

A critique of how developments within the auditing profession were integrated into higher education audit modules.

**Marlene Davies**

PhD by publication

**July 2011**

The University of Glamorgan

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A critique of how developments within the auditing profession were integrated into higher education audit modules.

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PhD by publication

July 2011

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The University of Glamorgan

A thesis presented in partial fulfilment of the requirement for the award of the degree of Doctor of Philosophy of the University of Glamorgan

## **Declaration**

This is to certify that the work submitted in this thesis under the title “A critique of developments within the audit profession and their application in higher education.” is the result of original research. This material has not been submitted for any other award.

Signed:

Marlene Davies

Date: 1<sup>st</sup> June 2011



## **Acknowledgements**

I would like to thank Alison Warman, Lisa James, Elaine Shellard and Theo Tryfonas for their collaborative research projects in respect of material researched for the joint articles submitted for both publication and presentation at various conferences.

I wish to acknowledge the late June Edwards, a lifelong friend, who advised and guided me in the preparation of the student handbook on the use of Excel.

Thank you to my supervisor, Nigel Brown who has provided me with constructive advice.

Thank you to Maggie McNorton, for encouraging me to complete this work and for reviewing the final draft.

The Welsh Chief Auditors Group support and interest in my research findings encouraged me to continue with the research. The presentation of some of my findings at two of their monthly meetings was an endorsement of their support.

My love and special thanks go to my husband Frank for his continued patience and sense of humour when the research tasks seemed never ending.

## **Dedication**

I dedicate this work, with all my love to my husband Frank, and my daughters Catherine and Helen who are the light of my life.

I also dedicate this work to my late parents Hugh and Morwenna Jenkins, to whom I owe everything.

## **Abstract**

This overview gives a summary of the research started 15 years ago in relation to the developments within the audit and governance environment. The developments focus on their impact on public sector audit activity and how these developments have been embedded in higher education (HE) programmes. The research and subsequent outputs have contributed to the introduction of innovative teaching methods that reflect contemporary developments in the audit profession. In introducing these developments the teaching approach for audit orientated modules has moved away from a didactic approach to experiential learning approach. This submission includes material from eight refereed published journal articles, one refereed paper presented at a conference and a chapter from a textbook. In addition, other journal publications and conference papers, which were presented at both national and international conferences, are mentioned as contributions to knowledge. At the time of submission of this work, one paper was under review for publication. While related areas of research were ongoing in respect of audit training within the profession and audit committees within Housing Associations. The period of research activity spans the years 1995 – to 2011.

These outputs cover three key areas in terms of contribution to learning. The first area looks at the design and development of a case study as a teaching medium focusing on experiential (hands on) learning as the basis for a module on computer auditing. This was based on research into the practical audit approaches within the public sector. The public sector was the focus of the initial research as it had a requirement for the presence of an internal audit function. This focus on the public sector focus continued into subsequent research. The application of audit techniques to provide a better appreciation of auditing was introduced into module development as a consequence of the research findings. This specifically applied information technology (IT) as a tool for audit which was embedded in a case study, and more recently for forensic accounting purposes. The use of MS Office Excel as a teaching medium was used initially to replicate audit software packages and referred to as 'Excel as an audit tool'. This was later replaced by commercial audit software using datasets. The second theme considers the impact of policies by government relating to aspects of accountability, value for money and performance measurement, again with an emphasis on the public sector audit function in verifying data used as indicators. The third area examines the working relationship between internal audit and the audit

committee, with a focus on the influence of corporate governance codes on internal control requirements and risk management. All three areas identify the changing face of audit as a consequence of external pressures such as IT developments, accountability requirements, pressures on limited resources and government codes of best practice recommendations and guidelines. The integration of these developments in to HE focused initially on undergraduate modules within the BA (Hons) Accounting and Finance programme. The developments were later integrated into post graduate modules as well as acting as an information conduit for local government in Wales.

The link between all three themes is that of the changes facing the audit profession and how these have been incorporated into the teaching of audit at HE level. These changes reflect the audit role in terms of the adoption of a proactive approach to responding, not only to the application of technology, but also to both public and government expectations in terms of indirect and direct requirements. This nexus between the themes is further enhanced by the use of audited information conveyed electronically for the purpose of performance verification of targets and the relationship between the efficient use of resources and good governance approaches. The recognition of the research output in the early stages was reinforced in 1998 by the award of Research Fellow from Grant Thornton and involvement with the Welsh Chief Auditors Group (WCAG) which resulted in the research focusing on Welsh local government. Further research has incorporated forensic auditing techniques and the internal audit function in the corporate arena. These were further utilised within the innovative and ground breaking development of the BA (Hons) Forensic Accounting programme. While the corporate governance work has taken the international route of comparing corporate governance codes of best practice and formed an important element within the post graduate programmes of MSc Accounting, MSc Forensic Accounting and MSc Management and Development of International Financial Systems.

Funded consultancy work has produced professional body reports on the training of professional auditors in contrast to the academic development of teaching material with journal papers contributing to the knowledge of both the HE community and practitioners. Finally the research and development of lecture material has been utilised for a joint publication of a textbook on auditing entitled Auditing Fundamentals (Davies & Aston 2010).

This document discusses the three themes by critiquing how the changing face of auditing influences the design and delivery of auditing modules within accounting programmes, in the context of higher education. The collection and analysis of data, and especially practitioner views, form part of the background to the research method adopted. The output and findings provide the basis of the contribution to knowledge which informs HE practice and the profession. The research output has contributed to enhancing both undergraduate and post graduate teaching material as well as reports to parties outside the higher education environment. The contribution to knowledge has been threefold, where the HE environment of undergraduate and postgraduate students have been exposed to current developments in auditing, along with an opportunity to learn via experiential learning techniques. Members of the profession have been enlightened on the issues affecting their working practices via conferences and training seminars. Finally management have capitalised on the research output and utilised this to make informed decisions. Further research opportunities have arisen as a direct result of research undertaken whilst other opportunities for disseminating knowledge and information have occurred via representations on various bodies and working parties including media interviews.

The papers in the appendices are integral to the submission.

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## **List of Acronyms**

ACCA	Association of Chartered and Certified Accountants
ACIFAL	Association of CIPFA Lecturers
ACL	Audit Command Language
AECC	Accounting Education Change Commission
BMAF	Business, Management, Accounting and Finance Subgroup
CAATs	Computer Assisted Auditing Techniques
CELL	Centre for Excellence in Lifelong Learning (University of Glamorgan)
CELT	Centre for Excellence in Learning and Teaching (University of Glamorgan)
CIIA	Chartered Institute of Internal Auditors (UK and Ireland)
CIPFA	Chartered Institute of Public Finance and Accountancy
FRC	Financial Reporting Council
HE	Higher Education
HIA	Heads of Internal Audit
ICAEW	Institute of Chartered Accountants in England and Wales
IDEA	Interactive Data Extraction and Analysis
IT	Information Technology
NAO	National Audit Office
NSS	National Student Survey
OLM	Open Learning Material
POB	Professional Oversight Board
QAA	Quality Assurance Agency
SWE	Supervised Work Experience
WCAG	Welsh Chief Auditor's Group

## Critical Overview

### 1. Introduction

The award of PhD by publication at the University of Glamorgan requires candidates to submit for examination an approved body of published work, accompanied by an overview that demonstrates the originality of the work. In addition, the PhD candidate must demonstrate the originality of contribution to knowledge in the field and significant authorship.

*The objective of the research was to critique how developments within the auditing profession were incorporated into Higher Education (HE) teaching.*

The initial area of interest stemmed from the intent to enhance the teaching material and enhance the learning experience for students. The research followed on from this initial intent and having completed a substantial amount of research the next logical step was to seek recognition. The motivation to improve the teaching material also provided the impetus to disseminate the findings to the academic community. An indirect output for the research resulted in the dissemination of the research findings to the wider community within the profession and management. This work explains how the developments within the audit profession were identified and incorporated into the teaching. The contribution to learning stemming from these findings resulted in an application of theory in a manner that utilised experiential learning, critical research and an enthusiasm to invoke a desire to learn simply by bringing the practical element of auditing into the classroom and generating an interest in current developments. The use of case studies and active learning in the teaching approach has changed both content and the delivery method of audit modules at the University of Glamorgan. The overall contribution to knowledge can be summarised as pertinent not only to HE but to the profession and to senior management within the public sector.

The appointment as senior lecturer in auditing in 1987 at the Polytechnic of Wales (incorporated as the University of Glamorgan in 1989), was at a time when auditing was becoming a subject area in its own right, as compared to its previous status when it was

incorporated as part of the financial accounting modules within undergraduate taught programmes.

As a newly appointed senior lecturer, a background in the field of professional accounting and auditing within the public sector provided the knowledge and practical expertise to contribute to all levels of HE audit education. Experience within the audit profession, as a senior auditor and more recently as a Chief Internal Auditor, was a distinct advantage when experiential learning became the focus of the teaching. The position of senior lecturer involved module delivery at all levels of HE provision, covering undergraduate and postgraduate accounting programmes, including exam based training programmes for the professional accountancy bodies of the Chartered Institute of Public Finance and Accountancy (CIPFA), the Association of Chartered Certified Accountants (ACCA) and, at a later date, the Chartered Institute of Internal Auditors, UK and Ireland (CIIA).

Membership of the teaching team carried with it the requirement of actively contributing to the revalidation of the BA (Hons) Accounting and Finance degree in the early 1990's. This provided an opportunity to review the content of the accounting and audit modules on the programme. A key aspect of this review was to reflect how HE responds to the needs of the evolving practices within the accounting and auditing profession. The 1990's saw huge strides in the changing attitude towards both public and private sector financing, financial reporting requirements and a vocal expression of the public's expectations of the auditing profession. This review of the BA Accounting and Finance programme provided a window of opportunity to incorporate a 'systems-based' approach to accounting and auditing at all three years of the degree. This enabled staff to consider ways of varying the mode of delivery of modules at the three levels (years 1, 2 and 3 of the undergraduate programme) to enable exposure to the widespread use of electronic accounting systems. This included the use of a commercial software package (Sage) in the delivery of accounting modules. If the accounting systems were electronic, then there was a need to look at the concept of introducing an experiential approach to the teaching of audit modules. A background in professional auditing was a distinct advantage waiting to be utilised. This new approach to accounting and audit teaching aptly named 'Systems-Based' was documented in Davies & Warman (1995).

As a Polytechnic, the level of research undertaken in the 1980's was in its infancy and therefore limited in terms of peer support. The original research focused on audit in terms of the practical application of skills through the development of a case study. Further areas of research looked at developments within the audit profession and the impact of changing attitudes and expectations on the role of the auditor within the public sector. However, the research detailed within this documentation demonstrates how the research evolved and how the three areas are interlinked. The objective of applying the research findings in HE programmes is a key thread within each area. The experiential or 'hands on' practical application as utilised within a case study is the beginning in terms of the research considered in this overview. The lessons learnt from the application of case study development and the integration of experiential approach to teaching has been a focal point in this work. To this end, the support and expertise gained from other colleagues who were just commencing their research proved invaluable. The research has produced in excess of 50 outputs. This includes continuing professional development material for professional bodies, refereed journal papers, conference papers<sup>1</sup> and textbooks, all of which have been incorporated into teaching material in various formats, including the research methods and current issues in accounting and auditing modules for postgraduate programmes. The development of a case study for the delivery of an experiential approach to audit teaching has continued from the original work in the mid 1990's to current programmes where the module Cases in Audit plays an important role within the BA (Hons) Accounting and Finance as well as the BA (Hons) Forensic Accounting.

The integration of a computerised audit module into the accounting and finance degree acted as a catalyst for the initial research. This instilled an interest in developing a practical 'hands on' or experiential audit module reflecting the audit of the workplace. This was instrumental in creating a case study that acted as a conduit for merging the theory with the practical to develop both technical skills and academic knowledge. The objective was primarily to give undergraduates (who were invariably school leavers without any practical accounting or

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<sup>1</sup> These research outputs are listed as publications & conference papers along with other research outputs under section 7.

auditing work experience) an insight into the realities of work based auditing. At this same time (due to corporate fraud and failures) questions were being asked by the public (and especially the media) as to ‘Where were the auditors?’ which resulted in professional body responses as well as changes in regulations and guidelines. These changes in attitudes and expectations of, and to, the auditing profession engendered an interest that led to other areas of research, namely audit involvement in performance indicator confirmations and, more recently, corporate governance and risk management as applied within the public sector. These areas provided material that eventually became integral parts of both undergraduate and postgraduate teaching for audit, corporate governance, and forensic auditing and accounting modules within the various accounting programmes.

The initial programme or ‘home’ for the ‘audit’ related modules rested within the BA (Hons) Accounting and Finance degree. This programme in its various validated guises included modules entitled ‘Computer Audit’, ‘Audit and Accountability’, ‘Systems Based Audit’, ‘Audit and Assurance’, ‘Issues in Auditing’, and ‘Cases in Auditing’. Some of these modules incorporated the cases study approach while others focused on introduction of current developments within the audit profession to stimulate enquiry and interest in the topic area. The modules developed as a consequence of the initial research resulted in the introduction of other programmes where the experiential learning remained a key factor in the learning process. These include BA (Hons) International Accounting and the innovative and market leading programmes of BA (Hons) Forensic Accounting and MSc Forensic Audit and Accounting. The BA (Hons) Forensic Accounting not only utilises the computer software currently available but it also has a core module ‘Cases in Auditing’ specifically designed to develop other marketable audit management skills as well as IT skills.

