	53.33	4	25.00	0	0
5.	1	6.25	12	75.00	3	20.00	0	0	0	0
6.	0	0	2	12.50	8	50.00	5	50.00	0	0
7.	0	0	1	6.25	7	43.75	8	75.00	0	0

Table 30: USA Small (14 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	4	28.58	9	64.29	1	7.14
2.	0	0	2	14.28	9	64.29	2	14.28	1	7.14
3.	1	7.14	3	21.42	7	50.00	1	7.14	2	14.28
4.	0	0	3	21.42	6	42.86	5	35.71	0	0
5.	2	14.28	3	21.42	5	35.71	4	28.58	0	0
6.	1	7.14	5	35.71	8	57.14	0	0	0	0
7.	0	0	2	14.28	2	14.28	10	71.42	0	0

Table 31: USA Medium (22 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	2	9.09	4	18.18	8	36.36	7	31.81	1	4.54
2.	3	13.63	8	36.36	6	27.27	4	18.18	1	4.54
3.	2	9.09	5	22.72	10	45.45	3	13.63	2	9.09
4.	1	4.54	4	18.18	6	27.27	3	13.63	1	4.54
5.	4	18.18	8	36.36	6	27.27	3	13.63	1	4.54
6.	2	9.09	1	4.54	5	22.72	12	54.55	2	9.09
7.	2	9.09	3	13.63	7	31.81	9	40.90	1	4.54

Table 32: USA Large (7 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	2	28.58	1	14.29	3	42.86	1	14.29
2.	0	0	2	28.58	3	42.86	1	14.29	1	14.29
3.	0	0	2	28.58	1	14.29	3	42.86	1	14.29
4.	0	0	1	14.29	4	57.14	2	28.58	0	0
5.	0	0	0	0	7	100.00	0	0	0	0
6.	0	0	1	14.29	3	42.86	2	28.58	0	0
7.	0	0	0	0	3	42.86	4	57.14	0	0

Table 33: USA Very large (33 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	3.03	5	15.15	12	36.36	12	36.36	3	9.09
2.	1	3.03	8	24.24	14	42.42	7	21.21	3	9.09
3.	1	3.03	10	30.30	10	30.30	8	24.24	4	12.12
4.	0	0	3	9.09	15	45.45	12	36.36	3	9.09
5.	4	12.12	14	42.42	9	27.27	3	9.09	3	9.09
6.	0	0	4	12.12	6	18.18	20	60.60	3	9.09
7.	1	3.03	4	12.12	10	30.30	16	48.48	2	6.06

Table 34: Canada Micro (5 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	2	40.00	1	20.00	2	40.00	0	0
2.	0	0	2	40.00	1	20.00	2	40.00	0	0
3.	0	0	2	40.00	2	40.00	1	20.00	0	0
4.	0	0	1	20.00	2	40.00	1	20.00	1	20.00
5.	1	20.00	3	60.00	1	20.00	0	0	0	0
6.	0	0	1	20.00	2	40.00	1	20.00	1	20.00
7.	0	0	1	20.00	2	40.00	2	40.00	0	0

Table 35: Canada Small (10 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	10.00	6	60.00	3	30.00	0	0
2.	0	0	4	40.00	6	60.00	0	0	0	0
3.	1	10.00	2	20.00	7	70.00	0	0	0	0
4.	0	0	2	20.00	4	40.00	4	40.00	0	0
5.	1	10.00	5	50.00	4	40.00	0	0	0	0
6.	0	0	0	0	3	30.00	6	60.00	1	10.00
7.	0	0	0	0	4	40.00	6	60.00	0	0

Table 36: Canada Medium (5 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	2	40.00	1	20.00	2	40.00	0	0
2.	0	0	3	60.00	1	20.00	1	20.00	0	0
3.	0	0	3	60.00	2	40.00	0	0	0	0
4.	0	0	2	40.00	1	20.00	2	40.00	0	0
5.	0	0	2	40.00	1	20.00	2	40.00	0	0
6.	0	0	1	20.00	2	40.00	2	40.00	0	0
7.	0	0	0	0	2	40.00	3	60.00	0	0

Table 37: Canada Large (3 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	33.33	2	66.66	0	0
2.	1	33.33	0	0	1	33.33	1	33.33	0	0
3.	0	0	1	33.33	1	33.33	1	33.33	0	0
4.	0	0	2	66.66	1	33.33	0	0	0	0
5.	1	33.33	0	0	0	0	1	33.33	1	33.33
6.	0	0	0	0	1	33.33	2	66.66	0	0
7.	0	0	1	33.33	1	33.33	1	33.33	0	0

Table 38: Canada Very large (11 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	2	18.18	3	27.27	3	27.27	3	27.27	0	0
2.	2	18.18	6	54.54	3	27.27	0	0	0	0
3.	1	9.90	6	54.54	3	27.27	1	9.90	0	0
4.	1	9.90	3	27.27	6	54.54	1	9.90	0	0
5.	3	27.27	4	36.36	4	36.36	0	0	0	0
6.	0	0	1	9.90	5	54.54	5	54.54	0	0
7.	1	9.90	2	18.18	4	36.36	4	36.36	0	0

Table 39: Rest of World Micro (4 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	25.00	1	25.00	1	25.00	1	25.00	0	0
2.	1	25.00	1	25.00	1	25.00	1	25.00	0	0
3.	1	25.00	1	25.00	1	25.00	1	25.00	0	0
4.	0	0	1	25.00	3	75.00	0	0	0	0
5.	0	0	2	50.00	1	25.00	1	25.00	0	0
6.	0	0	1	25.00	2	50.00	1	25.00	0	0
7.	0	0	0	0	3	75.00	1	25.00	0	0

Table 40: Rest of World Small (9 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	11.11	8	88.88	0	0
2.	0	0	0	0	4	4.44	5	55.55	0	0
3.	0	0	0	0	5	55.55	4	4.44	0	0
4.	0	0	1	11.11	6	6.66	1	11.11	1	11.11
5.	0	0	0	0	5	55.55	3	3.33	1	11.11
6.	0	0	1	11.11	2	22.22	4	4.44	2	2.22
7.	0	0	0	0	3	3.33	5	5.55	1	11.11

Table 41: Rest of World Medium (9 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	3	3.33	1	1.11	3	3.33	2	2.22	0	0
2.	2	2.22	3	3.33	4	4.44	0	0	0	0
3.	3	3.33	4	4.44	2	2.22	0	0	0	0
4.	0	0	3	3.33	5	5.55	1	1.11	0	0
5.	1	1.11	2	2.22	6	6.66	0	0	0	0
6.	0	0	2	2.22	3	3.33	3	3.33	1	1.11
7.	1	1.11	3	3.33	2	2.22	3	3.33	0	0

Table 42: Rest of World Large (1 record)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	100.00	0	0	0	0
2.	0	0	0	0	0	0	1	100.00	0	0
3.	0	0	0	0	1	100.00	0	0	0	0
4.	0	0	0	0	1	100.00	0	0	0	0
5.	0	0	0	0	1	100.00	0	0	0	0
6.	0	0	0	0	0	0	1	100.00	0	0
7.	0	0	0	0	0	0	1	100.00	0	0

Table 43: Rest of World Very large (5 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	3		2	40.00	0	0
2.	0	0	2	40.00	2	40.00	0	0	1	20.00
3.	0	0	2	40.00	2	40.00	1	20.00	0	0
4.	0	0	2	40.00	2	40.00	1	20.00	0	0
5.	1	20.00	2	40.00	2	40.00	0	0	0	0
6.	1	20.00	2	40.00	1	20.00	1	20.00	0	0
7.	0	0	1	20.00	1	20.00	3	66.00	0	0

5.4. Breakdown by job classification

Table 44: Job code 1 (47 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	4	8.51	7	14.90	12	25.53	22	46.80	2	4.26
2.	4	8.51	10	21.28	25	53.20	7	14.90	1	2.13
3.	3	6.38	14	29.79	19	40.42	9	19.15	2	4.26
4.	2	4.26	6	12.77	24	51.06	12	25.53	3	6.38
5.	6	12.77	22	46.80	12	25.53	5	10.63	2	4.26
6.	0	0	5	10.63	16	34.04	21	44.69	5	10.63
7.	1	2.13	5	10.63	13	27.66	26	55.32	2	4.26

Table 45: Job code 2 (21 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	4.76	2	9.52	8	38.10	8	38.10	2	9.52
2.	2	9.52	6	28.58	7	33.33	4	14.29	2	9.52
3.	1	4.76	6	28.58	7	33.33	5	23.80	2	9.52
4.	0	0	4	14.29	11	52.39	5	23.80	1	4.76
5.	3	14.29	4	14.29	11	52.39	2	9.52	1	4.76
6.	0	0	4	14.29	5	23.80	10	47.62	2	9.52
7.	1	4.76	2	9.52	5	23.80	12	57.14	1	4.76

Table 46: Job code 3 (5 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	20.00	2	40.00	1	20.00	1	20.00	0	0
2.	1	20.00	2	40.00	1	20.00	1	20.00	0	0
3.	1	20.00	2	40.00	2	40.00	0	0	0	0
4.	0	0	1	20.00	2	40.00	2	40.00	0	0
5.	1	20.00	1	20.00	2	40.00	1	20.00	0	0
6.	0	0	1	20.00	2	40.00	2	40.00	0	0
7.	0	0	2	40.00	3	60.00	0	0	0	0

Table 47: Job code 4 (29 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	3.45	3	10.34	9	31.03	15	51.72	1	3.45
2.	1	3.45	9	31.03	11	37.80	6	20.69	2	6.90
3.	2	6.90	6	20.69	12	41.38	5	17.24	4	13.79
4.	0	0	12	41.38	10	34.40	6	20.69	1	3.45
5.	3	10.34	9	31.03	11	37.80	5	17.24	1	3.45
6.	1	3.45	2	6.90	9	31.03	16	55.17	1	3.45
7.	2	6.90	3	10.34	7	24.14	16	55.17	1	3.45

Table 48: Job code 5 (8 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	12.50	0	0	1	12.50	5	62.50	1	12.50
2.	2	25.00	0	0	1	12.50	4	50.00	1	12.50
3.	1	12.50	0	0	2	25.00	4	50.00	1	12.50
4.	0	0	1	12.50	3	37.50	4	50.00	0	0
5.	1	12.50	1	12.50	4	50.00	1	12.50	1	12.50
6.	0	0	0	0	3	37.50	5	62.50	0	0
7.	0	0	2	25.00	3	37.50	3	37.50	0	0

Table 49: Job code 6 (5 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	20.00	3	60.00	1	20.00	0	0
2.	0	0	2	40.00	3	60.00	0	0	0	0
3.	0	0	3	60.00	2	40.00	0	0	0	0
4.	0	0	3	60.00	2	40.00	0	0	0	0
5.	0	0	3	60.00	2	40.00	0	0	0	0
6.	1	20.00	1	20.00	2	40.00	1	20.00	0	0
7.	1	20.00	1	20.00	2	40.00	1	20.00	0	0

Table 50: Job code 7 (2 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	50.00	1	50.00	0	0
2.	0	0	0	0	2	100.00	0	0	0	0
3.	0	0	2	100.00	0	0	0	0	0	0
4.	0	0	0	0	1	50.00	1	50.00	0	0
5.	0	0	1	50.00	1	50.00	0	0	0	0
6.	0	0	0	0	1	50.00	1	50.00	0	0
7.	0	0	0	0	1	50.00	1	50.00	0	0

Table 51: Job code 8 (5 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	3	60.00	0	0	2	40.00	0	0
2.	1	20.00	2	40.00	0	0	2	40.00	0	0
3.	2	40.00	1	20.00	1	20.00	1	20.00	0	0
4.	0	0	0	0	2	40.00	2	40.00	1	20.00
5.	0	0	3	60.00	1	20.00	1	20.00	0	0
6.	0	0	1	20.00	1	20.00	2	40.00	1	20.00
7.	0	0	0	0	4	80.00	1	20.00	0	0

Table 52: Job code 9 (16 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	6.25	3	18.75	9	56.25	3	18.75	0	0
2.	0	0	6	37.5	7	43.75	3	18.75	0	0
3.	1	6.25	3	18.75	10	62.50	2	12.50	0	0
4.	0	0	3	18.75	8	50.00	5	31.25	0	0
5.	3	18.75	7	43.75	5	31.25	1	6.25	0	0
6.	1	6.25	0	0	6	37.5	8	50.00	1	6.25
7.	0	0	0	0	8	50.00	8	50.00	0	0

Table 53: Job code 10 (4 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	25.00	2	50.00	1	25.00	0	0
2.	0	0	2	50.00	2	50.00	0	0	0	0
3.	0	0	2	50.00	1	25.00	1	25.00	0	0
4.	0	0	1	25.00	2	50.00	1	25.00	0	0
5.	0	0	2	50.00	2	50.00	0	0	0	0
6.	0	0	2	50.00	0	0	2	50.00	0	0
7.	0	0	1	25.00	1	25.00	2	50.00	0	0

Table 54: Job code 11 (8 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	12.50	5	62.50	2	25.00	0	0
2.	0	0	4	50.00	3	37.50	1	12.50	0	0
3.	0	0	2	25.00	6	75.00	0	0	0	0
4.	0	0	0	0	6	75.00	2	25.00	0	0
5.	0	0	2	25.00	5	62.50	1	12.50	0	0
6.	0	0	1	12.50	3	37.50	4	50.00	0	0
7.	0	0	1	12.50	3	37.50	4	50.00	0	0

Table 55: Job code 12 (3 records)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	2	66.66	1	33.33	0	0	0	0
2.	0	0	2	66.66	1	33.33	0	0	0	0
3.	0	0	3	100.00	0	0	0	0	0	0
4.	0	0	0	0	1	33.33	2	66.66	0	0
5.	1	33.33	2	66.66	0	0	0	0	0	0
6.	0	0	0	0	1	33.33	2	66.66	0	0
7.	0	0	1	33.33	1	33.33	1	33.33	0	0

Table 56: Job code 13 (1 record)

Q	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	100.00	0	0	0	0	0	0
2.	0	0	1	100.00	0	0	0	0	0	0
3.	0	0	1	100.00	0	0	0	0	0	0
4.	0	0	0	0	1	100.00	0	0	0	0
5.	0	0	1	100.00	0	0	0	0	0	0
6.	0	0	0	0	0	0	1	100.00	0	0
7.	0	0	1	100.00	0	0	0	0	0	0

4. Section C: Awareness of Balanced Scorecard

4.1. Overview of responses

Table 57: Total Sample

Personal Awareness L- H	127
Personal Awareness N	27
Organisational Awareness L - H	112
Organisational Awareness N	42

Table 58: Responses: IA/Not IA

	Complete No.	Incomplete No.	% Incomplete
IA	92	40	30.30
Non IA	20	2	9.09
Total	112	42	27.27

Table 59: Responses by Region

Region	Complete No.	Incomplete No.	Total	% Incomplete
USA	61	31	92	33.70
Canada	28	6	34	17.65
Rest of World	23	5	28	17.86

Table 60: Responses by Size

Region	Complete No.	Incomplete No.	Total	% Incomplete
Micro	15	9	24	37.5
Small	25	8	33	24.24
Medium	24	12	36	33.33
Large	11	1	12	8.33
Very large	37	12	49	24.49

Table 61: Nonrespondents by Main Business

	Complete No.	Incomplete No.	Total	% Incomplete
1.	17	14	31	45.16
2.	24	7	21	33.33
3.	3	2	5	40.00
4.	21	8	29	27.59
5.	6	2	8	25.00
6.	4	1	5	20.00
7.	4	1	5	20.00
8.	15	6	21	4.76
9.	7	1	8	12.50

4.2. Question C1 and C2: Personal and Organisational Awareness of BSC

Table 62: Personal Awareness of BSC, USA

High	17
Medium	33
Low	11
None/NR	31

Table 63: Organisational Awareness of BSC, USA

High	13
Medium	24
Low	22
None/NR	32

Table 64: USA Combinations

H/H	6	M/H	7	L/H	0
H/M	6	M/M	15	L/M	3
H/L	4	M/L	10	L/L	8
H/N	1	M/N	1	L/N	6

Table 65: Personal Awareness of BSC, Canada

High	8
Medium	15
Low	5
None/NR	6

Table 66: Organisational Awareness of BSC, Canada

High	11
Medium	11
Low	6
None/NR	6

Table 67: Canada Combinations

H/H	7	M/H	4	L/H	0
H/M	1	M/M	6	L/M	4
H/L	0	M/L	5	L/L	1
H/N	1	M/N	0	L/N	2

Table 68: Personal Awareness of BSC, ROW

High	10
Medium	9
Low	4
None/NR	5

Table 69: Organisational Awareness of BSC, ROW

High	5
Medium	13
Low	4
None/NR	6

Table 70: ROW Combinations

H/H	5	M/H	0	L/H	0
H/M	5	M/M	5	L/M	3
H/L	0	M/L	3	L/L	1
H/N	0	M/N	1	L/N	0

4.3. Question C3

Table 71: Overview (112 completed responses)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	44	39.29	53	47.32	15	13.39
2.	0	0	3	2.68	54	48.21	37	33.04	18	16.07
3.	2	1.79	14	12.50	44	39.29	29	25.89	23	20.54
4.	1	0.89	10	8.93	47	41.96	32	28.57	23	20.54
5.	0	0	6	5.36	51	45.53	35	31.25	20	17.86
6.	0	0	2	1.79	52	46.43	36	32.14	22	19.64
7.	1	0.89	6	5.36	57	50.89	27	24.11	21	18.75
8.	0	0	9	8.04	60	53.57	21	18.75	21	18.75
9.	2	1.79	9	8.04	58	51.79	20	17.86	23	20.54
10.	1	0.89	4	3.57	57	50.89	27	24.11	23	20.54
11.	1	0.89	5	4.46	57	50.89	25	22.32	24	21.43
12.	0	0	7	6.25	54	48.21	31	27.68	20	17.86

Table 72: IA (92 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	36	39.13	43	43.74	13	14.13
2.	0	0	3	3.26	45	48.91	29	31.52	15	16.30
3.	1	1.09	11	11.96	35	38.04	25	27.17	20	21.74
4.	1	1.09	8	8.70	36	39.13	27	29.35	20	21.74
5.	0	0	5	5.43	40	43.48	29	31.52	18	19.57
6.	0	0	1	1.09	39	42.39	32	34.78	20	21.74
7.	1	1.09	5	5.43	46	50.00	21	22.83	19	20.65
8.	0	0	2	2.17	47	51.09	26	28.26	21	22.83
9.	1	1.09	8	8.70	47	51.09	15	16.30	21	22.83
10.	1	1.09	2	2.17	49	53.26	24	26.09	16	17.39
11.	1	1.09	2	2.17	47	51.09	21	22.83	21	22.83
12.	0	0	6	6.52	43	46.74	25	27.17	18	19.57

Table 73: Non IA (20 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	8	40.00	10	50.00	2	10.00
2.	0	0	0	0	9	45.00	8	40.00	3	15.00
3.	1	5.00	3	15.00	9	45.00	4	20.00	3	15.00
4.	0	0	2	10.00	11	55.00	5	25.00	2	10.00
5.	0	0	1	5.00	11	55.00	6	30.00	2	10.00
6.	0	0	1	5.00	13	65.00	4	20.00	2	10.00
7.	0	0	1	5.00	11	55.00	6	30.00	2	10.00
8.	0	0	1	5.00	12	60.00	6	30.00	1	5.00
9.	1	5.00	1	5.00	11	55.00	5	25.00	2	10.00
10.	0	0	2	10.00	10	50.00	6	30.00	2	10.00
11.	0	0	3	15.00	10	50.00	4	20.00	3	15.00
12.	0	0	1	5.00	11	55.00	6	30.00	2	10.00

4.4. Breakdown by Region

Table 74: USA (64 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	26	40.62	29	45.31	9	14.06
2.	0	0	2	3.13	30	46.90	22	34.40	10	15.63
3.	2	3.13	5	7.81	25	39.06	19	29.70	13	20.31
4.	1	1.57	5	7.81	27	42.20	16	25.00	15	23.44
5.	0	0	2	3.13	26	40.62	22	34.40	14	21.90
6.	0	0	1	1.57	28	43.75	20	31.25	15	23.44
7.	1	1.57	2	3.13	31	48.44	17	26.60	13	20.31
8.	0	0	3	4.69	31	48.44	18	28.13	11	17.19
9.	2	3.13	3	4.69	35	54.69	12	18.75	12	18.75
10.	0	0	3	4.69	31	48.44	19	29.70	11	17.19
11.	1	1.57	4	6.25	33	51.60	15	23.44	11	17.19
12.	0	0	3	4.69	34	53.13	17	26.60	10	15.63

Table 75: Canada (29 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	9	31.03	14	48.30	6	20.69
2.	0	0	0	0	13	10.34	9	31.03	7	24.14
3.	0	0	5	17.24	8	27.59	7	24.14	9	31.03
4.	0	0	2	6.90	8	27.59	11	38.00	8	27.59
5.	0	0	0	0	12	41.34	9	31.03	8	27.59
6.	0	0	1	3.45	11	38.00	8	27.59	9	31.03
7.	0	0	3	10.34	13	10.34	5	17.24	8	27.59
8.	0	0	0	0	13	10.34	8	27.59	8	27.59
9.	0	0	2	6.90	11	38.00	6	20.69	10	34.45
10.	1	3.45	0	0	14	48.30	6	20.69	8	27.59
11.	0	0	1	3.45	12	41.34	6	20.69	10	34.45
12.	0	0	2	6.90	10	34.45	8	27.59	9	31.03

Table 76: ROW (23 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	10	43.48	11	47.83	2	8.70
2.	0	0	1	4.35	12	52.17	7	30.43	3	13.04
3.	0	0	4	17.40	11	47.83	4	17.40	4	17.40
4.	0	0	3	13.04	12	52.17	6	26.10	2	8.70
5.	0	0	4	17.40	13	56.52	5	21.74	1	4.35
6.	0	0	0	0	13	56.52	9	39.13	1	4.35
7.	0	0	1	4.35	14	60.87	6	26.10	2	8.70
8.	0	0	0	0	15	65.21	7	30.43	1	4.35
9.	0	0	4	17.40	13	56.52	3	13.04	3	13.04
10.	0	0	1	4.35	14	60.87	6	26.10	2	8.70
11.	0	0	0	0	13	56.52	5	21.74	5	21.74
12.	0	0	2	8.70	11	47.83	7	30.43	3	13.04

4.5. Breakdown by size (114 records)

Table 77: Micro (16 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	5	31.25	7	43.75	4	25.00
2.	0	0	1	6.25	5	31.25	5	31.25	5	31.25
3.	1	6.25	1	6.25	8	50.00	2	12.50	4	25.00
4.	0	0	3	18.75	6	37.50	3	18.75	4	25.00
5.	0	0	1	6.25	7	43.75	4	25.00	4	25.00
6.	0	0	1	6.25	8	50.00	3	18.75	4	25.00
7.	0	0	1	6.25	9	56.25	2	12.50	4	25.00
8.	0	0	1	6.25	7	43.75	4	25.00	4	25.00
9.	1	6.25	1	6.25	7	43.75	2	12.50	5	31.25
10.	0	0	1	6.25	6	37.50	4	25.00	5	31.25
11.	0	0	1	6.25	6	37.50	4	25.00	5	31.25
12.	0	0	2	12.50	5	31.25	4	25.00	5	31.25

Table 78: Small (25 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	9	36.00	12	48.00	4	4.00
2.	0	0	1	4.00	12	48.00	8	32.00	4	4.00
3.	1	4.00	4	16.00	12	36.00	8	32.00	4	4.00
4.	1	4.00	2	4.00	10	40.00	6	24.00	6	24.00
5.	0	0	1	4.00	12	48.00	8	32.00	4	4.00
6.	0	0	1	4.00	13	52.00	6	24.00	5	20.00
7.	1	4.00	2	4.00	13	52.00	4	4.00	5	20.00
8.	0	0	0	0	15	60.00	6	24.00	4	4.00
9.	1	4.00	1	4.00	15	60.0	3	12.00	5	20.00
10.	0	0	0	0	17	68.00	5	20.00	3	12.00
11.	1	4.00	1	4.00	14	56.00	5	20.00	4	4.00
12.	0	0	1	4.00	14	56.00	6	24.00	4	4.00

Table 79: Medium (25 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	11	44.00	10	40.00	4	16.00
2.	0	0	1	4.00	11	44.00	8	32.00	5	20.00
3.	0	0	5	20.00	5	20.00	8	32.00	7	28.00
4.	0	0	2	8.00	11	44.00	6	24.00	6	24.00
5.	0	0	2	8.00	11	44.00	8	32.00	4	16.00
6.	0	0	0	0	12	48.00	8	32.00	5	20.00
7.	0	0	1	4.00	12	48.00	6	24.00	6	24.00
8.	0	0	1	4.00	12	48.00	7	28.00	5	20.00
9.	0	0	4	16.00	11	44.00	4	16.00	6	24.00
10.	0	0	1	4.00	10	40.00	6	24.00	8	32.00
11.	0	0	1	4.00	10	40.00	6	24.00	8	32.00
12.	0	0	2	8.00	10	40.00	7	28.00	6	24.00

Table 80: Large (11 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	4	10.81	7	18.92	0	0
2.	0	0	0	0	5	13.51	5	13.51	1	9.09
3.	0	0	0	0	5	13.51	5	13.51	1	9.09
4.	0	0	0	0	4	10.81	7	18.92	0	0
5.	0	0	1	9.09	5	13.51	4	10.81	1	9.09
6.	0	0	0	0	3	8.10	6	16.22	2	5.41
7.	0	0	1	9.09	5	13.51	5	13.51	0	0
8.	0	0	0	0	7	18.92	3	8.10	1	9.09
9.	0	0	0	0	7	18.92	3	8.10	1	9.09
10.	0	0	0	0	7	18.92	3	8.10	1	9.09
11.	0	0	0	0	8	21.62	2	5.41	1	9.09
12.	0	0	1	9.09	6	16.22	3	8.10	1	9.09

Table 81: Very Large (37 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	15	40.54	17	45.95	5	13.51
2.	0	0	0	0	21	56.76	11	29.73	5	13.51
3.	0	0	4	10.81	16	43.24	9	24.32	8	21.62
4.	0	0	3	8.11	16	43.24	10	27.03	8	21.62
5.	0	0	1	2.70	16	43.24	11	29.73	9	24.32
6.	0	0	0	0	16	43.24	13	35.14	8	21.62
7.	0	0	1	2.70	17	45.95	11	29.73	8	21.62
8.	0	0	1	2.70	18	48.64	12	32.43	6	16.62
9.	0	0	3	8.11	18	48.64	8	21.62	8	21.62
10.	1	2.70	1	2.70	18	48.64	10	27.03	7	18.92
11.	0	0	2	5.41	18	48.64	9	24.32	8	21.62
12.	0	0	1	2.70	19	51.35	11	29.73	6	16.62