The area of research was given additional recognition in 1998 when Grant Thornton awarded a Research Fellowship. This fellowship provided the funding to attend international conferences, which expanded horizons in terms of constructive feedback and interaction with other internationally recognised researchers. Active learning techniques and the application of recognised learning theories were integrated with the research findings into teaching programmes to create opportunities for deeper learning experiences for the students. The

University's Centre for Excellence in Lifelong Learning (CELL, later renamed Centre for Excellence in Learning and Teaching CELT) awarded funding for the development of a module entitled 'Computer Audit'. Two years later further funding was made available to develop another related module on Systems Based Auditing. This module development was undertaken with a colleague Lisa James. Both of these modules focused on the establishment of a case study as a mechanism for greater student participation in order to enhance the learning experience by the application of the experiential 'hand on' approach. Databases were created for interrogation initially via Excel, while paper trials in the format of delivery notes, requisitions and invoices, were produced in order to establish the importance of control objectives and control mechanisms. These formed part of a case study that enabled tutor led sessions on the theory with practical activities to enhance student learning.

In 2007 the Higher Education Academy's Business, Management, Accounting and Finance (BMAF) subgroup provided funding for the development of datasets for use on the audit software ACL (Audit Command Language). This was a collaborative piece of work with Dr Theo Tryfonas from Bristol University (Tryfonas & Davies 2009). This development focused on the application of using the datasets within a case study environment which enabled the use of commercial software packages. This was very much a development from the initial use of Excel as an audit tool and merely provided access to data. The experiential learning concept and the use of a case study remained the focus of the work undertaken.

The co-operative working relationship that evolved as a result of supervising students on work experience at the National Audit Office (NAO) provided access to reports on performance indicators. This was utilised as an opportunity for students to consider the current developments within the profession and to apply their own understanding of performance and target setting as a useful management tool. This access to published NAO reports led to 2 publications on UK performance indicators in 2 international journals (Davies & Shellard, 1997 and Davies & Warman, 1998), leading to an invitation as key note speaker at the Asia Business Forum Conference (Davies, 2002). The experiences of the students undertaking work placement at the National Audit Office also contributed to a conference paper on the value of integrating work experience into final year modules (Davies & Williams, 2002). In hindsight



this review of student experiences whilst on work placement was only the beginning of what the University of Glamorgan and employers now consider as an important aspect of HE experience and skills development.

During 2001, as the Accounting and Finance undergraduate degree scheme leader, the redesign and revalidation of the programme provided the opportunity to include 'Audit' modules in the second and third years of the scheme. This utilised the material developed from the research undertaken into the use of IT in audit, performance measures and audit roles within corporate governance in the public sector. The integration of current developments into a subject area renowned for its 'dry nature' helped in making it more relevant, topical, accessible and practical. Auditing modules with titles 'Computer Audit', 'Audit and Accountability', 'Audit and Assurance' and 'Issues in Auditing' became part of the undergraduate BA (Hons) Accounting and Finance degree programme. These focused on aspects of auditing beyond the traditional elements of testing, evidence gathering and reporting. These were further enhanced by their inclusion within a case study that managed to bring a clearer perspective to the role and function of auditing.

Changes in internal audit functions, (especially within public sector organisations), and the introduction of audit committees to meet with corporate governance guidelines provided the backdrop for a research area pertinent to the development of the auditor. More recently, thanks to support from public sector practitioners for the research and subsequent outputs, the practical application of professional body guidelines affecting the auditor, and assurance requirements within corporate governance, resulted in provision of courses to trainee auditors within various public sector organisations. As before, the research output proved pertinent to the teaching programmes and learning outcomes at undergraduate, postgraduate and professional level for 'auditing' modules. The research provided material applicable to other subject areas that included an audit element, namely corporate governance and forensic audit and accounting modules. The changing role of audit, the increased use of IT, performance data verification and the internal audit relationships with audit committees, along with new developments such as forensic accounting and audit proved pivotal in the development of both modules and programmes. Outputs include conference papers and published journal articles as

well as training seminars. Journal articles: Davies (2001), Davies & James (2002) and Davies (2009). Conference papers: Davies & James (1998), Davies & Shellard (1998), Davies (1999) and Davies (2007). Training seminars: Davies (2005) and Davies (2006).

From the perspective of subsequent research activities linked to the concept of experiential learning, a successful consultancy bid to the Financial Reporting Council's (FRC) Professional Oversight Board (POB) in 2007, looked at the training of auditors within the accounting professional bodies. This was a collaborative research from the perspective of work based learning and exam based learning in relation to the audit suite of courses offered by the various bodies. This highlighted the importance of work based activities in the learning process in order to pass the professional body examinations. The research output produced findings included within the POB annual report to the Secretary of State (2008). A further development from the research provided material for conference papers and a journal paper (Marriott, et al 2008, 2009, 2010 and 2011).

As previously indicated, this submission is based on 10 outputs, encompassing 8 refereed academic papers, 1 refereed conference paper, and 1 textbook chapter. Appropriate reference is made to additional papers published as selected conference proceedings and papers submitted at forums and meetings to support the research findings. The research relating to this work commenced in 1995 with output in terms of conference proceedings and publications from 1997 to 2011. It incorporates three themes that contribute to the enhancement of learning and education experiences of students within HE. The output and conclusions drawn from each area of research are noted as contributions to knowledge applicable to both the HE community and accounting and audit practitioners.

In terms of the contribution to knowledge outside the HE community, guest speaker presentations to practitioners in the format of the Welsh Chief Auditors Group (WCAG) from the Welsh local government authorities enabled the output to be utilised for decision and policy making. This was specifically the case for the research output on the role of internal audit in corporate governance and the changing nature and approach of public sector audit and the training of audit trainees. The consultancy work for the Financial Reporting Council's

Professional Oversight Board into the training of auditors provided the opportunity to present the findings to the professional accountancy bodies along with conference papers and refereed journal articles.

This is not the end of the research path, the interest in how audit is changing and developing continues and the research into audit committees and internal audit relationships within the Welsh housing Associations has already begun, supported by Community Wales and a positive interest from the Welsh Government. Other research opportunities have been identified from further afield due to links with the University's partner institutions in China. The existence of 200,000 auditors in China opens up the research question of how and what is subject to audit, coupled with the awareness of corporate governance codes that are of international interest thanks to global business activities. Experience gained from previous research will act as a foundation to enhance these opportunities as well as provide a platform to share knowledge.

**To summarise:**

*Theme 1*

**A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool**

*This demonstrates the design and development of a case study that identifies the value of experiential learning especially the use of IT for audit teaching is invaluable. It also looks at the use of Excel as an audit tool can replicate audit software for teaching purposes. This later led to the use of commercial audit software packages in HE, whilst still retaining the value of experiential learning and case study utilisation for student learning.*

*Theme 2*

**Public Sector accountability: the relevance of performance measurement and value for money**

*This identifies evidence of the demand for more accountability within public sector expenditure and the impact on audit activity. The requirement to account for activities and to use appropriate measures to reflect the output and outcomes impacted on the new role for audit. This change in audit activity incorporates the increasing use of IT in audit work.*

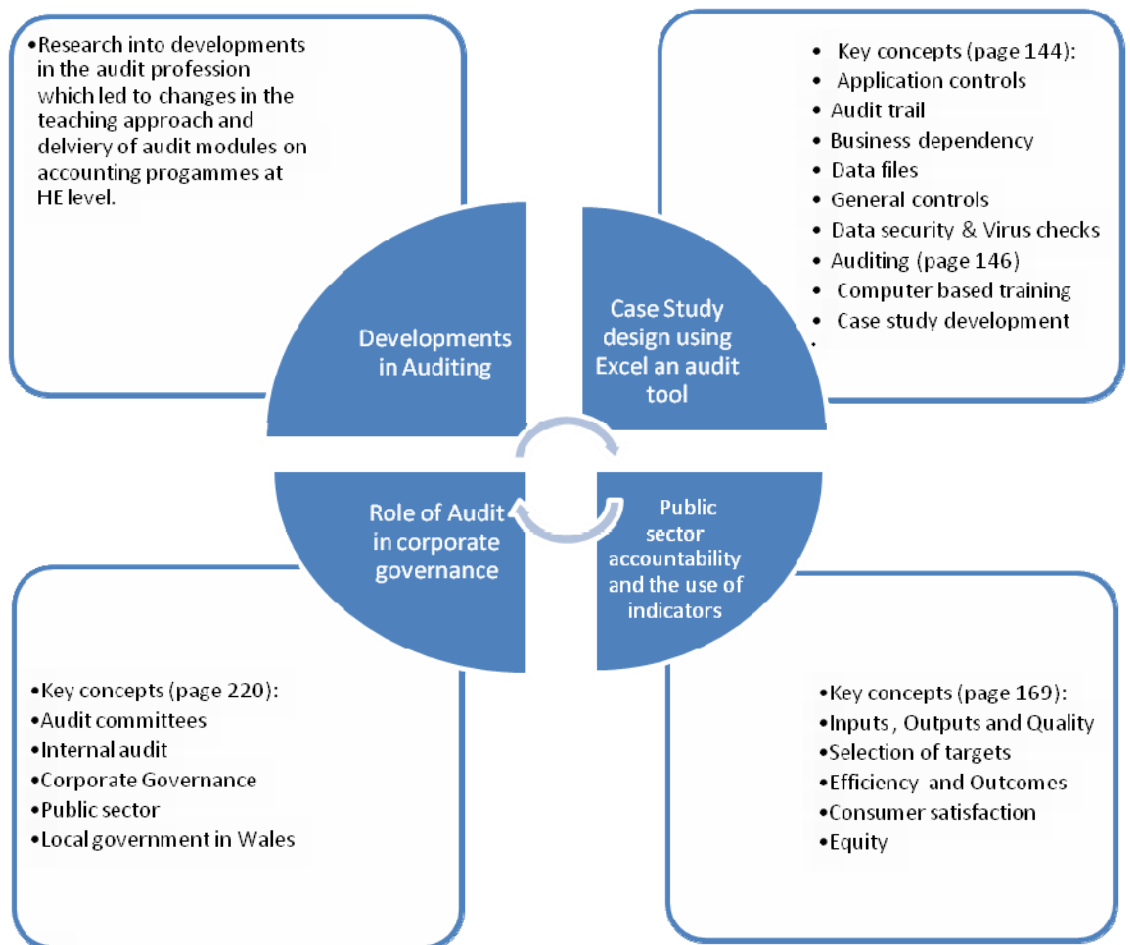
*Theme 3*

**The developing role of the internal auditor in corporate governance**

*This focuses on the ever changing nature of audit activity as a consequence of corporate governance requirements which are linked to the working relationship between internal audit and audit committees. This again illustrates the changing nature of audit along with the impact of external factors on the audit function.*

## An illustration of the nexus between the three themes

**Diagram 1** provides a framework that demonstrates how the three themes are interlinked and how the developments in auditing need to be incorporated into HE teaching in order to equip students with the appropriate audit and assurance tools for the future. Experiential learning is a key feature of this research. The three themes provide opportunities for incorporating practice and theory in a manner that enhances the learning experience for students.



**Diagram 1** The nexus of the three themes.

These three themes and their related publications in *section 9* outline the key concepts that are pertinent to the content and approach to audit module(s) delivery and content.

This illustration of the nexus between the three themes also provides an overview of how the themes are included as integral elements in developing, supporting and enhancing student learning when modules (and also programmes) are designed. The research activities reflect changes in the audit profession over the past fifteen years and how the design of modules have reflected both practical and professional audit practices in order to enhance the student learning experience. The use of learning vehicles such as case studies and experiential (hands on) approaches have facilitated this integration of practice into the teaching of audit at HE level.

Through this review and related research, various teaching materials have been developed and incorporated into various modules to enhance the students' learning, namely:

- Auditing techniques
- Revised auditing standards
- Codes of corporate governance
- Application of professional auditing guidelines
- Forensic audit and accounting

Over the years, the titles of the modules have altered to reflect these developments, while the mainstay programme of BA (Hons) Accounting and Finance has seen new programmes join the portfolio, namely: BA (Hons) International Accounting, BA (Hons) Business Accounting, BA (Hons) Management Accounting, BA (Hons) Forensic Accounting and BA (Hons) Finance (in the planning stage during 2011). The introduction of an undergraduate programme in Forensic Accounting was innovative and can be considered a child of the research output linked to developments within the profession. The research output from both the application of IT in audit and current developments in auditing were influential in its creation. The recognition, that new audit techniques as a reaction to business activities, necessitated a change in HE audit module content provided a framework for the design of the BA (Hons) Forensic Accounting. Thereby making it only one of three on offer to undergraduates within the UK.

**Papers submitted in support of the PhD by publication.**

The papers listed below are in chronological order according to the three distinct themes outlined above and can be found in *section 9* of this submission:

**1. Theme 1: A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool.**

**Publications submitted**

Davies, M., (1997), 'The Use of Excel as an Audit Tool'. *CTI Account Journal*, 9(2), pp.24–29.