4.6. Breakdown by job classification

Table 82: Category 1 (33 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	10	30.30	20	60.60	3	9.09
2.	0	0	0	0	17	51.51	13	39.40	3	9.09
3.	0	0	6	18.18	12	36.36	11	33.00	4	12.12
4.	0	0	3	9.09	16	48.48	10	30.30	4	12.12
5.	0	0	1	3.03	14	42.42	14	42.42	4	12.12
6.	0	0	0	0	15	45.45	14	42.42	4	12.12
7.	0	0	3	9.09	17	51.51	9	27.27	4	12.12
8.	0	0	2	6.06	17	51.51	11	33.00	3	9.09
9.	0	0	2	6.06	21	63.63	6	18.18	4	12.12
10.	0	0	2	6.06	17	51.51	11	33.00	3	9.09
11.	0	0	2	6.06	19	57.58	9	42.42	3	9.09
12.	0	0	2	6.06	18	54.55	10	30.30	3	9.09

Table 83: Category 2 (14 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	6	42.86	7	50.00	1	7.14
2.	0	0	0	0	3	2.14	8	57.14	1	7.14
3.	0	0	1	7.14	5	35.71	7	50.00	1	7.14
4.	0	0	1	7.14	4	28.57	6	42.86	3	21.43
5.	0	0	1	7.14	2	14.29	7	50.00	5	35.71
6.	0	0	0	0	5	35.71	7	50.00	2	14.29
7.	0	0	1	7.14	6	42.86	6	42.86	1	7.14
8.	0	0	0	0	8	57.14	5	35.71	1	7.14
9.	0	0	1	7.14	5	35.71	6	42.86	2	14.29
10.	0	0	0	0	7	50.00	6	42.86	1	7.14
11.	0	0	0	0	8	57.14	5	35.71	1	7.14
12.	0	0	1	7.14	6	42.86	6	42.86	1	7.14

Table 84: Category 3 (4 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	50.00	1	25.00	1	25.00
2.	0	0	1	25.00	2	50.00	0	0	1	25.00
3.	0	0	1	25.00	1	25.00	1	25.00	1	25.00
4.	0	0	0	0	2	50.00	1	25.00	1	25.00
5.	0	0	0	0	2	50.00	1	25.00	1	25.00
6.	0	0	0	0	1	25.00	2	50.00	1	25.00
7.	0	0	0	0	2	50.00	1	25.00	1	25.00
8.	0	0	0	0	1	25.00	2	50.00	1	25.00
9.	0	0	1	25.00	0	0	2	50.00	1	25.00
10.	0	0	0	0	1	25.00	2	50.00	1	25.00
11.	0	0	0	0	1	25.00	2	50.00	1	25.00
12.	0	0	1	25.00	0	0	2	50.00	1	25.00

Table 85: Category 4 (21 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	9	42.86	7	33.33	5	23.81
2.	0	0	1	4.76	11	52.38	3	14.29	6	28.58
3.	1	4.76	4	19.94	6	28.58	3	14.29	7	33.33
4.	1	4.76	0	0	5	23.81	8	38.10	7	33.33
5.	0	0	2	9.52	9	42.86	3	14.29	7	33.33
6.	0	0	1	4.76	10	47.62	3	14.29	7	33.33
7.	1	4.76	2	9.52	9	42.86	3	14.29	6	28.58
8.	0	0	0	0	11	52.38	3	14.29	7	33.33
9.	1	4.76	0	0	10	47.62	3	14.29	7	33.33
10.	1	4.76	0	0	10	47.62	3	14.29	7	33.33
11.	1	4.76	1	4.76	8	38.10	2	9.52	9	42.86
12.	0	0	0	0	9	42.86	4	19.94	8	38.10

Table 86: Category 5 (5 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	16.67	3	60.00	1	16.67
2.	0	0	0	0	1	16.67	3	60.00	1	16.67
3.	1	16.67	1	16.67	0	0	2	40.00	2	40.00
4.	0	0	0	0	3	60.00	1	16.67	2	40.00
5.	0	0	0	0	1	16.67	2	40.00	3	60.00
6.	0	0	0	0	2	40.00	1	16.67	3	60.00
7.	0	0	0	0	1	16.67	3	60.00	2	40.00
8.	0	0	0	0	2	40.00	2	40.00	2	40.00
9.	1	16.67	0	0	3	60.00	0	0	2	40.00
10.	0	0	0	0	3	60.00	2	40.00	1	16.67
11.	0	0	0	0	3	60.00	1	16.67	2	40.00
12.	0	0	0	0	3	60.00	1	16.67	2	40.00

Table 87: Category 6 (4 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	50.00	1	25.00	1	25.00
2.	0	0	1	25.00	2	50.00	0	0	1	25.00
3.	0	0	0	0	1	25.00	1	25.00	2	50.00
4.	0	0	1	25.00	2	50.00	0	0	1	25.00
5.	0	0	1	25.00	3	75.00	0	0	0	0
6.	0	0	0	0	3	75.00	1	25.00	0	0
7.	0	0	0	0	2	50.00	1	25.00	1	25.00
8.	0	0	0	0	2	50.00	2	50.00	0	0
9.	0	0	0	0	3	75.00	0	0	1	25.00
10.	0	0	1	25.00	2	50.00	1	25.00	0	0
11.	0	0	0	0	0	0	2	50.00	2	50.00
12.	0	0	1	25.00	0	0	2	50.00	1	25.00

Table 88: Category 7 (2 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	50.00	1	50.00	0	0
2.	0	0	0	0	1	50.00	1	50.00	0	0
3.	0	0	0	0	1	50.00	0	0	1	50.00
4.	0	0	0	0	1	50.00	1	50.00	0	0
5.	0	0	0	0	1	50.00	1	50.00	0	0
6.	0	0	0	0	2	100.00	0	0	0	0
7.	0	0	0	0	0	0	1	50.00	1	50.00
8.	0	0	0	0	2	100.00	0	0	0	0
9.	0	0	0	0	2	100.00	0	0	0	0
10.	0	0	0	0	2	100.00	0	0	0	0
11.	0	0	1	50.00	1	50.00	0	0	0	0
12.	0	0	0	0	1	50.00	1	50.00	0	0

Table 89: Category 8 (5 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	20.00	2	40.00	2	40.00
2.	0	0	0	0	3	60.00	0	0	2	40.00
3.	0	0	1	20.00	2	40.00	0	0	2	40.00
4.	0	0	1	20.00	2	40.00	0	0	2	40.00
5.	0	0	0	0	2	40.00	1	20.00	2	40.00
6.	0	0	1	20.00	2	40.00	0	0	2	40.00
7.	0	0	0	0	3	60.00	0	0	2	40.00
8.	0	0	0	0	2	40.00	1	20.00	2	40.00
9.	0	0	0	0	1	20.00	1	20.00	3	60.00
10.	0	0	0	0	1	20.00	1	20.00	3	60.00
11.	0	0	0	0	2	40.00	0	0	2	40.00
12.	0	0	0	0	2	40.00	0	0	3	60.00

Table 90: Category 9 (10 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	5	50.00	4	40.00	1	10.00
2.	0	0	0	0	7	70.00	2	20.00	1	10.00
3.	0	0	1	10.00	7	70.00	0	0	2	20.00
4.	0	0	2	20.00	4	40.00	2	20.00	2	20.00
5.	0	0	1	10.00	6	60.00	2	20.00	1	10.00
6.	0	0	0	0	7	70.00	1	10.00	2	20.00
7.	0	0	0	0	7	70.00	0	0	3	30.00
8.	0	0	0	0	5	50.00	3	30.00	2	20.00
9.	0	0	1	10.00	6	60.00	0	0	3	30.00
10.	0	0	0	0	6	60.00	2	20.00	2	20.00
11.	0	0	0	0	7	70.00	1	10.00	2	20.00
12.	0	0	1	10.00	6	60.00	2	20.00	1	10.00

Table 91: Category 10 (4 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	50.00	2	50.00	0	0
2.	0	0	0	0	2	50.00	2	50.00	0	0
3.	0	0	0	0	2	50.00	2	50.00	0	0
4.	0	0	2	50.00	1	25.00	2	50.00	0	0
5.	0	0	0	0	2	50.00	2	50.00	0	0
6.	0	0	0	0	1	25.00	3	75.00	0	0
7.	0	0	0	0	2	50.00	2	50.00	0	0
8.	0	0	0	0	2	50.00	2	50.00	0	0
9.	0	0	0	0	3	75.00	1	25.00	0	0
10.	0	0	0	0	2	50.00	2	50.00	0	0
11.	0	0	0	0	1	25.00	3	75.00	0	0
12.	0	0	0	0	1	25.00	3	75.00	0	0

Table 92: Category 11 (7 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	28.57	4		1	14.29
2.	0	0	0	0	3	42.89	3	42.89	1	14.29
3.	0	0	0	0	2	28.57	3	42.89	2	28.57
4.	0	0	0	0	5	71.43	1	14.29	1	14.29
5.	0	0	0	0	4	57.14	2	28.57	1	14.29
6.	0	0	0	0	3	42.89	3	42.89	1	14.29
7.	0	0	0	0	5	71.43	1	14.29	1	14.29
8.	0	0	1	14.29	3	42.89	0	0	1	14.29
9.	0	0	2	28.57	4	57.14	0	0	1	14.29
10.	0	0	1	14.29	5	71.43	0	0	1	14.29
11.	0	0	1	14.29	5	71.43	0	0	1	14.29
12.	0	0	1	14.29	5	71.43	0	0	1	14.29

Table 93: Category 12 (3 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	66.67	1	33.33	0	0
2.	0	0	0	0	3	100.00	0	0	0	0
3.	0	0	0	0	2	66.67	0	0	1	33.33
4.	0	0	0	0	2	66.67	0	0	1	33.33
5.	0	0	0	0	3	100.00	0	0	0	0
6.	0	0	0	0	0	0	1	33.33	2	66.67
7.	0	0	0	0	1	33.33	1	33.33	1	33.33
8.	0	0	0	0	1	33.33	1	33.33	1	33.33
9.	0	0	0	0	1	33.33	1	33.33	1	33.33
10.	0	0	0	0	2	66.67	0	0	1	33.33
11.	0	0	0	0	1	33.33	0	0	2	66.67
12.	0	0	0	0	2	66.67	0	0	1	33.33

Table 94: Category 13 (1 record)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	100.00	0	0	0	0
2.	0	0	0	0	1	100.00	0	0	0	0
3.	0	0	0	0	1	100.00	0	0	0	0
4.	0	0	0	0	1	100.00	0	0	0	0
5.	0	0	0	0	1	100.00	0	0	0	0
6.	0	0	0	0	1	100.00	0	0	0	0
7.	0	0	0	0	1	100.00	0	0	0	0
8.	0	0	0	0	1	100.00	0	0	0	0
9.	0	0	0	0	1	100.00	0	0	0	0
10.	0	0	0	0	1	100.00	0	0	0	0
11.	0	0	0	0	1	100.00	0	0	0	0
12.	0	0	0	0	1	100.00	0	0	0	0

5. Section D: Control Models

5.1. Overview of responses

Table 95: (153 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	15	9.80	64	41.83	47	30.72	25	16.34	2	1.30
2.	21	13.73	77	50.32	35	22.89	17	11.11	3	1.96
3.	3	1.96	7	4.58	64	41.83	76	49.67	3	1.96
4.	0	0	5	3.27	68	44.44	77	50.32	3	1.96
5.	1	0.65	9	5.89	53	34.64	89	58.17	3	1.96
6.	2	1.30	10	6.54	68	44.44	61	39.87	12	7.84
7.	85	55.56	53	34.64	6	3.92	4	2.61	5	3.27
8.	5	3.27	18	11.76	49	32.02	76	49.67	5	3.27
9.	1	0.65	3	1.96	66	43.14	80	52.29	3	1.96
10.	10	6.54	44	28.76	64	41.83	27	17.65	8	5.23

5.2. IA respondents

5.3. Table 96: (131 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	15	11.45	53	40.46	41	31.30	20	15.27	2	1.53
2.	19	12.58	68	51.91	28	21.37	14	10.69	2	1.53
3.	3	2.29	6	4.58	53	40.46	66	50.38	3	2.29
4.	0	0	5	3.82	58	44.27	66	50.38	2	1.53
5.	1	0.76	7	5.34	46	35.11	76	58.01	1	0.76
6.	2	1.53	8	6.11	58	44.27	51	38.93	12	9.16
7.	73	55.73	47	35.88	6	4.58	2	1.53	3	2.29
8.	4	3.05	12	9.16	45	34.35	67	87.77	4	3.05
9.	1	0.76	2	1.53	56	42.75	69	52.67	3	2.29
10.	10	7.63	36	27.48	57	43.51	22	16.79	6	4.58