Davies, M., (1998), 'The use of I.T. in Teaching Computer Auditing – the students' response'. *Selected Proceedings of the 9<sup>th</sup> Annual CTI Accounting, Finance and Management Conference*, York, pp.65-69.

Davies, M., (1999), 'Internal Controls in Computerized Systems'. In Davies, J. & Warman, A. (1999), *Accounting: A Systems Approach*. London, International Thomson Business Press, ISBN 1-86152-037-9, pp.291-304, Chapter 18.

Davies, M., (2000), 'Using a computerised case study to teach computer auditing: the reasons, the approach and the student response'. *Managerial Auditing Journal*, 15(4/5), pp.247-252.

**2. Theme 2: Public Sector accountability: the relevance of performance measurement and value for money**

**Publications submitted**

Davies, M. & Shellard, E., (1997), 'Performance Measurement in the United Kingdom'. *The Government Accountants Journal, US*, 46(3), pp.48-51.

Davies, M. & Warman, A., (1998), 'The Value of Auditing Performance Measurement in Executive Agencies - A Meteorological Office Case Study'. *Journal of Cost Management, US*, 12(1), pp.43-48.

Davies, M., (2003), 'Performance Measurement in the UK Public Sector: understanding performance indicators'. *The Journal of Finance and Management in Public Services, UK*, 3(2), pp.31-48.

**3. Theme 3: The developing role of the internal auditor in corporate governance**

### **Publications submitted**

Davies, M., (2001), 'The Changing Face of Internal Audit in Local Government - a survey on the views of Welsh Local Government Internal Auditors', *The Journal of Finance and Management in Public Services*, 1(1), pp.77-96.

Davies, M. & James, L., (2002), 'Auditing the Third Way: A Review of the Developing Role of Public Sector Audit and Inspection', *The Journal of Finance and Management in Public Services*, 2(2), pp.15-26.

Davies, M., (2009), 'Effective working relationships between Audit Committees and Internal Audit - the cornerstone of corporate governance in local authorities, a Welsh perspective', *The Journal of Management & Governance*, 13(1-2), pp.41-73, [also on line] Available at: <http://www.springer.com>



## **2. Theme 1: A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool.**

### **2.1 Background**

The development of a module specifically to utilise IT to illustrate audit activity moved away from conventional audit teaching. This focused on delivering a learning experience for students based on an interactive case study as a vehicle to enhance the module content. This necessitated the merging of practical auditing and an application of audit theory coupled with auditing standards. By using a case study to provide specific information relating to the structure, activities, policies and procedures it paved the way for a student learning experience that merged theory and practice. The background information about an organisation, its computer system and records held as a series of data enabled the use of MS Office and specifically Excel to be introduced as an audit tool were further enhanced by the production of a student handbook as a guide.

The contemporary definitions for auditing focus on the assurance and advisory aspects of auditing as well as the conventional ‘checking and vouching’ role. Definitions for internal audit imply that the role of the internal auditor has moved on from that of an appraising, monitoring and evaluating function, to that of a provider of *assurance, consultancy, assistance and advice*. Whilst at the time of the initial development, this had not been articulated as such by the professional bodies. By 2000 the Chartered Institute of Internal Auditors (CIIA UK and Ireland) published an updated definition of internal auditing that encompassed these elements:

*‘Internal Auditing is an independent, objective, assurance and consulting activity designed to add value and improve an organisation’s operations. It helps an organisation accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve effectiveness of risk management, control, and governance process’.* (2000:4)

In response to the revamped definitions and developments in the accounting profession, a number of authors looked at how the role of the auditor was changing. Both Ridley (2000) and Lower (2000) describe the development of the ‘new audit’ and the skills auditors should

possess in order to face the challenges of the 21st century. Krogstad et al (2000) recognise the need for internal audit to respond to developments within the profession:

*'As the pace of change accelerates, internal auditing must visualise and seize new opportunities to meet organisational needs. The new definition is intended to broaden the profession's self image and encourage its full participation in the expanding market for internal audit services'. (2000:24)*

The development of the experiential audit module in the 1990's can therefore be seen as an innovative and relevant approach to the design and delivery of an audit module. The definitions for the 'new' auditor's role cannot be representative unless there is recognition that auditors need to embrace change in attitude, and undertake training where necessary, to act as an auditor in the new millennium. There is therefore a focus on the training requirements and expectations both of, and from, the auditor, in terms of the 'new' auditor of the 21<sup>st</sup> century and how he/she will be required to provide a greater level of assurance, and become a more proactive member of the organisation in terms of future planning activities. Included within this is the need to embrace and utilise the computer to its fullest extent. This is the reason that the computer audit module embraced the merits of using a case study as well as recognising the value of a 'hands on' experiential approach to teaching.

In line with the overall philosophy for accounting education, the teaching of auditing had steadily changed over the years from the traditional didactic mode to a more experiential (hands on) learning approach. There was a change in attitude and approach to the teaching methods which embraced the need to develop and enhance skills. The traditional theory based approach of listening with the intent to repeat or emulate answers to questions was an approach that could no longer be sustained. Experiential learning with the expectation of developing knowledge, application and understanding was necessary to enhance the student experience. This was in order to provide students with the opportunity to graduate with an appropriate level of skills and knowledge in order to succeed in the work place as well as obtain a qualification that represented 'graduateness'. In addition, there was an increasing awareness of the need for a critical evaluation and appreciation of issues impacting on the auditing profession. The objective behind the more practically orientated auditing approach to

the design and delivery of audit in HE, was to create an awareness of auditing methodology in a practical/work context to engender more interest and involvement. Initially, the introduction of a new approach was encapsulated in an audit module entitled 'Computer Auditing'. This provided an excellent opportunity to design a teaching programme that utilised the computer as an audit tool, rather than concentrating on the control and security aspects linked to computerised accounting packages. This not only embraced the idea of an experiential approach to computer auditing but also the increasing recognition of the value of the use of case studies to illustrate and provide a realistic company based scenario to enhance the student learning experience. Dombrowski (1993) favoured this approach of 'hands on' experiential teaching. His view was to provide students with an auditing experience in the classroom that would give employers the trainees / new recruits who knew what 'auditing' meant and who could produce reports outlining the audit results. Siegel et al (1997) concur with the notion that experiential learning is relevant as they investigated whether experiential learning could improve auditing instruction. In their introduction they recognise that the:

*'.....weakest aspect of traditional teaching methods (in auditing) is the absence of concrete experience'. (1997: 217)*

Another important factor that recognised the need to change the approach in audit teaching was the report by the Accounting Education Change Commission (AECC) in 1990. It advocated improved instructional techniques for auditing. This reinforced the need to move away from the didactic approach – where students are passive participants in the teaching process. Experiential learning approaches are intended to engage the students in the learning process and in so doing aid in their appreciation and understanding of concepts and application of theory. In introducing this experiential approach to the teaching of computer audit through the use of a case study employing the intention was to capitalise on instructional techniques using the computer as a conduit for an improved learning environment for the students on the BA (Hons) Accounting and Finance and at a later date BA (Hons) Forensic Accounting.

These changes in respect of a change in attitude towards audit teaching, are complimented by the findings of others such as Frecknall-Hughes et al (1998) who commented on how more coverage was being given to auditing as a subject in its own right on accounting programmes.

More textbooks appeared to specifically cover teaching at undergraduate level as opposed to the professional route of learning standards and processes. Frecknall-Hughes et al (1998) also promoted the use of case studies for auditing which was limited up until the mid 1990's. The arena for this research and development of a new module was therefore appropriate and in line with developments throughout accounting education. This emphasis on experiential learning was in itself an early advocate of the employability feature of undergraduate programmes, which is the theme of programmes for the twenty first century.

The systems approach to accounting was critiqued by two University of Glamorgan accounting staff (Davies and Warman 1995) who detailed the scheme philosophy of a systems approach throughout a three-year accounting programme. The accounting module at the first year level used the SAGE accounting package, and the second year undergraduate audit module applied the professional software available for auditing accounting systems. This was incorporated into the teaching with the application of a case study that enabled and allowed students to progress at their own pace, thereby enhancing their own learning experience. The audit of accounting systems at the second year and computer audit, with its experiential approach to learning at the final year of study, provided a continuous theme throughout the three-year undergraduate BA (Hons) Accounting and Finance programme. Davies & Warman (1999) specifically designed a textbook to support the introduction of a systems approach for the accounting module on the accounting degree. The final chapter in this text (chapter 18) on the audit of accounting systems and the controls necessary for an effective computerised accounting system forms part of this overall submission (Davies 1999). The final chapter provided the link between the computerised accounting system and the audit approach that necessitated an understanding and appreciation of IT as an audit tool. However this chapter fell into the traditional approach of teaching where emphasis was placed on the theory without the practical element incorporated to enhance the learning experience. There was a need therefore to change the ways in which the module was delivered.

The introduction and increased use of IT not only revolutionised the way business services are delivered but also changed the way records are maintained, which in turn impacted on the audit function. This ultimately influences the audit training aspect of professional accounting

training courses and the audit modules within undergraduate accounting programmes. The need to keep abreast of developments in IT and the utilisation of computers in audit practice remains an ongoing issue for audit practitioners and tutors. Cosserat (1996) recognised that the auditor faces changes in the way audit is undertaken as well as an increased level of expectation for accountability. The use of IT to aid the audit process and procedures remains very much in the forefront of all audit activity, where financial information is in electronic format, and continues to influence the teaching of auditing.

Up until 1996 the merits of exposing students to the benefits of using IT within an auditing module was alien to the programme. The use of an accounting software package was well established by then, and it seemed an ideal opportunity to introduce something similar into the audit module. Until then the concept of dedicating a stand-alone module on the merits of IT in auditing had not been considered. On reflection, Bonham (2000) summed up what was occurring at this time in terms of the changing face of auditing. The auditor is facing a change in role, shedding the mantle of the 'basic compliance auditor' and becoming more 'a business adviser', resulting in audit being viewed as a 'valued service' to the organisation. Introducing the auditor to practical audit techniques and their outcomes fits with Bonham's view. Whilst undergraduate accounting programmes are not designed specifically to train professional auditors, there is still an opportunity to incorporate the academic, vocational and practical elements into a teaching programme in order to provide a platform that facilitates experiential learning. In addition, it provides an opportunity to create a more interesting and multifaceted learning experience for the students. This was the argument for developing a case study for the computer audit module in the first instance and later in the forensic accounting module.

From the outset it was evident that, if a practical audit within a business was going to be the focal point of a module, it was going to be difficult to rely exclusively on a textbook-based approach to classroom delivery. In an attempt to simulate a business situation for this module the design and development of a case study seemed an appropriate solution. The merits of using case studies in accounting education started to receive favourable reviews from the late 1980s and early 1990s. Articles in various accounting journals advocated the value of case studies in accounting whereby it encourages students to work in groups, think 'outside the

box', apply problem solving techniques and evaluate real life situations in an attempt to link theory to practice. Frecknall Hughes et al (1998) refer to authors who identified the benefits of using case studies in accounting, namely Hassall & Lewis (1995), Stewart & Dougherty (1993), Knechel (1992), Campbell & Lewis (1991), and Hassall et al (1998) who discussed the advantages and disadvantages of using case studies. However in the early 1990s case studies were not prevalent teaching modes for audit modules, as Frecknall Hughes et al (1998) confirm:

*'With respect to undergraduate auditing teaching the use of case studies in auditing appears to have been limited'. (1998:90)*

These developments and concepts provided the added impetus to write a case study that utilised IT within an auditing module. Webb (1994) identified the merits of interrogating the data held electronically to obtain evidence of appropriate control mechanisms and confirmation of outputs. This provided an insight into the potential of using IT as a tool for audit teaching, which was later endorsed by Wilson (1995) who advocated *'Teach the process not the content'*. Whilst Wilson does not refer specifically to case studies, it encourages the setting of tasks to generate greater student participation in the classroom, which can encompass experiential teaching as a key tool for learning. This approach to teaching the process as opposed to content ignited the touch paper at the outset to undertake research that evolved into the design and creation of auditing modules that embraced the concept of experiential learning.

Various authors have advocated the merits of case studies as an ideal teaching medium; the use of a case study in auditing is not new. The textbook – 'Cases in Auditing' by Maltby (1996) reinforced the approach to the utilisation of case studies for enhancing students' learning experiences. The textbook gives students problems that reflect clients' issues that are in case study format. Students are expected to apply their audit theory knowledge to answer the problems. Having the material in a case study format enables students to adapt auditing techniques to the requirements of the issues identified. The textbook 'Cases in Auditing' has capitalised on the opportunity of allowing students to appreciate that the auditor needs to design and plan an audit that is responsive to the issues within the client's business. Hassell et

al (1998) reviewed the use of a case study in developing learning on a Financial Decision Making module and concluded that the case study approach developed personal skills, interpersonal skills, cognitive and problem solving skills. Davies and Warman (1995) place great importance on the use of a case study in the approach to the teaching of Sage accounting software, as the scene setting in itself acts as a platform to generate a level of understanding, leading to application, and thereafter increased knowledge.