5.3. Non IA respondents

Table 97: (22 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	11	50.00	6	27.27	5	22.73	0	0
2.	2	9.09	9	40.91	7	31.82	3	13.63	1	4.45
3.	0	0	1	4.45	11	50.00	10	45.45	0	0
4.	0	0	0	0	10	45.45	11	50.00	1	4.45
5.	0	0	2	9.09	7	31.82	13	59.09	0	0
6.	0	0	2	9.09	10	45.45	10	45.45	0	0
7.	12	54.55	6	27.27	0	0	2	9.09	2	9.09
8.	1	4.45	6	27.27	4	18.18	10	45.45	1	4.45
9.	0	0	1	4.45	10	45.45	11	50.00	0	0
10.	0	0	8	36.36	7	31.82	5	22.73	2	9.09

5.4. Breakdown by region

Table 98: USA (91 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	11	12.09	36	39.56	27	29.67	16	17.58	1	1.10
2.	15	16.48	45	49.45	23	25.27	8	8.80	0	0
3.	3	3.30	3	3.30	45	49.45	40	43.96	0	0
4.	3	3.30	3	3.30	45	49.45	40	43.96	0	0
5.	0	0	2	2.20	50	54.95	39	42.86	0	0
6.	1	1.10	2	2.20	4	4.40	47	51.65	0	0
7.	1	1.10	2	2.20	41	45.05	47	51.65	0	0
8.	50	54.95	33	36.26	4	4.40	2	2.20	2	2.20
9.	0	0	3	3.30	46	50.55	40	43.96	2	2.20
10.	8	8.79	36	39.56	30	32.97	14	15.38	3	3.30

Table 99: Canada (34 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	2.94	18	52.94	10	29.41	5	14.71	0	0
2.	3	8.82	20	58.82	5	14.71	4	11.76	2	5.88
3.	0	0	2	5.88	8	23.53	24	70.59	0	0
4.	0	0	1	2.94	8	23.53	25	73.53	0	0
5.	0	0	3	8.82	6	17.65	25	73.53	0	0
6.	0	0	4	11.76	7	2.59	17	50.00	6	17.65
7.	22	64.70	7	2.59	2	5.88	0	0	3	8.82
8.	0	0	2	5.88	10	29.41	20	58.82	2	5.88
9.	0	0	0	0	11	32.35	22	64.70	1	2.94
10.	1	2.94	8	23.53	16	47.06	5	14.71	4	11.76

Table 100: ROW (28 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	3	10.71	10	35.71	10	35.71	4	14.28	1	3.57
2.	3	10.71	12	42.86	7	25.00	5	17.86	1	3.57
3.	0	0	2	7.14	11	39.29	12	52.86	3	10.71
4.	0	0	2	7.14	10	35.71	13	46.43	3	10.71
5.	0	0	4	14.28	6	21.43	17	60.71	1	3.57
6.	1	3.57	2	7.14	9	32.14	16	57.14	0	0
7.	13	46.43	13	46.43	0	0	2	7.14	0	0
8.	1	3.57	3	10.71	8	28.58	16	57.14	0	0
9.	1	3.57	0	0	9	32.14	18	64.29	0	0
10.	1	3.57	0	0	18	64.29	8	28.58	1	3.57

5.5. Breakdown by size**Table 101: Micro (24 records)**

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	4.17	13	54.17	7	29.17	3	12.50	0	0
2.	2	8.33	18	75.00	2	8.33	1	4.17	1	4.17
3.	0	0	1	4.17	13	54.17	10	41.67	0	0
4.	0	0	0	0	13	54.17	11	45.83	0	0
5.	0	0	3	12.50	9	37.50	12	50.00	0	0
6.	1	4.17	2	8.33	13	54.17	7	29.17	1	4.17
7.	11	45.83	9	37.50	2	8.33	0	0	2	8.33
8.	0	0	2	8.33	10	41.67	11	45.83	1	4.17
9.	0	0	2	8.33	11	45.83	11	45.83	0	0
10.	1	4.17	7	29.17	8	33.33	6	25.00	2	8.33

Table 102: Small (33 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	3	9.09	12	36.36	15	45.45	3	9.09	0	0
2.	4	12.12	14	42.42	10	30.30	4	12.12	1	3.03
3.	1	3.03	0	0	15	45.45	15	15.15	2	6.06
4.	0	0	1	3.03	14	42.42	17	51.51	1	3.03
5.	1	3.03	3	9.09	11	33.33	17	51.51	1	3.03
6.	1	3.03	2	6.06	10	30.30	15	45.45	5	15.15
7.	20	60.60	11	33.33	1	3.03	1	3.03	0	0
8.	2	6.06	2	6.06	12	36.36	17	51.51	0	0
9.	0	0	0	0	10	30.30	23	69.70	0	0
10.	1	3.03	5	15.15	17	51.51	8	24.24	2	6.06

Table 103: Medium (36 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	7	19.44	12	33.33	11	30.56	4	11.11	2	5.56
2.	6	16.67	18	50.00	9	25.00	2	5.56	1	2.28
3.	1	2.28	0	0	17	47.22	17	47.22	1	2.28
4.	0	0	1	2.28	20	55.56	13	36.11	2	5.56
5.	0	0	1	2.28	16	44.44	19	52.78	0	0
6.	0	0	2	5.56	16	44.44	14	38.89	4	11.11
7.	20	5.56	13	36.11	1	2.28	2	5.56	0	0
8.	3	1.08	4	11.11	8	22.22	21	58.33	0	0
9.	1	2.28	0	0	15	41.67	19	52.78	1	2.28
10.	4	11.11	8	22.22	18	50.00	6	16.67	0	0

Table 104: Large (12 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	8.33	5	41.67	3	25.00	3	25.00	0	0
2.	1	8.33	5	41.67	3	25.00	3	25.00	0	0
3.	2	16.67	4	33.33	4	33.33	2	16.67	0	0
4.	0	0	0	0	2	16.67	10	83.33	0	0
5.	0	0	0	0	2	16.67	10	83.33	0	0
6.	0	0	1	8.33	6	50.00	5	41.67	0	0
7.	6	50.00	5	41.67	1	8.33	0	0	0	0
8.	0	0	1	8.33	4	33.33	7	58.33	0	0
9.	0	0	0	0	6	50.00	6	50.00	0	0
10.	0	0	7	58.33	3	25.00	2	16.67	0	0

Table 105: Very large (49 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	3	6.12	22	44.90	11	22.45	12	24.49	1	2.04
2.	7	14.29	23	46.94	10	20.40	8	16.32	1	2.04
3.	1	2.04	6	12.24	17	34.70	24	48.98	1	2.04
4.	0	0	3	6.12	19	38.78	26	53.06	1	2.04
5.	0	0	2	4.08	15	30.61	31	63.27	1	2.04
6.	0	0	3	6.12	23	46.94	20	40.82	3	6.12
7.	28	57.14	15	30.61	1	2.04	1	2.04	4	8.16
8.	0	0	9	18.37	15	30.61	20	40.82	5	10.20
9.	0	0	1	2.04	24	48.98	21	42.86	3	6.12
10.	4	8.16	17	34.69	18	36.73	5	10.20	5	10.20

5.6. Breakdown by job classification

Table 106: Type 1 (47 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	5	10.64	19	40.42	16	34.04	7	14.89	0	0
2.	7	14.89	23	48.94	12	25.53	5	10.64	0	0
3.	1	2.13	2	4.26	21	44.68	21	44.68	2	4.26
4.	0	0	1	2.13	24	51.06	21	44.68	1	2.13
5.	0	0	2	4.26	18	38.30	26	55.32	1	2.13
6.	1	2.13	1	2.13	25	53.19	17	36.17	3	6.38
7.	25	10.64	14	29.79	5	10.64	2	4.26	1	2.13
8.	3	6.38	7	14.89	18	38.30	18	38.30	1	2.13
9.	0	0	2	4.26	20	42.55	24	51.06	1	2.13
10.	6	12.77	14	29.79	20	42.55	7	14.89	0	0

Table 107: Type 2 (21 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	4.76	11	52.39	4	19.05	3	14.29	2	9.52
2.	3	14.29	11	52.39	3	14.29	3	14.29	1	4.76
3.	1	4.76	2	9.52	9	42.86	8	38.10	1	4.76
4.	0	0	2	9.52	9	42.86	9	42.86	1	4.76
5.	0	0	3	14.29	8	38.10	9	42.86	1	4.76
6.	0	0	3	14.29	10	47.62	6	28.57	2	9.52
7.	13	61.90	6	28.57	0	0	1	4.76	1	4.76
8.	1	4.76	2	9.52	7	33.33	10	47.62	1	4.76
9.	0	0	0	0	7	33.33	13	61.90	1	4.76
10.	2	9.52	4	19.05	9	42.86	4	19.05	2	9.52

Table 108: Type 3 (5 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	20.00	2	40.00	0	0	2	40.00	0	0
2.	0	0	3	40.00	1	20.00	1	20.00	0	0
3.	0	0	0	0	1	20.00	4	80.00	0	0
4.	0	0	0	0	1	20.00	4	80.00	0	0
5.	0	0	0	0	1	20.00	4	80.00	0	0
6.	0	0	0	0	1	20.00	4	80.00	0	0
7.	1	20.00	4	80.00	0	0	0	0	0	0
8.	0	0	0	0	2	40.00	3	40.00	0	0
9.	0	0	0	0	1	20.00	4	80.00	0	0
10.	0	0	2	40.00	3	40.00	0	0	0	0

Table 109: Type 4 (29 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	2	6.90	11	37.93	10	34.49	5	17.24	1	3.45
2.	3	10.34	14	48.28	8	27.59	3	10.34	1	3.45
3.	1	3.45	2	6.90	9	31.03	16	55.17	1	3.45
4.	0	0	1	3.45	11	37.93	16	55.17	1	3.45
5.	1	3.45	2	6.90	10	34.49	16	55.17	0	0
6.	1	3.45	2	6.90	9	31.03	11	37.93	6	20.69
7.	18	62.07	8	27.59	1	3.45	0	0	2	6.90
8.	0	0	1	3.45	8	27.59	18	62.07	2	6.90
9.	0	0	0	0	10	34.49	18	62.07	1	3.45
10.	0	0	9	31.03	14	48.28	5	17.24	1	3.45

Table 110: Type 5 (8 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	4	50.00	3	37.50	1	12.50	0	0
2.	1	12.50	6	75.00	1	12.50	0	0	0	0
3.	0	0	0	0	6	75.00	2	25.00	0	0
4.	0	0	0	0	6	75.00	2	25.00	0	0
5.	0	0	0	0	5	62.50	3	37.50	0	0
6.	0	0	0	0	7	87.50	1	12.50	0	0
7.	3	37.50	5	62.50	0	0	0	0	0	0
8.	0	0	2	25.00	2	25.00	4	50.00	0	0
9.	0	0	0	0	5	62.50	3	37.50	0	0
10.	0	0	4	50.00	1	12.50	3	37.50	0	0

Table 111: Type 6 (5 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	2	40.00	3	60.00	0	0	0	0	0	0
2.	2	40.00	2	40.00	1	20.00	0	0	0	0
3.	0	0	0	0	3	60.00	2	40.00	0	0
4.	0	0	0	0	4	80.00	0	0	1	20.00
5.	0	0	1	20.00	1	20.00	3	60.00	0	0
6.	0	0	2	40.00	2	40.00	1	20.00	0	0
7.	1	20.00	3	60.00	0	0	1	20.00	0	0
8.	1	20.00	2	40.00	0	0	2	40.00	0	0
9.	1	20.00	0	0	3	60.00	1	20.00	0	0
10.	2	40.00	0	0	2	40.00	1	20.00	0	0

Table 112: Type 7 (2 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	50.00	0	0	1	50.00	0	0
2.	0	0	1	50.00	0	0	1	50.00	0	0
3.	0	0	0	0	1	50.00	1	50.00	0	0
4.	0	0	0	0	1	50.00	1	50.00	0	0
5.	0	0	0	0	0	0	2	100.00	0	0
6.	0	0	1	50.00	0	0	1	50.00	0	0
7.	2	100.00	0	0	0	0	0	0	0	0
8.	0	0	1	50.00	0	0	1	50.00	0	0
9.	0	0	1	50.00	0	0	1	50.00	0	0
10.	0	0	0	0	0	0	2	100.00	0	0

Table 113: Type 8 (5 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	3	60.00	2	40.00	0	0	0	0
2.	0	0	4	80.00	0	0	0	0	1	20.00
3.	0	0	0	0	3	60.00	2	40.00	0	0
4.	0	0	0	0	2	40.00	3	60.00	0	0
5.	0	0	1	20.00	2	40.00	2	40.00	0	0
6.	0	0	0	0	3	60.00	2	40.00	0	0
7.	3	60.00	1	20.00	0	0	0	0	1	20.00
8.	0	0	0	0	1	20.00	4	80.00	0	0
9.	0	0	0	0	1	20.00	4	80.00	0	0
10.	0	0	1	20.00	2	40.00	1	20.00	1	20.00

Table 114: Type 9 (16 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	6.25	4	25.00	9	56.25	2	12.5	0	0
2.	1	6.25	8	50.00	4	25.00	2	12.5	1	6.25
3.	0	0	0	0	4	25.00	12	75.00	0	0
4.	0	0	1	6.25	4	25.00	11	68.75	0	0
5.	0	0	0	0	3	18.75	13	81.25	0	0
6.	0	0	1	6.25	6	37.5	8	50.00	1	6.25
7.	9	56.25	7	41.18	0	0	0	0	0	0
8.	0	0	0	0	7	43.75	8	50.00	1	6.25
9.	0	0	0	0	8	50.00	7	43.75	1	6.25
10.	0	0	6	37.50	6	37.50	3	18.75	1	6.25

Table 115: Type 10 (4 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	25.00	2	50.00	1	25.00	0	0	0	0
2.	0	0	2	50.00	2	50.00	0	0	0	0
3.	0	0	0	0	2	50.00	2	50.00	0	0
4.	0	0	0	0	1	25.00	3	75.00	0	0
5.	0	0	0	0	1	25.00	3	75.00	0	0
6.	0	0	0	0	1	25.00	3	75.00	0	0
7.	3	75.00	0	0	0	0	0	0	1	25.00
8.	0	0	0	0	1	25.00	2	50.00	1	25.00
9.	0	0	0	0	4	100.00	0	0	0	0
10.	0	0	1	25.00	2	50.00	0	0	1	25.00

Table 116: Type 11 (8 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	3	37.50	1	12.50	1	12.50	3	37.50	0	0
2.	3	37.50	1	12.50	2	25.00	2	25.00	0	0
3.	0	0	0	0	3	37.50	5	62.50	0	0
4.	0	0	0	0	2	25.00	6	75.00	0	0
5.	0	0	0	0	1	12.50	7	87.50	0	0
6.	0	0	0	0	3	37.50	5	62.50	0	0
7.	5	62.50	3	37.50	0	0	0	0	0	0
8.	0	0	1	12.50	1	12.50	6	75.00	0	0
9.	0	0	0	0	4	50.00	4	50.00	0	0
10.	0	0	2	25.00	5	62.50	1	12.50	0	0

Table 117: Type 12 (3 Records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	3	100.00	0	0	0	0	0	0
2.	1	33.33	1	33.33	1	33.33	0	0	0	0
3.	0	0	1	33.33	1	33.33	1	33.33	0	0
4.	0	0	0	0	2	66.66	1	33.33	0	0
5.	0	0	0	0	2	66.66	1	33.33	0	0
6.	0	0	0	0	0	0	2	66.66	1	33.33
7.	2	66.66	1	33.33	0	0	0	0	0	0
8.	0	0	2	66.66	1	33.33	0	0	0	0
9.	0	0	0	0	2	66.66	1	33.33	0	0
10.	0	0	1	33.33	0	0	0	0	2	66.66

Table 118: Type 13 (1 Record)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	100.00	0	0	0	0	0	0
2.	0	0	1	100.00	0	0	0	0	0	0
3.	0	0	0	0	1	100.00	0	0	0	0
4.	0	0	0	0	1	100.00	0	0	0	0
5.	0	0	0	0	1	100.00	0	0	0	0
6.	0	0	0	0	1	100.00	0	0	0	0
7.	0	0	1	100.00	0	0	0	0	0	0
8.	0	0	0	0	1	100.00	0	0	0	0
9.	0	0	0	0	1	100.00	0	0	0	0
10.	0	0	0	0	0	0	0	0	1	100.00

6. Section E: General CSA Questions

6.1. Overview of Responses

Table 119:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	0.65	7	4.55	60	38.97	76	49.35	10	6.49
2.	1	0.65	8	5.19	58	37.67	80	51.95	7	4.55
3.	0	0	23	14.93	75	48.70	47	30.52	9	5.84
4.	1	0.65	11	7.14	69	44.80	59	38.31	13	8.44

6.2. IA respondents

Table 120: (132 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	5	3.79	55	41.67	63	47.73	9	68.18
2.	1	0.76	5	3.79	55	41.67	66	50.00	5	3.79
3.	0	0	18	13.63	67	50.76	39	29.54	8	6.60
4.	1	0.76	10	7.58	60	45.45	49	37.12	12	9.09

6.3. Non IA respondents

Table 121 (22 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	4.55	2	9.09	5	22.73	13	59.09	1	4.55
2.	0	0	3	13.63	3	13.63	14	63.64	2	9.90
3.	0	0	5	22.73	8	36.36	8	36.36	1	4.55
4.	0	0	1	4.55	9	40.90	10	45.45	1	4.55

6.4. Breakdown by region

Table 122: USA (92 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	3	3.26	39	42.39	42	45.66	8	8.70
2.	0	0	3	3.36	38	41.30	45	48.91	3	3.36
3.	0	0	12	13.04	47	51.09	28	30.43	5	5.43
4.	0	0	8	8.70	38	41.30	39	42.39	7	7.61

Table 123: Canada (34 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	2	5.88	12	35.29	19	55.88	1	2.94
2.	1	2.94	1	2.94	14	41.18	16	47.06	2	5.88
3.	0	0	8	23.53	14	41.18	10	29.41	2	5.88
4.	0	0	1	2.94	16	47.06	12	35.29	5	14.71

Table 124: ROW (28 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
5.	1	3.57	2	7.14	9	32.14	15	53.57	1	3.57
6.	0	0	1	3.57	6	21.43	19	67.86	2	7.14
7.	0	0	3	10.71	14	50.00	9	32.14	2	7.14
8.	1	3.57	2	7.14	15	53.57	8	28.57	2	7.14

6.5. Breakdown by size

Table 125: Micro (24 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	4.17	10	41.67	12	50.00	1	4.17
2.	0	0	2	8.33	9	37.50	11	45.83	2	8.33
3.	0	0	1	4.17	11	45.83	11	45.83	1	4.17
4.	0	0	3	12.50	10	41.67	10	41.67	1	4.17

Table 126: Small (33 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	3.03	14	42.42	17	51.51	1	3.03
2.	0	0	2	6.06	12	36.36	18	54.54	1	3.03
3.	0	0	5	15.15	18	54.54	9	27.27	1	3.03
4.	0	0	1	3.03	15	45.45	14	42.42	3	9.09

Table 127: Medium (36 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	2.78	1	2.78	11	30.56	18	50.00	5	13.89
2.	0	0	2	5.56	14	38.89	18	50.00	2	5.56
3.	0	0	6	16.67	17	47.22	19	52.78	4	11.11
4.	1	2.78	4	11.11	17	47.22	8	22.22	6	16.67

Table 128: Large (12 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	7	58.33	5	41.67	0	0
2.	0	0	0	0	6	50.00	6	50.00	0	0
3.	0	0	3	25.00	6	50.00	3	25.00	0	0
4.	0	0	0	0	6	50.00	5	41.67	1	8.33

Table 129: Very large (49 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	4	8.16	18	36.73	24	49.00	3	6.12
2.	1	2.04	2	4.08	17	34.69	27	55.10	2	4.08
3.	0	0	8	16.32	23	46.94	15	30.61	3	6.12
4.	0	0	3	6.12	21	42.86	22	44.90	3	6.12

6.6. Breakdown by job classification

Table 130: Type 1 (47 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	23	48.94	23	48.94	1	2.13
2.	0	0	1	2.13	18	38.30	27	57.44	1	2.13
3.	0	0	7	14.90	24	51.06	15	31.91	1	2.13
4.	0	0	4	8.51	19	40.43	20	42.55	4	8.51

Table 131: Type 2 (21 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	3	14.29	6	28.57	9	42.86	3	14.29
2.	0	0	3	14.29	9	42.86	9	42.86	0	0
3.	0	0	3	14.29	11	52.39	6	28.57	1	4.76
4.	0	0	1	4.76	11	52.39	7	33.33	2	9.52

Table 132: Type 3 (5 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	40.0	2	40.00	1	20.00
2.	0	0	0	0	1	20.00	3	60.00	1	20.00
3.	0	0	1	20.00	3	60.00	0	0	5	100.00
4.	1	20.00	1	20.00	3	60.00	0	0	0	0

Table 133: Type 4 (29 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	3.45	11	37.80	15	51.72	2	6.90
2.	1	3.45	2	6.90	10	34.40	14	48.28	2	6.90
3.	0	0	5	17.24	15	51.72	7	24.14	2	6.90
4.	0	0	1	3.45	12	41.38	13	44.83	3	10.34

Table 134: Type 5 (8 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	5	62.50	3	37.50	0	0
2.	0	0	0	0	5	62.50	3	37.50	0	0
3.	0	0	0	0	5	62.50	3	37.50	0	0
4.	0	0	0	0	5	62.50	3	37.50	0	0

Table 135: Type 6 (5 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	20.00	1	20.00	1	20.00	1	20.00	1	20.00
2.	0	0	1	20.00	1	20.00	2	40.00	1	20.00
3.	0	0	1	20.00	1	20.00	2	40.00	1	20.00
4.	0	0	1	20.00	1	20.00	1	20.00	2	40.00

Table 136: Type 7 (2 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	50.00	0	0	1	50.00	0	0
2.	0	0	1	50.00	0	0	1	50.00	0	0
3.	0	0	1	50.00	0	0	1	50.00	0	0
4.	0	0	1	50.00	0	0	1	50.00	0	0

Table 137: Type 8 (5 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	40.00	2	40.00	1	20.00
2.	0	0	0	0	2	40.00	1	20.00	2	40.00
3.	0	0	1	20.00	2	40.00	1	20.00	1	20.00
4.	0	0	0	0	2	40.00	2	40.00	1	20.00

Table 138: Type 9 (16 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	1	6.25	5	31.25	9	56.25	1	6.25
2.	0	0	0	0	6	37.50	10	62.50	0	0
3.	0	0	4	25.00	5	31.25	5	31.25	2	12.50
4.	0	0	1	6.25	8	50.00	6	37.50	1	6.25

Table 139: Type 10 (4 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	25.00	3	75.00	0	0
2.	0	0	0	0	2	50.00	2	50.00	0	0
3.	0	0	0	0	2	50.00	2	50.00	0	0
4.	0	0	0	0	2	50.00	2	50.00	0	0

Table 140: Type 11 (8 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	12.50	7	87.50	0	0
2.	0	0	0	0	1	12.50	7	87.50	0	0
3.	0	0	0	0	3	37.50	5	62.50	0	0
4.	0	0	0	0	4	50.00	4	50.00	0	0

Table 141: Type 12 (3 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	66.66	1	33.33	0	0
2.	0	0	0	0	2	66.66	1	33.33	0	0
3.	0	0	1	33.33	2	66.66	0	0	0	0
4.	0	0	0	0	2	66.66	0	0	1	33.33

Table 142: Type 13 (1 record)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	100.00	0	0	0	0
2.	0	0	0	0	1	100.00	0	0	0	0
3.	0	0	0	0	1	100.00	0	0	0	0
4.	0	0	1	100.00	0	0	0	0	0	0

7. Section F: CSA Implementation

7.1. Overview of responses

(NB: figures do not add up to 100% due to multiple answers)

Percentages are of 154 records

Table 143: F1

	No.	%
No response	11	7.14
< 12 months	45	29.22
13 – 24 months	34	22.07
25 – 36 months	23	14.94
> 36 months	41	26.62

Table 144: F2

	No.	%
No response	13	8.44
Never	56	36.36
Once	17	11.04
Twice	18	11.69
More than twice	50	32.47

Table 145: F3

	No.	%
No response	21	13.64
Internal auditors	133	86.37
External auditors	11	7.14
Consultants	30	19.49
Users	97	62.99

Table 146: F4

	No.	%
No response	3	1.95
Replacement	12	7.80
Part	79	51.30
Special exercise	85	55.19

Table 147: F5

	No.	%
No response	22	14.29
<25%	95	61.69
26 - <50%	24	80.52
50 - <75%	7	4.55
>75%	6	42.86

Table 148: F6

	No.	%
No response	17	11.04
Unsuccessful	20	12.99
Partially successful	61	39.61
Successful	35	22.73
Very successful	21	13.64

Table 149: F7

	1 st	2 nd	3 rd	4 th
1.	54	20	8	13
2.	34	28	21	10
3.	17	22	32	21
4.	24	29	20	17

7.2. IA respondents (132 records)

Table 150: F1

	No.	%
No response	7	5.30
< 12 months	40	30.30
13 – 24 months	32	31.82
25 – 36 months	21	15.90
> 36 months	32	31.82

Table 151: F2

	No.	%
No response	9	6.82
Never	51	38.64
Once	14	10.60
Twice	17	12.88
More than twice	41	31.06

Table 152: F3

	No.	%
Internal auditors	121	91.67
External auditors	10	7.58
Consultants	23	17.42
Users	83	62.88

Table 153: F4

	No.	%
Replacement	11	8.33
Part	71	53.79
Special exercise	73	55.30

Table 154: F5

	No.	%
<25%	85	64.40
26 - <50%	23	17.42
50 - <75%	5	3.79
>75%	4	3.03

Table 155: F6

	No.	%
No response	12	9.09
Unsuccessful	17	12.88
Partially successful	55	41.67
Successful	32	24.24
Very successful	16	12.12

Table 156: F7

	1 st	2 nd	3 rd	4 th
1.	44	21	9	11
2.	30	26	17	11
3.	16	17	32	18
4.	22	31	17	13

7.3. Non IA respondents (22)

Table 157: F1

	No.	%
No response	4	18.18
< 12 months	5	22.73
13 – 24 months	2	9.09
25 – 36 months	2	9.09
> 36 months	9	40.91

Table 158: F2

	No.	%
No response	4	18.18
Never	5	22.73
Once	3	13.64
Twice	1	4.55
More than twice	9	40.91

Table 159: F3

	No.	%
No response	10	45.45
Internal auditors	12	54.55
External auditors	2	9.09
Consultants	7	31.82
Users	14	63.64