The inclusion of IT in the teaching of auditing went some way to developing audit skills that the auditing profession seemed to consider lacking within their trainees and members. According to research by the Institute of Chartered Accountants in England and Wales (ICAEW), Audit Faculty, (1996), the auditor was still in awe of IT. This was supported by a survey undertaken by Bentley (1999), on the use of IT in audit. The conclusions from the survey indicated that, despite developments in the use of IT for audit purposes, there was still plenty of scope to further automate the audit process and the management of audit activities. This was also consistent at that time with the strategic development of accounting and audit in the profession. This focused towards providing financial managers who contribute to the whole business rather than conventional auditors, who many regarded as merely checkers on the activities of others. This represented a change in approach in terms of recognising the value of IT both for audit activity as well as audit management of resources. Hence the importance of introducing these audit IT techniques to develop skills, knowledge and understanding of IT in audit, along with the other more theoretical and conceptual aspects of audit theory.

By absorbing these issues when planning the content and style of an audit module, case studies can enhance and encourage a deeper learning experience. It can provide the students with a worthwhile grounding in a subject area that could very well become a career pathway for a number of the students. On the other hand the use of a case study can provide an insight into systems and controls necessary within a business environment irrespective of whether the students become professionally qualified auditors. The objective behind applying the research findings to the module teaching material was to provide an insight into audit activity. This would enable the clarification of activities that may be misinterpreted as audit work when they

were no more than a simple checking procedure. The developments in the profession were indicating a change in audit activity that required a change in HE audit teaching. This was a driver to the development of the material and was at the forefront of the initial plan. Millichamp (1996) clearly explains the difference between the checking and auditing activities and states:

*'The internal auditor's job is to appraise the activity of others, not to perform a specific part of data processing. For example, a person who spent his time checking employee expense claims is not performing an internal audit function. But an employee who spent some time reviewing the system for checking employee expense claims may well be performing an internal audit function'. (1996:493)*

The objective in developing the case study material was to improve the students' analytical skills, inquisitiveness, probing ability, and data manipulation skills. This helped in taking the student part way to achieving what was termed 'graduateness', an element of the benchmarks identified by the Quality Assurance Agency (QAA) as noted in the BA (Hons) Accounting and Finance validation document of 1992. The acquisition of skills, coupled with the ability to critically review and reflect on the subject areas studied, provided the foundations for achieving the graduate qualification.

As part of the background research to the development of this case study, for the delivery of a practical IT audit module, a survey of the approach employed at other institutions was undertaken. A 'Centre for Lifelong Learning' (CELL) funded project investigated how other HE institutions delivered audit modules and specifically how audit modules incorporate IT into teaching. The report to CELL proved a basis for conference and publication output that gave the opportunity to reflect on what had actually been undertaken and achieved (Davies 1997, 1998).

The developments in auditing during the latter part of the twentieth century have resulted in the need for the modern auditor to acquire a certain number of key skills. These include assurance provider, evaluator and opinion provider, evidence collector, communicator, and adviser. This provided the philosophy for developing a computer audit case study that incorporated some of the required skills. Whilst acknowledging that the undergraduate



accounting programme was not designed to produce practicing auditors, the vocational and practical element had always been advocated as appealing to the students. This was borne out in the module evaluation questionnaires completed at the end of the academic year. Feedback from students on their exposure to practical audit experience, whilst studying the module, favoured the experiential route as compared to the traditional teaching approach. This provided an ideal platform to develop and improve on what is often termed an unexciting even boring subject area.

It was important to bear in mind that, when introducing a new approach to module delivery, it is important to reflect on what has been done in the past to learn and progress in terms of the relationship between education, practice and theory. An illustration of this reflective review is to question how effective the case study was in providing an insight into audit techniques, policies and practices. When reflecting on the effectiveness of the tuition, another area of concern is the question as to whether the learning outcomes have been achieved. Fortunately the audit module evaluation review rendered the following positive student feedback comments indicating the success of the new teaching approach. The comments below were extracted from the annual monitoring evaluation review questionnaire completed by the students at the end of the academic year:

- *'I found that the case study created a living situation that allowed me to analyse and test in a realistic way; it did away with the need to imagine a situation when I had no practical experience in auditing'.*
- *'I found that the workbook and supporting material on how to use advanced Excel very helpful, especially as I did not have a great deal of confidence in using a computer'.*
- *'The fact that I could work at my own pace meant that I could learn at my own pace'.*

The student feedback and a critique of the case study's 'hands-on approach to audit teaching' were published in Davies (2000).

Since the development of the case study approach to the delivery of the computer audit module the audit modules within the BA (Hons) Accounting and Finance programme at Glamorgan have changed. This was to reflect developments in the audit profession and the requirements and expectations of accounting programmes. This is illustrated by the introduction of a BA (Hons) International accounting, (focusing on international accounting and auditing standards) and BA (Hons) Forensic Accounting, (focusing on the increased need for tools for the detection of fraud and corruption). The experience of developing the computer audit module with its case study has nevertheless provided worthwhile knowledge for the further development of newer and more relevant audit modules, including the current Computerised Accounting Systems module and the Forensic Accounting module, both of which use audit software within their module delivery.

Building upon past experience is an important feature of case study development and design. Recognising the problems and benefits of using case studies enables a review process that ensures the appropriate design for the best possible student learning experience. Compared to the conventional didactic approach to the delivery of a module, using a case study can provide a better understanding of the key aspects that form part of the module content and overall objective in terms of learning experience and outcomes. The use of case studies can improve skill levels by simulating true business situations that require problem analysis and decision making. The more detailed and complex the case study then the greater the opportunity to expose the students to a variety of situations that require application of knowledge and experience. Case studies can also facilitate the merging of theory and practice which can help identify areas where the acquisition of more theoretical knowledge may be necessary in order to complete the set tasks linked to the case. A key aspect of using case studies is that they can reinforce existing knowledge which can be another source of confidence building. Another advantage of using case studies is the fact that problems are normally buried beneath and intermingled with the facts. By setting cases in a real world situation they reflect what goes on within an organisation, where problems have to be identified and discovered as opposed to being set out in a class situation as a standalone problem. Cases are made up of a series of events which represent the problem data, where facts are often incomplete, (this is where the forensic accountant has to develop additional skills), and often misleading. Developing student

skills in discerning the relevant from the irrelevant is pertinent to the use of case studies as a teaching method. Another feature of case studies is the requirement for action. In other areas of instruction such as standalone tutorial tasks that necessitate a formal answer, case studies especially those with experiential learning approaches, require the students to do something with the information. Psychologically there is a big gap between thinking and doing. Case studies require actions which provide solutions based on activities linked to the material within the case. For those students undertaking the forensic accounting route they will often have to consider the evaluation of the evidence, which will also require appropriate recording just in case there is a need to take the stand as the expert witness, where evidence collection and evaluation will play an important role. Weil et al (2001) looked at student perceptions in relation to case studies and concluded that:

*‘...students perceive the major benefit of the use of case studies to be exposure to real-world complexity, particularly with respect to decision making’. (2001:124)*

In accordance with Quality Assurance Agency benchmarking, programmes need to display a level of skills attainment. The auditing modules identify a number of key skills that students should achieve by the end of the module and, whilst all skills are of equal importance, certain key skills are worth noting as they form a focal point in the development of the case study requirements. The following are particularly important: analysis, evaluation, planning, problem solving, interpersonal and group or team building skills. The use of case study material facilitates the opportunity to develop these skills. Team or group working skills, infer the need to allocate duties, identify roles and responsibilities and the realisation that working in a team necessitates a great deal of interdependence in terms of the input and output of others. Case studies can provide the framework for developing and nurturing these skills. Under the case study approach students have to think for themselves, and consider how to deal with the situation as outlined within the case study. Students will often have to identify and prioritise problems that require solving, and in so doing they will also have to find an appropriate solution. This can lead to the development of confidence with an ability to make decisions on their own judgement and experience.

The rapid changes during the last twenty years, in computerised accounting systems, have resulted in the need for accounting graduates to display a level of understanding of the application of accounting software both in accounting and auditing in the twenty-first century. Accounting undergraduates need to be equipped to understand the importance of IT for accounting, audit, managerial and governance purposes. For the past twenty years, the BA (Hons) Accounting and Finance undergraduate programme, at the University of Glamorgan, has embraced an integrated systems approach to the teaching and delivery of accounting and auditing. This has been achieved through the use of computer assisted learning and professional accounting software packages. In 2008 this was strengthened when the Forensic Accounting programme was validated alongside the existing Accounting and Finance undergraduate programme. Two commercial audit software packages, IDEA (Interactive Data Extraction and Analysis) and ACL (Audit Command Language) were incorporated as part of the accounting and audit module entitled Computerised Accounting Systems. The introduction of these commercial software packages enabled staff to attend training sessions to ensure that current developments are incorporated into the module content. This was an important development, especially when students who are returning from their supervised work experience year, were exposed to the most recent state of the art software.

## 2.2 Method

### Questionnaire approach

In order to establish an appropriate approach to developing a case study that incorporated theory and practice to give students an experiential learning experience, there was a need to establish some key facts about current audit practices. If the case study was going to utilise IT as an audit tool then not only was there a need to establish what went on in practice but also to identify how such audit modules were delivered at other HE institutions. The research method adopted was a questionnaire survey to provide data on the use of IT in the audit profession, specifically within internal audit. A second questionnaire established the extent of the use of IT as a mechanism to deliver audit modules and best practice within other HE establishments. This information on the use of IT by the professional auditor in terms of reliance on the computer as well as the type of software would inform and guide the development of a case study that incorporated an active approach to learning. It was also important to discover what other HE institutions did in terms of using IT as a mechanism for the teaching of computer audit. This response would also identify whether computer audit was a standalone module or indeed whether there was an element covering the topic 'computer audit' as part of the programme or module content.

The underlying rationale for the adoption of the questionnaire survey was to gather information on which to direct the development of a case study. A broad questionnaire survey as opposed to in depth interview was employed to gather the data, as this seemed the most manageable and controllable at the time. As a pilot scheme a small group of questionnaires were used on a one to one basis to ensure that all aspects were clearly explained on the questionnaire. This provided invaluable feedback in terms of the questions included within the survey and ensured that the objectives were achievable. The use of case studies as an effective teaching and learning method is well documented. However, despite the merits of student learning through their own and joint efforts, with the tutor seen as a facilitator rather than the provider of solutions, some students do not regard the use of case studies as the ideal learning method. In order to overcome this problem it is important to use a variety of methods in

teaching. This is why the objective of designing the case study with added experiential learning was an import aspect for the 'Computer Audit' module. By using IT as an audit technique the intention was to allow students to assess the situation within the case and to utilise the computer to provide evidence from which to draw conclusions. Easton (1992) describes this as the middle ground for case study use.

*'Many cases are written to allow students to practice particular analytical techniques or to approach problems in a particular way'. (1992: 4)*

Questionnaires are a data collection technique, where the respondents are invited to answer the same questions in a set or predetermined order (deVaus, 2001). A very important factor in questionnaire design is the selection and phrasing of questions. It is important that the objective of the questionnaire is reflected in the format and type of question set. For this survey there was just one opportunity to collect the answer from the participants. It was imperative therefore to have questions that would be understood and interpreted in the same way by all the respondents (Robson, 2002). A number of the questions were 'open ended' enabling participants to provide their comments and opinions. These questions focused on establishing the approach and attitudes towards the use of IT within the work place. Prior to the main survey a pilot questionnaire was distributed to two practitioners for their comments. The two completed pilot questionnaires highlighted the need for appropriate skills development in auditor training, along with the input from IT experts with some knowledge of auditing for a good standard of IT auditing. The responses helped to hone the final questions to ensure that they would direct the respondents in a manner that ensured consistency in terms of interpretation. This is supported by Smith (2011), who promotes the use of piloting as an essential instrument to show that the survey is capable of generating the required answers from the selected participants:

*'The pilot instrument should be an advanced draft of a document which adequately represents the progression of the research from abstract concepts through the development of valid constructs, to the identification of reliable individual questions'. (2011:122)*

Questionnaires were mailed to participants with an introductory letter explaining the research objectives. These were sent to heads of internal audit in public sector organisations and

scheme leaders at those Universities offering accounting degree programmes. This method of distribution provided names and links in the hope that the identification of relevant and appropriate participants would increase the reliability and extent of responses.

The output from the questionnaires provided data for both qualitative and quantitative analysis. There was specific information as to the use of particular audit software, as compared to subjective feedback on the approach and attitude towards computer audit activity. To a certain extent therefore data collection and analysis followed the structured approach as identified under the 'positivist perspective'. This is where (Gill and Johnson, 2002) refer to the identification of similarities is facilitated by the collection and analysis of the responses. The deductive approach that is associated with positivism (Collis and Hussey, 2003) advocates the use of questionnaires for data collection that is both independent and objective. The responses to the questionnaires provided data that enabled formation of an overview on the use of computers in audit practice. The feedback from the HE institutions indicated how much IT formed part of undergraduate audit teaching. The use of questionnaires enabled a standardised collection of data for analysis and access to a broad sample of audit practitioners and academics. The key objective of the questionnaire was to identify how much IT was used by the audit practitioner and how much computer audit was taught in other HE institutions as part of an audit module. The results proved useful in the design and development of data for inclusion as part of the overall case study.