Table 160: F4

	No.	%
Replacement	1	4.45
Part	8	36.36
Special exercise	12	54.55

Table 161: F5

	No.	%
<25%	10	45.45
26 - <50%	1	4.55
50 - <75%	2	9.09
>75%	2	9.09

Table 162: F6

	No.	%
Unsuccessful	3	13.64
Partially successful	6	27.27
Successful	3	13.64
Very successful	5	22.73

Table 163: F7

	1 st	2 nd	3 rd	4 th
1.	12	0	0	2
2.	5	3	5	0
3.	2	6	2	2
4.	2	1	4	4

7.4. Breakdown by region

USA (92 records)

Table 164: F1

	No.	%
No response	8	8.70
< 12 months	29	31.52
13 – 24 months	20	21.73
25 – 36 months	12	13.04
> 36 months	23	25.00

Table 165: F2

	No.	%
No response	8	8.70
Never	37	40.22
Once	11	11.96
Twice	9	9.78
More than twice	27	29.35

Table 166: F3

	No.	%
Internal auditors	79	85.87
External auditors	7	7.61
Consultants	16	17.39
Users	55	59.78

Table 167: F4

	No.	%
Replacement	6	6.52
Part	46	50.00
Special exercise	49	53.26

Table 168: F5

	No.	%
<25%	58	63.04
26 - <50%	14	15.22
50 - <75%	2	2.17
>75%	4	4.34

Table 169: F6

	No.	%
Unsuccessful	14	4.35
Partially successful	35	38.04
Successful	17	18.48
Very successful	14	4.35

Table 170: F7

	1 st	2 nd	3 rd	4 th
1.	30	12	3	7
2.	19	16	13	4
3.	13	14	14	11
4.	15	15	11	9

Canada (34 records)

Table 171: F1

	No.	%
No response	1	2.91
< 12 months	7	20.59
13 – 24 months	10	55.89
25 – 36 months	5	14.71
> 36 months	11	32.35

Table 172: F2

	No.	%
No response	3	8.82
Never	11	11.96
Once	3	8.82
Twice	5	14.71
More than twice	12	35.29

Table 173: F3

	No.	%
Internal auditors	31	91.18
External auditors	0	0
Consultants	7	20.59
Users	21	61.76

Table 174: F4

	No.	%
Replacement	3	8.82
Part	17	50.00
Special exercise	21	61.76

Table 175: F5

	No.	%
<25%	20	58.82
26 - <50%	7	20.59
50 - <75%	2	5.88
>75%	1	2.94

Table 176: F6

	No.	%
No response	4	11.76
Unsuccessful	3	8.82
Partially successful	15	44.12
Successful	8	23.53
Very successful	4	11.76

Table 177: F7

	1 st	2 nd	3 rd	4 th
1.	14	4	2	4
2.	10	5	4	4
3.	3	5	10	4
4.	5	8	4	5

Rest of the World (28 records)**Table 178: F1**

	No.	%
No response	2	7.14
< 12 months	9	32.14
13 – 24 months	4	14.29
25 – 36 months	6	21.43
> 36 months	7	25.00

Table 179: F2

	No.	%
No response	2	7.14
Never	8	23.53
Once	3	8.82
Twice	4	11.76
More than twice	11	39.29

Table 180: F3

	No.	%
No response	5	17.86
Internal auditors	23	82.14
External auditors	5	17.86
Consultants	7	25.00
Users	21	75.00

Table 181: F4

	No.	%
Replacement	3	8.82
Part	16	57.14
Special exercise	15	53.57

Table 182: F5

	No.	%
<25%	18	64.29
26 - <50%	3	8.82
50 - <75%	3	8.82
>75%	1	3.57

Table 183: F6

	No.	%
Unsuccessful	3	8.82
Partially successful	11	39.29
Successful	10	35.71
Very successful	3	8.82

Table 184: F7

	1 st	2 nd	3 rd	4 th
1.	10	4	3	2
2.	5	7	4	2
3.	1	3	8	6
4.	4	6	5	3

7.5. Breakdown by size**Micro (24 records)****Table 185: F1**

	No.	%
No response	3	12.50
< 12 months	7	29.17
13 – 24 months	7	29.17
25 – 36 months	2	50.00
> 36 months	5	20.83

Table 186: F2

	No.	%
No response	2	8.33
Never	9	37.50
Once	2	8.33
Twice	3	12.50
More than twice	8	33.33

Table 187: F3

	No.	%
Internal auditors	20	83.33
External auditors	1	4.17
Consultants	3	12.50
Users	14	58.33

Table 188: F4

	No.	%
Replacement	0	0
Part	15	20.83
Special exercise	10	41.67

Table 189: F5

	No.	%
<25%	15	20.83
26 - <50%	5	20.83
50 - <75%	1	4.17
>75%	0	0

Table 190: F6

	No.	%
Unsuccessful	5	20.83
Partially successful	9	37.50
Successful	5	37.50
Very successful	2	8.33

Table 191: F7

	1 st	2 nd	3 rd	4 th
1.	7	2	1	3
2.	4	5	2	1
3.	2	3	6	1
4.	3	2	4	3

Small (33 records)

Table 192: F1

	No.	%
No response	2	6.06
< 12 months	15	45.45
13 – 24 months	7	21.21
25 – 36 months	5	15.15
> 36 months	4	12.12

Table 193: F2

	No.	%
No response	1	3.03
Never	13	39.40
Once	4	12.12
Twice	7	21.21
More than twice	6	18.18

Table 194: F3

	No.	%
Internal auditors	29	87.88
External auditors	4	12.12
Consultants	9	27.27
Users	24	72.72

Table 195: F4

	No.	%
Replacement	2	6.06
Part	18	50
Special exercise	15	54.54

Table 196: F5

	No.	%
<25%	21	63.64
26 - <50%	7	21.21
50 - <75%	1	3.03
>75%	0	0

Table 197: F6

	No.	%
Unsuccessful	2	6.06
Partially successful	16	48.48
Successful	5	15.15
Very successful	6	18.18

Table 198: F7

	1 st	2 nd	3 rd	4 th
1.	14	5	3	1
2.	6	7	5	5
3.	2	5	8	7
4.	5	9	6	2

Medium (36 records)**Table 199: F1**

	No.	%
No response	2	5.56
< 12 months	11	30.56
13 – 24 months	5	13.89
25 – 36 months	7	19.44
> 36 months	11	30.56

Table 200: F2

	No.	%
No response	2	5.56
Never	18	50.00
Once	2	5.56
Twice	4	11.11
More than twice	10	27.78

Table 201: F3

	No.	%
Internal auditors	30	83.33
External auditors	3	8.33
Consultants	7	19.44
Users	19	52.78

Table 202: F4

	No.	%
Replacement	2	5.56
Part	15	5.40
Special exercise	22	61.11

Table 203: F5

	No.	%
<25%	27	75.00
26 - <50%	2	5.56
50 - <75%	1	2.78
>75%	1	2.78

Table 204: F6

	No.	%
Unsuccessful	10	27.78
Partially successful	10	27.78
Successful	9	25.00
Very successful	2	5.56

Table 205 F7

	1 st	2 nd	3 rd	4 th
1.	14	3	3	1
2.	7	5	5	3
3.	3	7	3	6
4.	4	5	6	4

Large (12)

Table 206: F1

	No.	%
No response	1	8.33
< 12 months	2	16.67
13 – 24 months	3	25.00
25 – 36 months	3	25.00
> 36 months	3	25.00

Table 207: F2

	No.	%
No response	1	8.33
Never	4	33.33
Once	1	8.33
Twice	2	16.67
More than twice	4	33.33

Table 208: F3

	No.	%
No response	1	8.33
Internal auditors	11	91.67
External auditors	1	8.33
Consultants	1	8.33
Users	7	58.33

Table 209: F4

	No.	%
No response	0	0
Replacement	0	0
Part	10	83.33
Special exercise	6	50.00

Table 210: F5

	No.	%
No response	1	8.33
<25%	5	41.67
26 - <50%	5	41.67
50 - <75%	0	0
>75%	1	8.33

Table 211: F6

	No.	%
No response	0	0
Unsuccessful	4	33.33
Partially successful	4	33.33
Successful	7	58.33
Very successful	0	0

Table 212: F7

	1 st	2 nd	3 rd	4 th
1.	3	4	3	0
2.	5	4	1	0
3.	2	1	4	3
4.	3	3	3	1

Very Large (49 records)

Table 213: F1

	No.	%
No response	3	6.12
< 12 months	10	20.41
13 – 24 months	12	24.49
25 – 36 months	6	12.24
> 36 months	18	36.73

Table 214: F2

	No.	%
No response	5	10.20
Never	12	24.49
Once	8	16.33
Twice	2	4.08
More than twice	22	44.90

Table 215: F3

	No.	%
Internal auditors	43	87.76
External auditors	3	6.12
Consultants	10	20.41
Users	33	67.34

Table 216: F4

	No.	%
Replacement	7	14.29
Part	21	42.86
Special exercise	29	59.18

Table 217: F5

	No.	%
<25%	27	55.10
26 - <50%	7	14.29
50 - <75%	3	6.12
>75%	4	8.16

Table 218: F6

	No.	%
Unsuccessful	4	8.16
Partially successful	22	44.90
Successful	9	18.37
Very successful	11	22.44

Table 219: F7

	1 st	2 nd	3 rd	4 th
1.	16	6	1	6
2.	13	6	8	2
3.	8	7	10	4
4.	9	10	2	6

7.6. Breakdown by Job Classification

Type 1 (47 records)

Table 220: F1

	No.	%
No response	2	4.26
< 12 months	13	27.66
13 – 24 months	10	2.13
25 – 36 months	9	19.15
> 36 months	13	27.66

Table 221: F2

	No.	%
No response	4	8.51
Never	13	27.66
Once	5	10.64
Twice	8	17.02
More than twice	17	36.12

Table 222: F3

	No.	%
Internal auditors	42	89.36
External auditors	6	12.77
Consultants	12	25.53
Users	35	27.47

Table 223: F4

	No.	%
Replacement	1	2.13
Part	25	53.19
Special exercise	27	57.45

Table 224: F5

	No.	%
<25%	27	57.45
26 - <50%	11	23.40
50 - <75%	3	6.38
>75%	0	0

Table 225: F6

	No.	%
Unsuccessful	8	17.02
Partially successful	22	46.80
Successful	7	14.90
Very successful	8	17.02

Table 226: F7

	1 st	2 nd	3 rd	4 th
1.	21	5	3	1
2.	12	12	3	3
3.	5	6	12	7
4.	5	13	5	5

Type 2 (21 records)**Table 227: F1**

	No.	%
No response	0	0
< 12 months	9	42.86
13 – 24 months	5	23.81
25 – 36 months	3	14.29
> 36 months	4	19.05

Table 228: F2

	No.	%
No response	0	0
Never	10	47.62
Once	3	14.29
Twice	2	9.52
More than twice	6	28.57

Table 229: F3

	No.	%
Internal auditors	18	85.71
External auditors	2	9.52
Consultants	5	23.81
Users	16	76.19

Table 230: F4

	No.	%
Replacement	1	4.76
Part	8	38.10
Special exercise	11	52.38

Table 231: F5

	No.	%
<25%	15	71.43
26 - <50%	1	4.76
50 - <75%	1	4.76
>75%	1	4.76

Table 232: F6

	No.	%
Unsuccessful	3	14.29
Partially successful	9	42.86
Successful	4	19.05
Very successful	2	9.52

Table 233: F7:

	1 st	2 nd	3 rd	4 th
1.	4	5	1	2
2.	6	2	2	2
3.	2	2	3	3
4.	2	3	4	3

Type 3 (5 records)**Table 234: F1**

	No.	%
No response	1	20.00
< 12 months	1	20.00
13 – 24 months	0	0
25 – 36 months	0	0
> 36 months	3	60.00

Table 235: F2

	No.	%
No response	0	0
Never	2	40.00
Once	0	0
Twice	1	20.00
More than twice	2	40.00

Table 236: F3

	No.	%
Internal auditors	4	80.00
External auditors	1	20.00
Consultants	2	40.00
Users	3	60.00

Table 237: F4

	No.	%
Replacement	1	20.00
Part	1	20.00
Special exercise	2	40.00

Table 238: F5

	No.	%
<25%	2	40.00
26 - <50%	0	0
50 - <75%	1	20.00
>75%	2	40.00

Table 239: F6

	No.	%
Unsuccessful	1	20.00
Partially successful	1	20.00
Successful	0	0
Very successful	3	60.00

Table 240: F7

	1 st	2 nd	3 rd	4 th
1.	1	0	1	1
2.	2	1	0	0
3.	1	1	0	1
4.	1	1	1	0

Type 4 (29 records)

Table 241: F1

	No.	%
No response	1	3.45
< 12 months	8	27.56
13 – 24 months	9	31.03
25 – 36 months	5	17.24
> 36 months	6	20.69

Table 242: F2

	No.	%
No response	2	6.90
Never	9	31.03
Once	3	10.34
Twice	5	17.24
More than twice	10	34.48

Table 243: F3

	No.	%
Internal auditors	27	93.10
External auditors	1	3.45
Consultants	5	17.24
Users	14	48.28

Table 244: F4

	No.	%
Replacement	1	3.45
Part	16	55.17
Special exercise	20	68.97

Table 245: F5

	No.	%
<25%	19	65.51
26 - <50%	7	24.14
50 - <75%	0	0
>75%	0	0

Table 246: F6

	No.	%
Unsuccessful	5	17.24
Partially successful	10	34.48
Successful	7	24.14
Very successful	4	13.79

Table 247: F7

	1 st	2 nd	3 rd	4 th
1.	10	5	2	1
2.	6	5	5	2
3.	5	6	4	3
4.	6	2	6	4

Type 5 (8 records)**Table 248: F1**

	No.	%
No response	2	25.00
< 12 months	3	37.50
13 – 24 months	1	12.50
25 – 36 months	0	0
> 36 months	2	25.00

Table 249: F2

	No.	%
No response	1	12.50
Never	5	62.50
Once	0	0
Twice	0	0
More than twice	2	25.00

Table 250:F3

	No.	%
Internal auditors	5	62.50
External auditors	0	0
Consultants	0	0
Users	2	25.00

Table 251: F4

	No.	%
Replacement	2	25.00
Part	3	37.50
Special exercise	0	0

Table 252: F5

	No.	%
<25%	3	37.50
26 - <50%	1	12.50
50 - <75%	1	12.50
>75%	1	12.50

Table 253: F6

	No.	%
Unsuccessful	1	12.50
Partially successful	3	37.50
Successful	2	25.00
Very successful	0	0

Table 254: F7

	1 st	2 nd	3 rd	4 th
1.	3	0	0	0
2.	0	1	2	0
3.	0	0	2	1
4.	0	1	0	1

Type 6 (5 records)

Table 255: F1

	No.	%
No response	0	0
< 12 months	3	60.00
13 – 24 months	0	0
25 – 36 months	1	20.00
> 36 months	1	20.00

Table 256: F2

	No.	%
No response	0	0
Never	3	60.00
Once	0	0
Twice	0	0
More than twice	2	40.00

Table 257: F3

	No.	%
No response	0	0
Internal auditors	4	80.00
External auditors	0	0
Consultants	0	0
Users	3	60.00

Table 258: F4

	No.	%
Replacement	2	40.00
Part	2	40.00
Special exercise	1	20.00

Table 259: F5

	No.	%
<25%	4	80.00
26 - <50%	0	0
50 - <75%	0	0
>75%	0	0

Table 260: F6

	No.	%
Unsuccessful	3	60.00
Partially successful	2	40.00
Successful	0	0
Very successful	0	0

Table 261: F7

	1 st	2 nd	3 rd	4 th
1.	3	0	0	0
2.	1	0	0	1
3.	0	1	0	0
4.	0	0	1	0

Type 7 (1 record)

Table 262: F1

	No.	%
No response	1	50.00
< 12 months	0	0
13 – 24 months	1	50.00
25 – 36 months	0	0
> 36 months	0	0

Table 263: F2

	No.	%
No response	1	50.00
Never	1	50.00
Once	0	0
Twice	0	0
More than twice	0	0

Table 264: F3

	No.	%
No response	0	0
Internal auditors	1	50.00
External auditors	0	0
Consultants	0	0
Users	0	0

Table 265: F4

	No.	%
Replacement	1	50.00
Part	0	0
Special exercise	0	0

Table 266: F5

	No.	%
<25%	0	0
26 - <50%	0	0
50 - <75%	0	0
>75%	1	50.00

Table 267: F6

	No.	%
Unsuccessful	0	0
Partially successful	0	0
Successful	0	0
Very successful	1	50.00

Table 268: F7

	1 st	2 nd	3 rd	4 th
1.	1	0	0	0
2.	1	0	0	0
3.	1	0	0	0
4.	1	0	0	0

Type 8 (5 records)

Table 269: F1

	No.	%
No response	3	60.00
< 12 months	2	40.00
13 – 24 months	0	0
25 – 36 months	0	0
> 36 months	3	60.00

Table 270: F2

	No.	%
No response	0	0
Never	2	40.00
Once	0	0
Twice	3	60.00
More than twice	0	0

Table 271: F3

	No.	%
Internal auditors	4	80.00
External auditors	0	0
Consultants	2	40.00
Users	4	80.00

Table 272: F4

	No.	%
Replacement	0	0
Part	4	80.00
Special exercise	3	60.00

Table 273: F5

	No.	%
<25%	3	60.00
26 - <50%	1	20.00
50 - <75%	0	0
>75%	0	0

Table 274: F6

	No.	%
Unsuccessful	0	0
Partially successful	2	40.00
Successful	1	20.00
Very successful	1	20.00

Table 275: F7

	1 st	2 nd	3 rd	4 th
1.	2	0	0	1
2.	1	1	1	0
3.	0	2	0	1
4.	1	0	1	0

Type 9 (16 records)

Table 276: F1

	No.	%
No response	0	0
< 12 months	5	31.25
13 – 24 months	5	31.25
25 – 36 months	2	12.50
> 36 months	4	25.00

Table 277: F2

	No.	%
No response	0	0
Never	10	62.50
Once	1	6.25
Twice	2	12.50
More than twice	3	18.75

Table 278: F3

	No.	%
Internal auditors	16	100.00
External auditors	0	0
Consultants	1	6.25
Users	8	50.00

Table 279: F4

	No.	%
Replacement	1	6.25
Part	10	62.50
Special exercise	9	56.25

Table 280: F5

	No.	%
<25%	11	68.75
26 - <50%	1	6.25
50 - <75%	1	6.25
>75%	1	6.25

Table 281: F6

	No.	%
Unsuccessful	0	0
Partially successful	8	50.00
Successful	4	25.00
Very successful	3	18.75

Table 282: F7

	1 st	2 nd	3 rd	4 th
1.	6	2	0	2
2.	1	3	4	1
3.	0	2	4	3
4.	3	4	2	0

Type 10 (4 records)

Table 283: F1

	No.	%
No response	1	25.00
< 12 months	1	25.00
13 – 24 months	1	25.00
25 – 36 months	0	0
> 36 months	1	25.00

Table 284: F2

	No.	%
No response	0	0
Never	0	0
Once	0	0
Twice	1	25.00
More than twice	2	50.00

Table 285: F3

	No.	%
Internal auditors	3	37.50
External auditors	0	0
Consultants	0	0
Users	2	25.00

Table 286: F4

	No.	%
Replacement	1	12.50
Part	1	12.50
Special exercise	3	37.50

Table 287: F5

	No.	%
<25%	2	25.00
26 - <50%	1	12.50
50 - <75%	0	0
>75%	0	0

Table 288: F6

	No.	%
Unsuccessful	0	0
Partially successful	0	0
Successful	2	25.00
Very successful	1	12.50

Table 289: F7

	1 st	2 nd	3 rd	4 th
1.	1	0	0	1
2.	1	0	1	0
3.	0	0	1	1
4.	0	2	0	0

Type 11 (8 records)

Table 290: F1

	No.	%
No response	0	0
< 12 months	1	12.50
13 – 24 months	0	0
25 – 36 months	1	12.50
> 36 months	6	

Table 291: F2

	No.	%
No response	0	0
Never	2	25.00
Once	4	50.00
Twice	0	0
More than twice	2	25.00

Table 292: F3

	No.	%
Internal auditors	7	87.50
External auditors	2	25.00
Consultants	3	37.50
Users	6	75.00

Table 293: F4

	No.	%
Replacement	0	0
Part	7	87.50
Special exercise	6	75.00

Table 294: F5

	No.	%
<25%	7	87.50
26 - <50%	0	0
50 - <75%	0	0
>75%	0	0

Table 295: F6

	No.	%
Unsuccessful	0	0
Partially successful	1	12.50
Successful	2	25.00
Very successful	5	62.50

Table 296: F7

	1 st	2 nd	3 rd	4 th
1.	2	2	0	3
2.	3	2	2	0
3.	3	0	4	0
4.	3	2	0	2

Type 12 (3 records)**Table 297: F1**

	No.	%
No response	1	33.33
< 12 months	1	33.33
13 – 24 months	0	0
25 – 36 months	1	33.33
> 36 months	0	0

Table 298: F2

	No.	%
No response	0	0
Never	0	0
Once	0	0
Twice	0	0
More than twice	2	66.67

Table 299: F3

	No.	%
No response	0	0
Internal auditors	2	66.67
External auditors	0	0
Consultants	0	0
Users	1	33.33

Table 300: F4

	No.	%
Replacement	1	33.33
Part	0	0
Special exercise	2	66.67

Table 301: F5

	No.	%
<25%	2	66.67
26 - <50%	0	0
50 - <75%	0	0
>75%	0	0

Table 302: F6

	No.	%
Unsuccessful	0	0
Partially successful	0	0
Successful	2	66.67
Very successful	0	0

Table 303: F7

	1 st	2 nd	3 rd	4 th
1.	1	0	0	1
2.	1	0	0	1
3.	0	1	1	0
4.	1	1	0	0

Type 13 (1 record)

Table 304: F1

	No.	%
No response	0	0
< 12 months	1	100.00
13 – 24 months	0	0
25 – 36 months	0	0
> 36 months	0	0

Table 305: F2

	No.	%
No response	0	0
Never	0	0
Once	0	0
Twice	0	0
More than twice	1	100.00

Table 306: F3

	No.	%
No response	1	100.00
Internal auditors	0	0
External auditors	0	0
Consultants	0	0
Users	0	0

Table 307: F4

	No.	%
Replacement	1	100.00
Part	1	100.00
Special exercise	1	100.00

Table 308: F5

	No.	%
<25%	0	0
26 - <50%	1	100.00
50 - <75%	0	0
>75%	1	100.00

Table 309: F6

	No.	%
Unsuccessful	0	0
Partially successful	0	0
Successful	0	0
Very successful	1	100.00

Table 310: F7

	1 st	2 nd	3 rd	4 th
1.	0	1	0	0
2.	0	0	1	0
3.	0	0	0	1
4.	1	0	0	0

8. Section G: CSA Practice

8.1. Overview of Responses

Table 311: 147 records

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	0.68	0	0	44	29.93	94	63.95	8	5.44
2.	0	0	3	2.04	40	27.21	93	63.27	11	7.48
3.	1	0.68	1	0.68	65	44.22	66	44.90	14	9.52
4.	1	0.68	7	4.76	39	26.53	94	63.95	6	4.08
5.	2	1.36	3	2.04	72	48.98	63	42.86	7	4.76
6.	5	3.40	25	17.01	60	40.82	42	28.57	15	10.20
7.	4	2.72	29	19.73	57	38.78	38	25.85	19	12.93
8.	3	2.04	24	16.33	54	36.73	42	28.57	22	14.97
9.	5	3.40	24	16.33	54	36.73	42	28.57	22	14.97
10.	4	2.72	16	10.88	63	42.86	39	26.53	25	17.01
11.	7	4.76	30	20.41	40	27.21	39	26.53	31	21.10

8.2. IA respondents

Table 312: 128 records

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	41	32.03	80	62.50	7	5.47
2.	0	0	2	1.56	55	42.97	61	47.66	10	7.81
3.	1	0.78	0	0	59	46.09	55	42.97	13	10.16
4.	0	0	6	4.08	38	29.69	79	61.72	5	3.40
5.	1	0.78	0	0	68	53.13	54	42.19	5	3.40
6.	2	1.56	23	17.97	54	42.19	35	27.34	14	10.94
7.	2	1.56	27	21.10	51	39.84	31	24.22	17	13.28
8.	1	0.78	23	17.97	52	40.63	34	26.56	18	14.06
9.	3	2.34	22	17.19	50	39.06	35	27.34	19	14.84
10.	3	2.34	14	10.94	58	45.31	31	24.22	22	17.19
11.	5	3.40	25	19.53	40	31.25	32	25.00	26	20.31

8.3. Non IA respondents

Table 313: 19 records

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	5.26	0	0	3	15.79	14	73.68	1	5.26
2.	1	5.26	0	0	3	15.79	14	73.68	1	5.26
3.	0	0	1	5.26	5	26.32	12	63.16	1	5.26
4.	1	5.26	1	5.26	1	5.26	15	78.95	1	5.26
5.	1	5.26	3	15.79	4	21.05	9	47.37	2	10.53
6.	3	15.79	2	10.53	6	5.26	7	36.84	1	5.26
7.	2	10.53	2	10.53	6	5.26	7	36.84	2	10.53
8.	2	10.53	4	21.05	4	21.05	6	31.58	3	15.79
9.	2	10.53	3	15.79	4	21.05	7	36.84	3	15.79

8.4. Breakdown by region

Table 314: USA (87 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	33	37.93	49	56.32	5	5.75
2.	0	0	2	2.30	42	48.28	38	43.68	5	5.75
3.	1	1.15	0	0	39	44.83	39	44.83	8	9.20
4.	0	0	4	4.60	28	32.18	51	58.62	4	4.60
5.	2	2.30	2	2.30	44	50.57	34	39.08	5	5.75
6.	2	2.30	15	17.24	37	42.53	25	28.74	8	9.20
7.	2	2.30	19	21.83	40	45.98	14	16.09	12	13.80
8.	1	1.15	16	18.40	40	45.98	17	19.54	13	14.94
9.	1	1.15	13	14.94	39	44.83	19	21.84	15	17.24
10.	1	1.15	7	8.05	44	50.57	18	20.69	17	19.54
11.	3	3.45	20	22.99	28	32.18	17	19.54	19	21.84