### ***2.2.1 Stage 1 -- Questionnaires sent to public sector internal audit departments***

The initial exercise entailed circulating a questionnaire to 41 Internal Audit departments. This was distributed to Local Authorities, Health Authorities and NHS Trusts for the purpose of establishing the use of IT in auditing. Public sector organisations are required to maintain an internal audit function. Therefore the circularisation to these organisations provided a route where there was the likelihood of a good response. Local government for example has a requirement to engage internal audit especially under Sec 151 of the Local Government Act 1972. At the time of distribution the establishment of internal audit sections within the private

sector accounting firms and standalone internal audit firms as providers of outsourced internal audit functions was in its infancy. These were therefore not considered within the survey.

The aim of the questionnaire was to identify the approach to computer systems audit in the work place and to identify the various software packages used ranging from bespoke in house designed software to “off the shelf” packages. The distinction between computers used for routine audit work and report writing or for specific computerised system audit was also investigated. This questionnaire was not distributed to internal auditors in private practice, since this was not a common feature of most organisations as this research was pre the Turnbull report (1999) on corporate governance, which recognised the relevance and importance of internal audit in the business environment.

### ***2.2.2 Stage 2 -- Questionnaires sent to other teaching institutions***

The second questionnaire was distributed to a total of 43 UK Universities who offered accounting or accounting with other subjects as full time degree programmes. The objectives were three fold: firstly to identify the degree schemes that included auditing and / or computer auditing modules as part of the programme. Secondly, from the modules which were specifically related to auditing, to identify the amount of time allocated to computer auditing? Thirdly, to establish what use was made of computers in teaching computer auditing and / or other aspects of auditing, e.g. flowcharting for control purposes and word processing for report writing. The questions focused on identifying the current teaching approaches that used experiential approaches to audit teaching, the use of specific software packages, and the amount of time allocated to computer audit within a module if it was identifiable as a separate module.

From the questionnaire results it was evident that there was an opportunity to reflect on current audit practice if IT was incorporated into the undergraduate audit modules. The use of IT at other institutions was no more advanced than at Glamorgan and again there was an opportunity to make the module and the accounting degree distinctive. However, from the outset, it was clear that, in developing a ‘hands on’ experiential case study, access to



commercial audit software packages may be a problem due to their prohibitive costs and accessibility to datasets. This would require an alternative approach to the use of IT within a case study environment for teaching purposes. This was why the case study included data saved as a spreadsheet allowed students to analyse, filter and search the information using MS Office Excel. This provided the students with the means by which to undertake an activity based experience without the prohibitive costs of acquiring an audit software licence. An initial hurdle was the development of suitable datasets for analysis. This was however a hurdle in disguise because it allowed the data to be developed in a manner that included all the possible anomalies, errors and fraud necessary to provide ample material for analysis. This proved time consuming but the resulting rewards outweighed this cost and the exercise was deemed effective and worthwhile, as the datasets have continued to be developed and used (Davies 1997 & 2010).

In terms of developing the datasets for the case study, a series of (fictitious personnel) payroll data was constructed along with the use of a graphics software package to develop a student 'package' for the module. This included background demonstration disks providing a 'picture' of a business, its financial data, personnel and organisation charts, and a database representing the payroll for a five month period. A student guide and handbook on using Excel was co-authored with June Edwards, a systems analyst (Davies & Edwards (1997)). A narrative of the case, with additional information and interrelated student tasks and activities, formed the core handbook for the module. The data was set up on Excel in the computer labs in order for the students to undertake data mining and analysis by using the audit functions, data sort, auto filter, pivot tables, graphs and charts. The complete package of information, data, tasks and activities formed the basis of a case study (named JM Keltree), specifically designed for the computer audit module on the undergraduate degree BA (Hons) Accounting and Finance. The data has since been updated and 'recycled' enabling the dataset to remain a worthwhile teaching tool as an applied activity within the forensic accounting module where students are reminded that forensic accounting work often means searching through old records to identify the source or the source of a fraud.

### 2.2.3. The case study - J&M Keltree plc

In designing the case study the objective was to provide a learning experience that moved away from the use of textbooks and manuals to that where students could achieve a deeper sense of learning. This would necessitate a 'hand on' approach to knowledge acquisition. Hellier et al (2009) describe this by referring to the audit activity.

*'Auditors often rely upon audit manuals.....However, the performance of an effective audit requires more than simply a rigid observance of ...rules. The teaching ....needs to instil...an active participation in this knowledge acquisition'. (2009:1)*

In line with the systems based approach to the accounting and finance degree programme, students were exposed to the general principles of audit in the second year and the more experiential aspect was introduced at the third year of study. At year 3 the module – 'Computer Auditing' was a suitable medium for developing a case study approach to fuse the theory with practice in order to develop students' critical evaluation and achievement of the module's learning objectives. The case study (J&M Keltree) was written with the aim of introducing students to the experiential approach to audit testing, audit planning and reporting. As the data within the case study was held on a spreadsheet using Excel, as an aid to learning, a user guide was produced for using properties of Excel relevant for auditing with downloads of screens. This enabled tools such as audit precedent and audit dependence to be illustrated, as well as those tools relating to graphs and charts for incorporation into the audit report which formed part of the activities linked to the case. The case study encompassed a number of tasks which were not all IT dependent. This ensured that conventional theory based activities were merged with the experiential style activities.

The case study therefore took into account the different learning styles of students and attempted to accommodate these styles with different tasks. Examples of such tasks required problem solving, assimilation of information prior to decision making, application of concepts and theory, and application of techniques that save time when analysing data. It was also important to provide the appropriate learning environment, in this case study access to IT. Heath (1997) comments on the relevance of the environment in which the learning is to take place:

*'The facilities available and the environment in which learning is to take place are also important'. (1997: 9)*

This is where J&M Keltree set the scene for the business activity, its background, staff profiles as well as the audit environment of the computer laboratory where students could analyse the data. Details of the background research and illustrative examples of expected student tasks and activities were published in Davies (1997).

The base information within the case study ensured that the student tasks were sufficiently varied to enable a number of audit issues to be investigated and assessed. The interrelated student tasks were set out to ensure student participation and involvement throughout the duration of the module. Some of the student time was spent in conventional tutorials to establish the objectives of the audit approach to gain basic knowledge and understanding. The remainder of the time was spent in the computer lab undertaking activities that were computer based, using MS Office Excel to analyse the case study data. This created an opportunity for the theory of audit testing to be a practical exercise in order to generate a better understanding of audit methodology and techniques. In addition, the opportunity to incorporate both manual and computerised systems issues enabled the student to develop proactive auditing and IT skills. The main thrust of the case study was the payroll database information relating to the salaries of all personnel within the company, but there were other aspects of a more general nature relating to risk, planning and report writing. A combination of audit techniques, based on the Excel spreadsheet enabled students to undertake a substantial amount of 'data mining' as part of the exercises / tasks in audit testing. The students continue to learn from these data mining techniques whether they are computer auditors or forensic accountants. To reiterate Coglitore & Matson (2007 p.201), the students seem to become more 'technologically adept' after completing the module. This acts as a testament to the overall objective of developing the module.

The objective of the experiential teaching approach was to give the undergraduate student an opportunity to develop additional computer literacy, analytical, and audit skills. Skills development, student participation, and student self study formed the key elements of the

module. Students were immersed with 'hands-on' practical auditing throughout, with tutor assistance and guidance being the norm rather than tutor leadership and dependency. This case study provided a teaching vehicle that gave the student a 'real life' scenario of data upon which to undertake auditing tasks, and tests that enabled skills development to enhance knowledge, understanding and application. The application of audit theory and practice facilitated a richer learning experience.

The J&M Keltree case study, with its company background information, supporting charts, and financial data, provides an approach that combines all the information to establish a set of circumstances and situations. The aim of this approach is supported by Smith & Crumbley (2009):

*'Investigative processes outline the steps in combining non-quantitative data with financial information to identify suspicious events'. (2009:5)*

Utilising a case study scenario provided a foundation to be built upon throughout the duration of the module. Each audit topic area can feed into the base information of the case study as the module develops. Students familiarise themselves with the key issues including the company background, organisational structure and processes and procedures applicable to the accounting system. This also gave an insight into the review of corporate plans and business objectives which formed part of the assessment tasks for the module.

The J&M Keltree plc. case study, covered the key issues of computer auditing including: general and application computer controls, risk, system design and development, fraud investigation, audit planning, audit testing and analytical review. The information within the case study ensured that student tasks were sufficiently varied to enable a number of audit issues to be explored and considered. This practical case study provided a simulated 'real life' exercise. The success of this case study engendered an interest in the development of another case study 'Lisa's Lovelies' which dealt with company sales and invoicing activities that required audit review. This was undertaken with a colleague, Lisa James, and supported with a CELL module development grant.

The development of the J&M Keltree plc case study not only provided material for an undergraduate module but also provided an insight into case study development, the benefits and pitfalls for both tutor and student. At the time the module was developed the programme was franchised to Portobello College, Dublin which meant the material was used by a tutor based at Portobello College. This meant that the material had to be robust enough for another tutor to use without having the specialist background experience. After three years of delivering this module the feedback reports from students at Glamorgan and Portobello, plus the tutor at Portobello, provided a very positive response to the module. The feedback indicated the success of the module in terms of assessment and learning outcomes. These feedback reports formed the basis for a paper reporting the views and experiences of both students and tutors exposed to the audit case study as a teaching vehicle (Davies 2001).

Setting student tasks is relatively easy in comparison to assessing and evaluating the responses to the audit findings produced as a result of the 'audit' undertaken by the students. It is essential, therefore, that the practical operational aspects of using case studies are considered. The setting of tasks needs to encompass both student learning experiences and student skills development. This is in addition to covering the appropriate material at the right level of the programme. The fact that case study material requires student self-study, student participation and group-work enables what is traditionally regarded as a difficult subject area to generate student interest. Student 'learning' in terms of the assessment indicated a 'deeper' level of understanding of the audit tasks (Davies 2001). However, comparing cohorts from one year to another is difficult as there are other variables that must be considered, along with the change in module delivery approach. Developing a case study to encompass the learning outcomes of the module only forms part of the process. The delivery, assessment and review including the updating, remains an ongoing process if the module is to withstand the rigour of time to remain current, contemporary and up to date.

The key aspect of developing the computer audit module was to enhance the teaching approach in such a manner that the learning objectives were met. The concept of student centred learning means that there has to be willingness on behalf of the tutors to incorporate real life scenarios, and a level of work experience, into the teaching. On the reverse side,

where there are students with the relevant experience, it does not always mean that good interaction and transfer of experience will take place. Student participation is paramount to the learning experience. The students' willingness to commit to the module objectives was therefore very important. Encouraging the student to 'test and play' with both the data and MS Office Excel, in terms of sorting and filtering to arrive at some conclusions, helped improve the learning experience. Those students with MS Office Excel skills were not always the ones with the analytical and inquisitive skills. The combination of these skills and attributes proved a healthy foundation for a learning experience when students were placed in groups with varied skills and knowledge levels. Students with IT skills may have thought that they had an advantage when using MS Office Excel, however, to apply IT in audit requires both IT and an appreciation of auditing. Using audit precedent and audit dependence tools in MS Office Excel was new to most students, while interpretation of data subject to audit interrogation identified those students who understood the key issues in using IT in audit.

The introduction of the computerised audit case study, designed as a direct result of changes in audit procedures and the research findings from the survey sent to practitioners and Universities, generated a starting point in the application of audit practice into HE modules at Glamorgan. The increased emphasis on the use of IT in audit continues and the term computer auditor is no longer a name for a specific type of auditor; all auditors are now 'computer auditors' as argued by Coglitore & Matson (2007):

*'.....paperless audits are no longer a thing of the future, but reflect the current state of auditing'. (2007:201)*

As a development from the initial case study that used generated fictitious data, advancement in the 'cleansing' of accessed dataset sources provided an opportunity to use more realistic data. However, the emphasis on providing a taste of practical auditing as an experiential learning approach still remained a key objective. These datasets provided material for both audit and computing students as new modules were designed and developed, specifically in forensic auditing and computer forensics. Not only was the case study designed to provide an experiential learning experience but the intention was to develop three other types of skills, namely critical thinking, communication and interpersonal skills. This would require a shift

from a 'passive' involvement to an 'active' involvement in terms of the student's learning process.