Table 315: Canada (32 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	5	15.63	26	81.25	1	3.13
2.	0	0	0	0	8	25.00	21	65.64	3	9.38
3.	0	0	0	0	13	40.63	16	50.00	3	9.38
4.	0	0	1	3.13	5	15.63	24	75.00	1	3.13
5.	0	0	0	0	14	43.75	17	53.13	1	3.13
6.	0	0	7	21.88	15	46.88	6	18.75	4	12.50
7.	0	0	6	18.75	8	25.00	17	53.13	1	3.13
8.	1	3.13	6	18.75	5	15.63	16	50.00	4	12.50
9.	3	9.38	5	15.63	5	15.63	15	46.88	4	12.50
10.	2	6.25	4	12.50	7	21.88	15	46.88	4	12.50
11.	2	6.25	4	12.50	5	15.63	16	50.00	5	15.63

Table 316: ROW (28 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	3.57	0	0	6	21.43	19	67.86	2	7.14
2.	0	0	1	3.57	10	35.71	14	50.00	3	10.71
3.	0	0	1	3.57	13	46.43	11	39.29	3	10.71
4.	1	3.57	2	7.14	6	21.43	18	64.29	1	3.57
5.	0	0	1	3.57	14	50.00	12	42.86	1	3.57
6.	3	10.71	3	10.71	8	28.57	11	39.29	3	10.71
7.	2	7.14	4	14.28	9	32.14	7	25.00	6	21.43
8.	1	3.57	5	17.86	11	39.29	7	25.00	4	14.28
9.	1	3.57	6	21.43	10	35.71	8	28.57	3	10.71
10.	1	3.57	5	17.86	12	42.86	6	21.43	4	14.28
11.	2	7.14	6	21.43	7	25.00	6	21.43	7	25.00

8.5. Breakdown by size

Table 317: Micro (23 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	7	30.43	15	65.21	1	4.35
2.	0	0	0	0	7	30.43	14	60.87	2	8.70
3.	0	0	0	0	9	39.13	11	47.83	3	13.04
4.	0	0	4	17.40	2	8.70	16	69.56	1	4.35
5.	0	0	1	4.35	7	30.43	14	60.87	1	4.35
6.	0	0	2	8.70	12	52.17	5	21.74	2	8.70
7.	0	0	5	21.74	8	34.78	6	26.09	4	17.40
8.	0	0	6	26.09	7	30.43	7	30.43	3	13.04
9.	0	0	3	13.04	12	52.17	5	21.74	3	13.04
10.	0	0	3	13.04	12	52.17	5	21.74	3	13.04
11.	1	4.35	4	17.40	7	30.43	7	30.43	4	17.40

Table 318: Small (32 records)

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	9	28.12	21	65.63	2	6.25
2.	0	0	0	0	15	46.88	15	46.88	2	6.25
3.	0	0	0	0	17	53.13	13	40.63	2	6.25
4.	0	0	0	0	9	28.12	22	68.75	1	3.13
5.	0	0	0	0	19	59.38	11	34.38	2	6.25
6.	1	3.13	6	18.75	13	40.63	11	34.38	1	3.13
7.	2	6.25	5	15.63	12	37.50	9	28.12	4	12.50
8.	0	0	3	9.38	15	46.88	11	34.38	3	9.38
9.	1	3.13	4	12.50	11	34.38	11	34.38	5	15.63
10.	1	3.13	1	3.13	14	43.75	11	34.38	5	15.63
11.	0	0	8	25.00	8	25.00	11	34.38	5	15.63

8.6. Breakdown by job classification

Type 1 (45 records)

Table 322:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	13	28.89	31	68.89	1	2.22
2.	0	0	0	0	18	40.00	26	57.78	1	2.22
3.	0	0	0	0	20	44.44	23	51.11	2	4.44
4.	0	0	0	0	11	24.44	30	66.67	2	4.44
5.	0	0	0	0	19	42.22	22	48.89	1	2.22
6.	0	0	0	0	17	37.78	13	28.89	3	6.67
7.	0	0	0	0	16	35.56	10	22.22	6	13.33
8.	0	0	0	0	18	40.00	12	26.67	5	11.11
9.	0	0	0	0	18	40.00	13	28.89	4	8.89
10.	0	0	0	0	22	48.89	11	24.44	5	11.11
11.	0	0	0	0	13	28.89	12	26.67	5	11.11

Type 2 (20 records)

Table 323:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	8	40.00	9	45.00	3	15.00
2.	0	0	1	5.00	10	50.00	7	35.00	2	10.00
3.	1	5.00	0	0	9	45.00	8	40.00	2	10.00
4.	0	0	1	5.00	5	25.00	12	60.00	2	10.00
5.	0	0	0	0	11	55.00	8	40.00	1	5.00
6.	1	5.00	2	10.00	7	35.00	7	35.00	3	15.00
7.	0	0	5	25.00	8	40.00	4	35.00	3	15.00
8.	0	0	7	35.00	5	25.00	3	15.00	5	25.00
9.	1	5.00	5	25.00	4	35.00	4	35.00	6	30.00
10.	1	5.00	5	25.00	4	20.00	4	35.00	6	30.00
11.	3	15.00	5	25.00	0	0	2	10.00	10	50.00

Type 3 (5 records)

Table 324:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	4	80.00	1	20.00	0	0
2.	0	0	1	20.00	3	60.00	0	0	1	20.00
3.	0	0	0	0	3	60.00	0	0	2	40.00
4.	0	0	1	20.00	2	40.00	2	40.00	0	0
5.	0	0	0	0	4	80.00	0	0	1	20.00
6.	0	0	0	0	3	60.00	1	20.00	1	20.00
7.	0	0	0	0	2	40.00	2	40.00	1	20.00
8.	0	0	2	40.00	1	20.00	1	20.00	1	20.00
9.	0	0	2	40.00	1	20.00	1	20.00	1	20.00
10.	0	0	0	0	4	80.00	0	0	1	20.00
11.	0	0	2	40.00	2	40.00	1	20.00	0	0

Type 4 (29 records)

Table 325:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	9	31.03	18	62.07	2	6.90
2.	0	0	0	0	12	41.38	13	44.83	4	13.80
3.	0	0	0	0	13	44.83	12	41.38	4	13.80
4.	0	0	2	6.90	8	27.59	19	65.52	0	0
5.	0	0	0	0	14	48.28	13	44.83	2	6.90
6.	0	0	6	20.69	12	41.38	7	24.14	4	13.80
7.	1	3.45	2	6.90	10	34.48	11	37.93	5	17.24
8.	1	3.45	4	13.80	12	41.38	8	27.59	4	13.80
9.	1	3.45	4	13.80	9	31.03	9	31.03	6	20.69
10.	1	3.45	2	6.90	11	37.93	9	31.03	5	17.24
11.	1	3.45	4	13.80	7	24.14	10	34.48	7	24.14

Type 5 (7 records)

Table 326:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	2	28.58	5	71.43	0	0
2.	0	0	0	0	4	57.14	3	42.86	0	0
3.	0	0	0	0	3	42.86	4	57.14	0	0
4.	0	0	0	0	2	28.58	5	71.43	0	0
5.	0	0	0	0	4	57.14	2	28.58	1	14.29
6.	0	0	0	0	2	28.58	4	57.14	1	14.29
7.	0	0	1	14.29	4	57.14	2	28.58	0	0
8.	0	0	1	14.29	4	57.14	2	28.58	0	0
9.	0	0	1	14.29	4	57.14	2	28.58	0	0
10.	0	0	1	14.29	4	57.14	2	28.58	0	0
11.	0	0	1	14.29	2	28.58	3	42.86	1	14.29

Type 6 (5 records)

Table 327:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	1	20.00	0	0	2	40.00	1	20.00	1	20.00
2.	0	0	1	20.00	1	20.00	1	20.00	2	40.00
3.	0	0	1	20.00	2	40.00	0	0	2	40.00
4.	1	20.00	0	0	3	60.00	0	0	1	20.00
5.	0	0	0	0	4	80.00	0	0	1	20.00
6.	1	20.00	0	0	3	60.00	0	0	1	20.00
7.	1	20.00	1	20.00	1	20.00	0	0	2	40.00
8.	1	20.00	0	0	1	20.00	2	40.00	1	20.00
9.	1	20.00	0	0	1	20.00	2	40.00	1	20.00
10.	1	20.00	1	20.00	1	20.00	0	0	2	40.00
11.	1	20.00	1	20.00	2	40.00	0	0	1	20.00

Type 7 (1 record)

Table 328:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	0	0	1	100.00	0	0
2.	0	0	0	0	0	0	1	100.00	0	0
3.	0	0	0	0	0	0	1	100.00	0	0
4.	0	0	0	0	0	0	1	100.00	0	0
5.	0	0	0	0	1	100.00	0	0	0	0
6.	0	0	0	0	0	0	1	100.00	0	0
7.	0	0	0	0	0	0	1	100.00	0	0
8.	0	0	0	0	0	0	1	100.00	0	0
9.	0	0	0	0	0	0	1	100.00	0	0
10.	0	0	0	0	0	0	1	100.00	0	0
11.	0	0	0	0	0	0	1	100.00	0	0

Type 8 (5 records)

Table 329:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	0	0	4	80.00	1	20.00
2.	0	0	0	0	0	0	4	80.00	1	20.00
3.	0	0	0	0	2	40.00	2	40.00	1	20.00
4.	0	0	0	0	0	0	4	80.00	1	20.00
5.	0	0	1	20.00	1	20.00	2	40.00	1	20.00
6.	0	0	1	20.00	3	60.00	1	20.00	0	0
7.	0	0	0	0	0	0	3	60.00	2	40.00
8.	0	0	1	20.00	1	20.00	2	40.00	1	20.00
9.	0	0	0	0	2	40.00	2	40.00	1	20.00
10.	0	0	0	0	2	40.00	2	40.00	1	20.00
11.	0	0	1	20.00	1	20.00	2	40.00	1	20.00

Type 9 (15 records)

Table 330:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	5	33.33	10	66.67	0	0
2.	0	0	0	0	8	53.33	7	46.67	0	0
3.	0	0	0	0	8	53.33	7	46.67	0	0
4.	0	0	1	6.67	5	33.33	9	53.33	0	0
5.	1	6.67	0	0	9	53.33	5	33.33	0	0
6.	1	6.67	4	26.67	7	46.67	3	33.33	0	0
7.	1	6.67	4	26.67	6	40.00	4	26.67	0	0
8.	0	0	0	0	8	53.33	6	40.00	1	6.67
9.	1	6.67	1	6.67	8	53.33	4	26.67	1	6.67
10.	1	6.67	0	0	7	46.67	5	33.33	2	13.33
11.	0	0	0	0	7	46.67	5	33.33	3	33.33

Type 10 (4 records)

Table 331:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	25.00	3	75.00	0	0
2.	0	0	0	0	2	50.00	2	50.00	0	0
3.	0	0	0	0	1	25.00	3	75.00	0	0
4.	0	0	0	0	0	0	4	100.00	0	0
5.	0	0	0	0	2	50.00	2	50.00	0	0
6.	0	0	1	25.00	2	50.00	1	25.00	0	0
7.	0	0	1	25.00	3	75.00	0	0	0	0
8.	0	0	1	25.00	2	50.00	0	0	1	25.00
9.	0	0	0	0	3	75.00	0	0	1	25.00
10.	0	0	0	0	3	75.00	0	0	1	25.00
11.	1	25.00	0	0	2	50.00	0	0	1	25.00

Type 11 (8 records)

Table 332:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	0	0	8	100.00	0	0
2.	0	0	0	0	1	12.50	7	87.50	0	0
3.	0	0	0	0	1	12.50	6	75.00	1	12.50
4.	0	0	0	0	1	12.50	7	87.50	0	0
5.	0	0	0	0	2	25.00	6	75.00	0	0
6.	0	0	1	12.50	3	37.50	4	50.00	0	0
7.	0	0	2	25.00	5	62.50	1	12.50	0	0
8.	0	0	1	12.50	3	37.50	3	37.50	1	12.50
9.	0	0	1	12.50	3	37.50	3	37.50	1	12.50
10.	0	0	0	0	3	37.50	4	50.00	1	12.50
11.	0	0	1	12.50	3	37.50	4	50.00	0	0

Type 12 (2 records)

Table 333:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	0	0	2	100.00	0	0
2.	0	0	0	0	0	0	2	100.00	0	0
3.	0	0	0	0	2	100.00	0	0	0	0
4.	0	0	0	0	2	100.00	0	0	0	0
5.	0	0	0	0	1	50.00	1	50.00	0	0
6.	0	0	0	0	1	50.00	1	50.00	0	0
7.	0	0	0	0	2	100.00	0	0	0	0
8.	0	0	0	0	1	50.00	0	0	1	50.00
9.	0	0	0	0	1	50.00	1	50.00	0	0
10.	0	0	0	0	0	0	1	50.00	1	50.00
11.	0	0	0	0	1	50.00	0	0	1	50.00

Type 13 (1 record)

Table 334:

Q.	SD No.	SD %	D No.	D %	A No.	A %	SA No.	SA %	DK No.	DK %
1.	0	0	0	0	1	100.00	0	0	0	0
2.	0	0	0	0	1	100.00	0	0	0	0
3.	0	0	0	0	0	0	1	100.00	0	0
4.	0	0	0	0	0	0	1	100.00	0	0
5.	0	0	0	0	0	0	0	0	1	100.00
6.	0	0	1	100.00	0	0	0	0	0	0
7.	0	0	1	100.00	0	0	0	0	0	0
8.	0	0	1	100.00	0	0	0	0	0	0
9.	0	0	1	100.00	0	0	0	0	0	0
10.	0	0	1	100.00	0	0	0	0	0	0
11.	0	0	1	100.00	0	0	0	0	0	0