Linked to the development of forensic audit and accounting modules, the increased use of IT in fraud detection, has led to audit staff becoming investigators and the internal auditor especially becoming more proactive in fraud detection. Confirmation of the need for the attainment of these skills is highlighted by Pearson & Singleton (2008), who state that accounting students need to possess these IT skills:

*'Accounting students need to be more aware of IT-based schemes and have an appreciation for the need to use specialists to support the work of the accountant in auditing or investigating computer based fraud and forensic accounting issues'. (2008:546)*

Due to cost issues, previous attempts at making the IT and audit experience interactive, made use of MS Office Excel as an audit tool (Davies 2001). The affordability and availability of audit software packages, such as Audit Command Language (ACL), and Interactive Data Extraction and Analysis (IDEA) audit software packages, provided the opportunity to use commercial /bespoke audit software. This enabled tutorial tasks to focus on data extraction and analysis. This activity provided an insight and skills development opportunity, as argued by Braun & Davis (2003):

*'.....to bridge the gap between the current technological skills of an auditor and the skills that would be needed in a continuous audit is to increase the usage and understanding of computer assisted audit tools and techniques especially generalized audit software' (2003:726).*

Since the development of the computer audit case study, and the use of MS Office Excel as an audit tool, commercial audit packages to multiple users (IDEA and ACL) have exposed students to these software packages. Academic staff have attended training sessions to keep abreast of the new software and have been able to convey these developments to the students. This has removed the reliance on MS Office Excel as an audit tool, and its associated limitations. This therefore negates the previous view that:

*'Commercial software packages such as IDEA/ACL are expensive audit packages to purchase and only operate well when a large volume of data requires analysis'.  
(Davies 2000:251)*

The use of commercial audit packages provided additional skills attainment opportunities for accounting students at Glamorgan. However the use of these software packages was further enhanced when the Division of Accounting within the Business School decided to look for distinctiveness within the suite of accounting programmes. The exceptions from professional body examinations (specifically ACCA) offered by the BA (Hons) Accounting and Finance degree did not allow a great deal of leeway to alter the programme as the maximum awarded exceptions were a strong selling point. However other opportunities stemmed from the recognition of changes within the accounting and audit profession in dealing with the increased level of fraud and corruption. BA (Hons) Forensic Accounting was designed specifically as an innovative programme that reflected the new trend in accounting and audit activities. The research into module development linked to the experiential learning proved to be an important contributor to the design of the compulsory final year module Forensic Accounting. The use of IT and the use of case studies formed the core element within the programme, while the research linked to the preparation of material for the Davies & Aston (2010) text provided the rationale for introducing this programme as part of the undergraduate suite of courses. This development placed the University of Glamorgan in a unique position in offering a distinctive programme for the 21<sup>st</sup> century of undergraduate study. This was further enhanced when the postgraduate programme MSc Forensic Audit and Accounting was introduced as a programme within the suite of postgraduate opportunities.

The relevance of ensuring that programmes and modules incorporate experiential learning was recognised retrospectively in 2007. This was a research exercise undertaken on behalf of the Financial Reporting Council, Public Oversight Board (POB). The research sought the perceptions of trainees on the relevance of work based learning and exam based learning in terms of their value to the modern audit professional. Whilst this research focused on the experiences of trainees within their accounting training contracts, it nevertheless identified the importance of experiential learning as a means of increasing both skills and knowledge. The



research findings were published in the POB report (2008), while the data and participant feedback resulted in a publication, Marriot et al (2011).

On reflection, the research into incorporating the 'hands on' experiential approach, and the development of the case study, can be deemed in advance of its time, which was forward thinking in its approach. Whilst the initial research focused on the development of a case study that incorporated experiential learning, the researcher's journey embraced the work of the lecturer to that of consultant. The design of an experiential learning approach for the students, incorporating the desire to develop work based skills were later applied to the review of trainee accountants perceptions of the exam based learning as compared to the work based learning.

## 2.3 List of Publications and conference papers

### Published papers

1997, 'The Use of Excel as an Audit Tool', *CTI Account Journal* 9(2), pp.24 – 29.

1998, 'The use of I.T. in Teaching Computer Auditing – the students' response', *Selected Proceedings of the 9<sup>th</sup> Annual CTI Accounting Finance and Management Conference, York*, pp. 65-69.

1999, 'Internal Controls in computerised systems', In: **Davies J. & Warman A., (1999) *Accounting–A Systems Approach***, London, International Thomson Business Press, ISBN 1-86152-037-9, pp.291-304 **Chapter 18**.

2000, 'Using a computerised case study to teach computer auditing: the reasons, the approach and the student response', *Managerial Auditing Journal*, 15(4&5), pp. 247-252.

2011, 'Student perceptions of work-based training and exam-based learning relating to the professional competences of auditors and the impact of regulatory training in the UK', *Accounting Education: An International Journal*, 20(2), pp.133-151. (co authors Marriott, M., Telford, B. & Evans, J.G.)

### Conference papers including published proceedings and reports

1996, 'Using IT to Teach Computer Audit Modules' CELL (Centre for Lifelong Learning) research report, University of Glamorgan.

1997, 'The Use of Excel in providing Business Assurance', *CALECO 9<sup>th</sup> Annual Conference*, Bristol.

1998, 'Computer Assisted Learning', *Creativity on the Campus*, University of Glamorgan.

1998, 'Hands on to hands off – the lessons learnt in the delivery and teaching of computer audit', *CALECO 10<sup>th</sup> Annual International Conference*, Bristol.

1999, 'The use of a computerised Case Study for the teaching of a computer audit module', *Proceedings of the DSI 5<sup>th</sup> International Conference*, Athens, Greece, pp. 244-246

1999, 'System's Based Audit, Lisa's Lovelies Case Study', CELL (Centre for Lifelong Learning) research report, University of Glamorgan.

2001, 'Using case studies to deliver audit modules on undergraduate accounting programmes, the Glamorgan experience', *British Accounting Association, Special Interest Group, Accounting Education Conference*, University of Glamorgan.

2002, 'Incorporating work based experience into final year modules, audit and taxation, *Asset European Conference*, Cambridge England. (Co author H. D. Williams).

2004, 'How best to assess groups and individuals' - Good Practice in Assessment' , *The Higher Education Academy - Inaugural Annual Good Practice Conference*, University of Glamorgan.

2008, 'The training of auditors within the professional accountancy bodies within the UK and Ireland', *Consultancy Report to Professional Oversight Board (POB) of Financial Reporting Council (FRC)*, London. (Details included within the POB annual report to the Secretary of State 2008). (co authors: N. Marriott, B. Telford & J.G. Evans)

2009, 'Training of Auditors within the professional accountancy bodies within the UK and Ireland', Feedback reports to accountancy bodies (ACCA, ICEAW, ICAI) re: report to POB, FRC, London . (co authors: N. Marriott, B. Telford & J.G. Evans)

2009, 'Experiences from Using Computer-Assisted Audit Techniques as Teaching tools, poster', *BMAF conference*, Cardiff. (co author Dr.T. Tryfonas)

2009, 'Playing CCAT and mouse in the tutorial class'. *British Accounting Association Education Special Interest Group Annual Conference*, Essex. (co author Dr.T. Tryfonas)

2009, 'Practical training for auditors: the views of student', *National Auditing Conference*, Exeter, UK. (co authors N. Marriott, J. G. Evans & B. Telford.)

2009, 'Practical training for auditors: the views of students', *British Accounting Association Education Special Interest Group Annual Conference*, Essex England. (co authors N. Marriott, B. Telford, J. G. Evans)

### **Consultancy funded research report**

2008, 'Report on Practical Training for Auditors', *Public Oversight Board, FRC*, London. (co researchers: N. Marriot, B. Telford, J. Evans)

## 2.4 Contribution to Knowledge

In line with the overall objective of this research namely:

*The objective of the research was to critique how developments within the auditing profession were incorporated into Higher Education (HE) teaching.*

This first theme set out to identify how much IT was incorporated into current day (initially reviewed in 1996) auditing practice and how this was incorporated into HE audit teaching. The initial research showed that professional auditing practice was evolving and the increased use of IT was emerging as an indicator of how the auditor was now becoming more and more proficient in the use of IT. There was less reliance on allocating tasks to the 'computer auditor expert', i.e. all auditors were heading towards becoming computer audit experts. From research into other Universities' approaches to incorporating IT into the audit classroom, the results indicated that experiential teaching of IT in audit was not a common feature of the undergraduate teaching curriculum for auditing.

The contribution to knowledge stems from the findings of the questionnaires and the resulting outputs, both in terms of journals and conference papers. It also contributed to changes in module content and delivery that increased student knowledge and skills level. Anderson et al (1996) note,

*'Learning .....can only be brought about by what the learner does – what he or she attends to, what activities he or she engages. The activity of a teacher is relevant to the extent that it causes students to engage in activities they would not otherwise engage in.....'. (1996:22)*

The experiential approach to learning that was introduced by the use of the J&M Keltree case study contributed to student learning in a manner that audit had not been previously taught at Glamorgan. Patel and Russell (1998) describe the constituents of knowledge, Know-how, Know-why, Know-when, and Know-about. The experiential learning approach introduced in the computer audit case study provided the learning by doing which enabled students to attain

additional skills in the process. Patel and Russell (1998) promote the use of computer based learning (IT) in HE teaching.

*'...there is an operational aspect of knowledge (know-how) where a student can learn by doing.....a student can learn through trial and error in a knowledge area that is action orientated'. (1998: 24)*

Crowther & Davies (1998) support this in terms of recognising the know-how as a transferable skill, when they comment on the importance of *'what students can do, as well as what they know'* (1998:91).

#### 2.4.1 Research outcomes

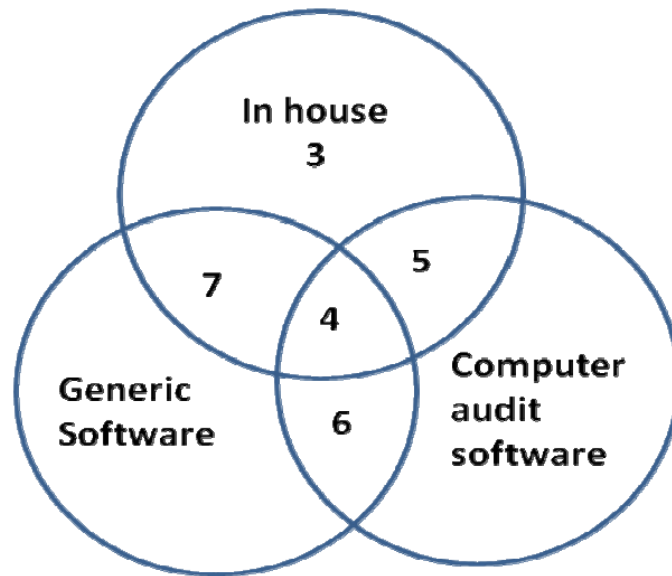
From the survey, distributed to 41 audit departments, 26 respondents revealed data indicating that of those who responded, 65% of the organisations used word-processing and spreadsheet packages as an integral part of the audit process. There were others who, as well as using word processing and spreadsheet, were utilising specialist off the shelf audit software packages designed specifically to audit certain accounting software. A number of respondents had commenced designing bespoke in-house interrogation techniques (19, or 73% of the 26 respondents). These were designed specifically to audit their organisation's accounting systems. This was not surprising, especially as their accounting systems had probably been specifically designed in-house in the first place.

**Table 1** gives the breakdown between in-house designed audit packages, audit software packages and the use made of MS Office Excel, MS Office Word, Lotus, AmiPro. Out of the 26 respondents there was a combination in terms of the use made of different software available

In-house	Computer Audit packages	Excel, Word / Lotus, AmiPro
19	15	17

**Table 1** – Breakdown of various software packages used by the sector  
(Source Davies (1997))

This breakdown of software usage is further illustrated below as a Venn diagram.



**Diagram 2** Illustration of split between different approaches to IT audit

This Venn diagram illustrates the breakdown of the information on Table1. It shows how the 26 respondents use the different forms of audit software options available to undertake the audit as a combination of tools. Only 4 respondents used all three options, 5 used computer audit software packages with in-house designed software, 6 used computer audit software packages with the generic software, and 7 used generic software with in house designed software for auditing purposes. This initial survey indicated the trend of change and recognised that internal audit was moving from traditional auditing, as a consequence of changes in data collection and analysis. In these circumstances the auditor has no option other than to be proactive in responding quickly to change and capitalising on the opportunities afforded by advances in technology. The key to this finding was the requirement of IT knowledge for audit purposes; for HE purposes the use of generic and computer audit software would be a starting point.

The results from the second questionnaire, distributed to all UK Universities offering accounting programmes, showed that, whilst computer auditing was a recognised element of a number of accounting degree programmes, limited time was devoted to its teaching. The outcome of the survey revealed that, despite systems audit being the core element of the audit process (as identified by the first questionnaire), very little time was set aside to give students an opportunity to experience any 'hands on' audit of data. This was not surprising, as the lack of availability of datasets for downloading was a definite drawback, and in addition the accessibility of affordable computer auditing software packages, was probably a contributory factor.

This revealed a fundamental weakness within HE at the time in respect of practical computer audit skills development. This was despite the fact that most auditors were auditing computerised accounting systems. Even less time was allocated to teaching activity based on experiential computer auditing. Based on the comments received from the questionnaire, it was not through lack of need but through lack of availability of appropriate software and case study material that IT was not used by institutions in teaching computer auditing.

At the time of this research the outcomes indicated that, in general, UK universities made very little use of the computer as a medium in teaching auditing modules. Only 12% of institutions taught computer auditing as a named module/course within the degree programme. Those that did have computer auditing within their auditing course did not make use of the computer as a means of giving students experiential activities in computer auditing.

**Table 2** below gives an indication of the extent of IT usage in computer audit teaching.

**Table 2 - Breakdown of Universities using IT for teaching auditing**

Total number of Universities with audit modules	% time in modules given to computer audit	use of IDEA or ACL	Use of Excel or Lotus 123 or other	No computers used in audit module delivery
2	100%	1	1	0
1	40%	0	1	0
2	30%	1	0	1
2	20%	0	2	0
5	15%	1	0	4
11	10%-14%	1	3	7
9	9% or less	1	4	4
4 (no computer audit)	0%	0	0	0
7 (no auditing)	0%	0	0	0
43		5	11	16

(Adapted from Davies (1996))

This research provided an insight into the teaching of computer auditing within the HE sector, which in turn promoted the development of a case study reliant on IT, in order to make it relevant to current audit activity. This was used as an example of an innovative approach to the teaching of computer audit as a standalone module within an accounting undergraduate programme. The survey provided an analysis of the use, or lack of use, of IT in the teaching of computer audit within the HE sector. These research findings relating to audit module content were the first to be collected within the University of Glamorgan.

The case study and experiential approach to the teaching of computer audit provided an avenue that provided a practical application of education theory, demonstrating the relevance of recognising the added value of both theoretical and practical concepts. The approach employed at the University of Glamorgan was reflected by CIPFA in 1998 when it reviewed the integration of IT in the training of the professional CIPFA student.



*'CIPFA does not seek to train IT specialists but recognises how IT is now an integral part of all aspects .....and that a professional training must encompass an understanding and appreciation of these issues'. McCulloch (1998:35)*

This quote is just as applicable to the teaching of HE students where the teaching must encompass an understanding and appreciation of IT. The modern auditor is expected to possess data-oriented analytical skills with the use of contemporary computer assisted auditing techniques (CAATs). The use of CAATs is not a new phenomenon but the permanent use of computerised accounting systems dictates that the auditor has to be literate in this area. Arens et al (2004) confirm that both external and internal auditors use CAATs especially for ratios, trends and in depth analytical procedures. Sayana (2003) goes even further by recognising that audit and IT cannot be separated:

*'Performing audits without using information technology is hardly an option' (2003:1)*

The experiential approach to teaching the audit of systems using IT provided the foundation for developing a module utilising specific IT skills linked to audit requirements. The positive feedback on the J&M Keltree computer audit module illustrated the value of a practical approach to the use of CAATs in order to enhance understanding of IT in auditing. Data analysis procedures for computer specialists and accountants / auditors are skills much in demand in the relevant industry sectors (Coglitore, and Matson 2007). Braun & Davis (2003) identified the increased demand and recognition of IT audit skills:

*'In the past auditors could choose to audit 'around the computer' or 'through the computer'..... but the increased use of electronic data ,,,,,, suggest the need for increased use of technology in the audit process'.(2003:726)*

The research findings and the description of the case study were presented at 9 conferences with papers published in two journals. The conference paper 'Using Excel as an audit tool' (1997), leading onto the conference paper 'Playing CAAT and mouse in the tutorial class' (2009), illustrates the move away from MS Office Excel towards the use of commercial audit software. These various outputs critiqued the use of spreadsheets for teaching auditing and the problems of creating realistic scenarios and data for audit manipulation. The use of case

studies and the ‘hands on’ approach led to a paper on the integration of student work experience (as part of a sandwich degree, as well as experience gained prior to commencing the programme) into the teaching of auditing and taxation (Davies & Williams, 2002).

In addition to the conference and journal papers that were subject to peer review, there is evidence that this research contributed to knowledge within the HE community. This is reflected in the accounting academics’ group successful funding application from CELL in 2001 under the topic ‘Teaching difficult subjects’ and participation in the University of Glamorgan’s HE Academy conference 2004 - Good Practice in Assessment.

#### **2.4.2 Further and continuing developments**

Subsequent to the development of the case study for the computer audit module, the experience gained from the design of the case study and assessment process was applied to the preparation of another auditing case study. The material for this case study was developed with a colleague for use on the second year audit module System’s Based Audit. This project was supported by CELL and resulted in further research output (Davies 2001). The experiences gained from designing audit case study material provided additional output material in terms of identifying the merits of using case studies and the pitfalls of an overreliance on case studies (Davies 2001).

The initial work on the J&M Keltree case study database continues in the format of data applicable for forensic data mining, where the data is initially analysed using MS Office Excel and then imported into IDEA to display the value of dedicated software for the forensic auditor. This was also instrumental in supporting the recent collaborative research utilising the ACL audit software and datasets linked to the original case study development. This resulted in a contribution to knowledge that attracted recognition from the HE Academy’s BMAF group, with funding through its Teaching Research and Development Grants. This provided an opportunity to share the data sets within the BMAF community and the special interest group of the BAA Accounting Education. The output generated two distinctive pieces of collaborative work (Tryfonas & Davies (2009a) & (2009b)).

An indirect development from the use of a case study for the Computer Audit module development was the creation of a module that relied entirely on the use of a variety of auditing case studies to achieve the learning outcomes. This module aptly named 'Cases in Auditing' was designed to incorporate both audit knowledge and application with employability skills. Whilst not relying on IT as a mechanism for developing skills, it drew upon the experiences gleaned from the design and preparation of the materials for the J&M Keltree case study. The varied assessments employed for the Cases in Auditing case study were recognised by the University of Glamorgan's CELT programme for an Innovative Assessment Award in 2010.

The continuing developments and changes within the auditing and accounting profession drive the need for a proactive attitude towards module development and structure. This is also the case if audit techniques, as well as processes, are taught in an experiential manner that attains the learning outcomes. For these reasons this research cannot be regarded as a 'one off' piece of research as there will always be new areas to incorporate into the teaching programme to reflect current professional auditing practices.

### **3. Theme 2 Public Sector accountability: the importance of performance measurement and value for money**

#### **3.1 Background**

The success of incorporating the use of IT as an audit tool incorporated into case study material for audit modules, led to the review of how other audit practices could also be incorporated into HE audit teaching. The development of the case study for the computer audit module revealed that students with work experience could relate to practical audit activities far easier than other students who were reliant on applying rules obtained from textbook auditing. Using a case study that helped students improve their analytical and decision making skills encouraged student participation. It became apparent that utilising the student with a level of work experience benefited both the individual as well as the peer group.

An analysis undertaken by the unit involved with the allocation of supervised work experience to those opting to complete the sandwich 4 year degree, identified that work experience students were able to add value to their degree classification. They were also contributing not only to their own learning but also to those who had not undertaken the supervised work experience (SWE) route.

As a staff member with supervisory responsibilities towards a student placed with the National Audit Office (NAO), there appeared an opportunity to identify areas other than IT, which could be incorporated into the teaching programme. It was the developments in auditing and the impact on the changing role of audit in the public sector which emerged as a direct result of links with the NAO. The increasing importance placed by government on the recording and audit of performance targets and related indicators by the NAO provided the foundation for what eventually became the core subject area of the module 'Audit and Accountability'. It also formed a key area of research that led to international conference and journal papers (Davies & Shellard 1997, Davies and Warman 1998, Davies 2003). This area provided students with exposure to some new roles for the auditor, in verifying and ascertaining data accuracy, in the publication of indicators meeting the pre-set targets. As a consequence of the SWE year, the

students who had worked with the NAO added value to the tutorial sessions by explaining the actual audit activity as opposed to the theoretical aspects found in textbooks and professional journals. Here again the practical processes were used to illustrate and thereby enlighten those who had not been exposed to any audit work experience.

In terms of the measurement of performance, students within HE would be able to relate to the concept of target setting and performance measurement as they were themselves part of the data used in performance measurement. Education and especially examination results are used to assess the performance of both students and education establishments. League tables and rankings provide a gauge as to how well services are provided. This subject area of performance was therefore appropriate for review especially from the perspective of audit role.

A proactive working relationship with the NAO, and the work undertaken by the work experience students provided access to various audited reports within the public domain. These published annual reports which included financial and non financial data were gradually incorporating the new dimension of reporting on performance (NAO 1991). The initial research interest focused on Executive Agencies set up by the government of the 1980's. It identified the relevance of introducing new government initiatives and developments in the public sector that had implications on the traditional work of the auditor. These aspects were introduced into the final year module entitled 'Audit and Accountability' of the BA (Hons) Accounting and Finance programme. This module moved away from solely the corporate arena, focusing on audit opinion on financial statements, and introduced elements that focused on audit issues affecting both private and public sector auditing.

Central government's decision to create Executive Agencies in 1988 to run its departments and business units, (where practicable within agreed policy and resource frameworks), also placed a heavy reliance on performance measures and target achievement to assess results. The NAO (1992) publication detailed the government's objectives behind the establishment of setting and measuring targets within Executive Agencies. In the same year HM treasury (1992) published guidance on the setting of targets, while Likierman (1994) published twenty lessons for managers on how to handle performance indicators. As auditor of these Agencies,

the NAO lead the field in providing assurances on the data used for performance measurement. Ministers and departments were given considerable freedom in the selection of performance targets. Carter and Greer (1993) comment on how the use of performance indicators was important in the development of the Executive Agencies. This development of the executive agencies, known as the Next Steps initiative, did require additional resources. A review of the Executive Agencies within the Department of Social Security by Carter and Greer (1993) revealed that significant resources were allocated to the design and improvement of the performance indicators.

Interest in how these targets were reviewed, in terms of analysing their success and the role that audit played in their verification, provided an ideal platform for research that could ultimately feed into the teaching curriculum. The initial target setting focused on central government agencies and departments. However, as with a number of government initiatives, it would not be long before these ideas would become a feature of local government and the eventual impact on internal audit would lead to further research. Performance measurement was on the political agenda and there was no stopping it in the 1990's. The role of the auditor would therefore be changing from merely vouching and verifying data to that of providing credibility to the published data adding indirectly a quality control dimension to the data. Dallas (1996) refers to the importance of clarifying objectives and developing a recognised approach to measuring and reporting performance if accountability is to be achieved.

From the early 1990s' to date, performance targets and objectives shrouded under titles such as: Citizens' Charters, Best Value, Value for Money, Star Ratings, and Programmes for Improvement which continue to focus on the achievement of predetermined targets. The role of the auditor in performance targets ranges from confirming and verifying source data, to publishing reports that contain a multitude of bar charts, (as produced in the Audit Commission<sup>2</sup>'s annual publication on performance indicators), as well as assessing performance. This is again an example of how external factors, such as government initiatives, impact on the traditional role of the audit. The result is new activities that require a different

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<sup>2</sup> Audit Commission – the body responsible for the external audit of local government in England & Wales. Since 2005, the Wales Audit Office has overall responsibility for public sector audit within Wales.

approach to audit. Other researchers identified concerns regarding the collection of data and the establishment of targets. Bowerman (1995) refers to reservations towards the value of the Citizens' charter (which identified expectations in the form of targets) and the wisdom of handing over the design and collection of the information to external auditors.

One key area that relied heavily on performance targets and indicators was that of performance related pay. The temptation to over exaggerate figures, to ensure that the bonuses are paid, can tempt individuals (and organisations) to inflate the reporting of achievements, as the NAO (1995) evaluation of performance in the Meteorological Office Executive Agency illustrates. Davies and Warman (1998) question the relevance of indicators and targets:

*'How successful are the performance indicators and targets as a means of monitoring and measuring performance and in demonstrating value for money offered by the public service'? (1998:43)*

During their audit of the Meteorological Office Executive Agency, the NAO (1995) pointed out that, where targets constantly change, it becomes more difficult to assess performance,

*'changing goal posts too often only leads to comparison problems that render a misleading view of overall performance' (Davies and Warman 1998:45)*

The NAO (1994) commented on how performance target achievement was the basis for performance related pay, while the actual audit of performance against target revealed that the reported target was not actually achieved. This distortion of statistics is another area of concern. The 'adjustment' of waiting lists within the National Health Service (NHS) is a well known area where controversy has arisen as to the true meaning of the data supplied. When data is published especially within the public sector there is a presumption that the data is reliable. If this proves not to be the case then the whole system for all Executive Agencies (and public bodies as a whole) loses credibility. There is the danger that a public service can skew its main priorities towards meeting artificial targets and away from solving real problems linked to service provision. Strict adherence to achieving the performance targets set from the agreed performance indicators should not become an end in itself. This was eloquently summarised in a tutorial class of students from the BA (Hons) Accounting and Finance

programme, who likened the situation to that of a classic tale. It was as if 'Little Red Riding Hood' was more concerned about the brambles along the path to grandma's cottage as compared to the dangers of meeting the wolf. This illustrates the overemphasis that can take place when too many targets are set.

Although Executive Agencies were the first public bodies to be the subject of the research, they were by no means the only area of the public sector that succumbed to the perceived benefits of indicators and targets. Local government, the National Health Service and devolved governments all looked towards meeting Central Government's obsession with setting targets to improve efficiency and effectiveness. The concept that service providers would take stock of how well a service is delivered, along with the creation of benchmarks for year on year comparison and improvement, drove the demand for more and more targets, relying on indicators to portray the existing situation. The New Labour government (of 1997) approach to audit as described by Kemp (1997) outlines the objective.

*'the objective is to have the public services we need delivered in a way which give best value for money, service to the public and accountability- the three pillars of good public service'. (1997: 9)*

The public sector accountancy body, Chartered Institute of Public Finance and Accountancy (CIPFA), identified how performance measurement could be used both internally and externally to enhance accountability. CIPFA (2000) identified how internal policy making and strategic planning could place reliance on the data published under performance indicators, while external indicators provide a mechanism for comparison. Davies (2003) states that:

*'The value of performance indicators ...is not only that of displaying accountability, but also....in terms of the planning, development and policy making process'. (2003:35)*

However there are issues linked to the use of indicators. Lapsey and Mitchell (1996) recognise that indicators are not helpful and may even be harmful when the measures fall short of clear output measures, or when goals achieved cannot easily be quantified or measured. In an



interview for the Further Education Forum, P. Vevers (1996), associate director at the Audit Commission, stated that:

*'For some time, one of the criticisms levelled at performance indicators is that there is far too much concentration on efficiency and cost, and not enough on quality'. (1996: 1)*

Michael Dallas (1996) drew upon the experiences of Coopers and Lybrand working with different bodies within the public sector and identifies five tests in relation to performance measurement.

*'Is the performance measurement integrated, i.e is there a range of measures to give an overview of how well an organisation is performing?  
Is the information published locally for those who use the services?  
Is the same information published for all bodies in that service so that performance can be compared?  
Is the information audited?  
If not audited, is there audit of the underlying system that produces the information'?*  
(1996:13-14)

Performance targets and measurements play a role in displaying financial accountability. However there are wider aspects in terms of effectiveness and quality. When individuals have to meet the targets set for specific tasks, this achievement can sometimes lead to less job satisfaction and the possible loss of motivation. Most employees want to feel a sense of achievement in their work. Meeting goals can result in a feeling of success, but failure can lead to a loss of interest in the job, the lowering of standards, and loss of confidence in ability. It can be extremely demanding to meet a constant stream of targets. Achieving targets can become a focal point of the job as opposed to the provision of a quality job or service. These issues were identified by Beekes et al (2010) who reported on the concerns linked to the use of performance targets. The findings of this report indicated that, where employees are subjected to performance targets, particularly financial objectives targets, it makes them consider manipulating or undertaking devious actions to meet such targets. These behavioural reactions seem to be pertinent at all levels within the organisation when targets become the focal point. This manipulation of data to meet targets, which is often not linked to personal gain, can often lead to fraudulent reporting. This is both detrimental to the organisation and the economy,

when decisions are reliant on the outcome of performance data. The Gee et al (2011) report on public sector performance, in terms of its ability to protect itself from fraud, is an example of how performance data is used to highlight the public sector's susceptibility to fraud.

The audit function has a role in providing assurances on the data collected, used and published, in order that there is a level of confidence attached when they come to be analysed and interpreted. Verifying the data is a starting point, leading to the implementation of 'rewards' for achieving the goals. The local government auditor, the Audit Commission, revolutionised the audit approach from merely imposing probity or vouching audit to that of a sophisticated audit, embracing a management consultancy and advisory role. The expertise of the auditor in the area of value for money became a mainstay of auditor skill in performance indicator audit. Dallas (1996) sums up the role of audit in performance measurement:

*'It is better viewed as a quality control process to validate whether performance information is properly prepared and fairly presented'. (1996:16)*

Leading on from the initial use of target setting, more and more sophisticated means of performance measurement were introduced. This resulted in Best Value initiatives within local government and Star rating within the NHS sector. In 2001 the Audit Commission completed a consultation process that asked the public to comment on the use of performance indicators. The outcome showed that there were too many indicators, some of which were more relevant to the collection of statistics than to the improvement of public service.

As a result, in 2003 the Audit Commission launched a broadside against the government's prolific use of indicators, warning that they can distort priorities and lead to damaging consequences for public services. A news brief in the public sector accountancy magazine Public Finance and Accountancy read:

*'The public spending watchdog warns that many targets set in Whitehall are at best ineffective and at worst encouraging the practice of 'gaming'. Where staff focus on meeting targets to the detriment of other parts of the service'. PFA (2003:3)*

This issue of performance targets continues into the 21<sup>st</sup> century with the coalition government of Conservative and Liberal Democrats parties, elected in 2010, indicating a move away from the setting and measurement of targets. Its desire to reduce the public debt inevitably places greater pressure on the achievement of indirect targets in the form of expenditure cuts. There will be new targets set based on the reduction in expenditure as opposed to the provision of a service. The scope for researching the use and impact of results, ranking and ranges of targets and indicators is just 'never ending'. Travers (2001) summed up the picture of performance indicators, which is probably still as true ten years on.

*'Other countries must look at the British government's obsession with public sector performance- and its measurement with disbelief. There is no doubt that....  
..... developments in audit, inspection, performance measurement.....has given this country (UK) the most sophisticated mapping of public service under achievement in the world'. (2001:23)*

In terms of providing material to engender thought and debate, performance measurement was an interesting subject area for students to consider as its definition is not an easy task. Neely et al (2005) support this by stating:

*'Performance measurement is a topic which is often discussed but rarely defined. Literally it is the process of quantifying action, where measurement is the process of quantification and action leads to performance'. (2005:1228)*

This subject area was therefore deemed to be one that could be classified as pertinent to new audit activities and one that could engender student interest.

## 3.2 Method

### **Main source of data – published reports and professional body publications**

The data for this theme stemmed from two key areas, the annual reports of Executive Agencies, published by the NAO, and technical publications from the public sector accountancy body CIPFA. As the topic area was relatively new in terms of academic research there was a limited number of published research papers. Therefore the emphasis was on government published material, accountancy magazines and professional journals. As performance targets became recognised items on the public sector agenda, more academics investigated the issues surrounding performance measures. At the time that this research started, public sector audit of performance targets was also very much in its infancy. Auditing per se was as applicable in the public sector as in any private organisation. However, due to the uniqueness of public sector service provision, with its resource constraints and the never ending demand for its services, performance measurement was an important aspect for the audit function. CIPFA was promoting the audit aspects linked to accountability, while the Audit Commission published guidelines on performance output results, which provided an endless source of material. It was important however to be aware of the pitfalls of making unwarranted inferences, especially where there was a danger that comparisons would not be on the basis of like with like. Brownell (1995) implies that the problem with a number of accounting research projects is that comparisons are difficult to undertake when differences exist in the approach to the collection of data, or the data itself is not homogenous, while its location can often be another disruptive variable. These issues were important when the concept of internal and external audit input were related to the interpretation of targets, measures and indicators.

The initial research focused on annual reports for the Executive Agencies which, when analysed, revealed the expected rate of return from capital employed, as if the organisation was a private sector organisation. This indicated the new view of what these Agencies were meant to represent, in that they should operate in a businesslike manner. These reports not

only reported on financial targets, but also on the achievement, or non achievement, of non financial targets.

Due to the uniqueness of each Agency, a comparison between the agencies is meaningless. However, it was possible to create an overview of targets and outcomes. In collaboration with two colleagues, Alison Warman and Elaine Shellard (1997 & 1998), research was undertaken into identifying whether targets set were actually met, and how audit was used as a tool to verify the attainment of these performance targets. The initial research focused on ascertaining the effectiveness of targets and measures in meeting the expectations of the target setters. The consequences of failure to achieve the targets were also considered, although their verification was not always possible.

This research on the Executive Agencies (previously operating as government departments but now having their own recognised status as Agencies) involved a review of eighteen annual reports for 4 Executive agencies over a range of years. The emphasis was on analysing published information found within the reports to identify the targets and their achievement. Davies & Warman (1996) questioned the value of publishing achieved targets by these Agencies. These Agencies invariably had a long list of targets, including the standard one of return on capital employed, set at 6% for all Agencies. This failed to convey a true picture for many of the Agencies; The Royal Mint Executive Agency, for example, consistently achieved in excess of 20% return on capital employed. This questions the value of setting a standardised 6% return when some Agencies were performing in excess on a regular basis. If this was true of the Royal Mint Executive Agency was it also true of any of the other Agencies? This illustration can be read in two ways, is it the futile nature of the target for the Royal Mint Executive Agency, or does it reflect the brilliance of its managers in exceeding the target? Blanket targets such as the 6% rate of return can be easy or difficult to achieve depending on the service provider. Targets that are tailored to individual service providers can be more meaningful, but then a comparison becomes difficult. This is where the public sector has a problem when performance measurement cannot be unique to an organisation when comparisons across the board have to be made. Travers (2003) criticised the production of a

long list of targets identified for Whitehall and service providers to meet; the targets very often have a short 'shelf life' and can become 'curiously dated'.

Leading from this initial research, with the output from Davies and Warman (1998) further research into other areas of the public sector identified the role of audit in verifying the data used for performance measurement. The work of the Audit Commission in local government and health sectors provided a wealth of material to consider. This included not only the performance data but the underlying issues behind target setting, the factors dictating the rationale behind the targets and the 'rules' for meaningful targets. The review of the public sector publication of targets and indicators generated a query in terms of what exactly did an indicator or meeting a pre set target say about the provision of a service. Public sector services tend to focus on the subjective nature of quality as opposed to the measurable output of a product. Meeting a goal does not in itself provide adequate proof of a worthwhile level of service (Davies & Shellard 1997, Davies 2003). A review of the NHS league tables in 2004 by the Healthcare Commission led to a report by Nic Fleming in the Daily Telegraph (2004: July 21) where Dr Andrew McCulloch, the chief executive of the Mental Health foundation, claimed that the Star Ratings attached to health trusts failed to show the true performance or a meaningful picture.

*'The star rating system is not going to drive up standards in a way that is meaningful to those using the service'. Dr A McCulloch, Daily Telegraph July 21, 2004, p10)*

Irrespective of whether it is a public sector area that is reviewed, or whether performance is business related, there seems to be an issue with the value of performance target setting and measurement. This is because the setting of targets and the measurement of performance will invariably carry the element of doubt. This is illustrated by Neely at al (2005) where concerns are raised in relation to the inappropriateness of performance measurement, this is because they;

*'...encourage short termism.....lack strategic focus, do not provide data on quality....encourage local optimisation,.....encourage managers to minimise the variances from standards.....and fail to provide information on what the customers want'. (2005:1253).*

By using published reports and various accounting journal papers the research yielded material for developing thought provoking student tasks for reviewing and questioning performance measurement. This area of research also provided a wealth of data that resulted in conference presentations, and journal publications on a national and international platform.

### 3.3 List of Publications and conference papers

#### Published papers

1997, '**Performance Measurement in the United Kingdom**', *The Government Accountants Journal US*, 46(3), pp.48 -51. (co author E. Shellard)

1998, '**The Value of Auditing Performance Measurement in Executive Agencies - A Meteorological Office Case Study**', *Journal of Cost Management U.S.*, 12(1), pp.43-48. (co author A. Warman)

2003, '**Performance Measurement in the UK Public Sector: understanding performance indicators**', *The Journal of Finance and Management in Public Services*, 3(2), pp.31-48.

#### Conference papers

1998, 'Measuring Performance in the U.K. Public Sector', *Proceedings of the WDSI 27<sup>th</sup> International Conference, Reno, Nevada, USA*, pp. 27-32 (co author E. Shellard)

2002, 'The Modernising of Local Government – a View on Wales', *Proceedings of the Asian AAA World Conference, on Disclosure Governance and Transparency*, Singapore.

2002, 'Performance Measurement in the UK Public Sector'. *Proceedings of the Asia Business Forum Conference, Key Performance Indicators for the Public Sector*. Kuala Lumpur, Malaysia.

2003, 'Performance Measurement in the UK Public Sector: understanding performance indicators'. *Acipfal annual conference*, Cardiff, Wales.

2003, 'An overview of the use of performance indicators as a method of displaying accountability in the UK public sector'. *Proceedings of The European Applied Business Research Conference*, Venice, Italy.



### 3.4 Contribution to Knowledge

In line with the overall objective of this research namely:

*The objective of the research was to critique how developments within the auditing profession were incorporated into Higher Education (HE) teaching.*

This second theme looked at the performance measures, with research undertaken into identifying whether targets set were actually met and how audit was used as a tool to verify performance attainment in the public sector. In line with the overall objective this was reviewed in relation to how these current and topical issues could be incorporated into HE delivery of auditing modules, more specifically Audit and Accountability which formed part of the BA (Hons) Accounting and Finance suite of final year modules. The subject area proved of interest to the students as they analysed the targets within the annual reports by using ratios and trends and thereby integrated their knowledge of accounting into audit activities. The approach to the research was further utilised as an example of good practice in terms of undertaking secondary research based on published data. This research technique and the ensuing action of critical review was used to illustrate research techniques to students undertaking dissertation modules at both undergraduate and postgraduate programmes. The contribution to knowledge looked at the topic of performance measurement audit and its critical review as well as the approach to data collection for research purposes.

When overall performance targets and output measures are published within annual reports, the documents themselves can be very impressive looking. This can sometimes give the impression of a successful activity. However these need to be considered in more detail if they are to demonstrate value for money in the public sector (Davies & Warman 1998). The research revealed interesting aspects relating to target setting and the verification of data used to convey the achievement or non achievement of the targets. Manipulation of data by the Meteorological Office (Met Office), as discovered by the NAO (1995), demonstrated the impact on the behaviour of managers and staff subjected to performance targets. From the review of the NAO report on the Met Office, and the research on the annual reports of the Met

Office, it became apparent that a key to performance measurement was the need to ensure consistency of targets. The changing of the 'goal posts' too often only leads to comparison problems that render misleading views on the overall performance (Davies & Warman 1996). The exposure of students to the inconsistencies of performance measurement enabled a contribution to knowledge that drew upon a different learning activity to that of experiential learning. By allowing students to evaluate data, it encouraged students to critically review the concept.

By using examples of misleading reviews such as those set for Companies House Executive Agency students were provided with scenarios from which to draw conclusions or question applicability of targets. These developed criticality, improved confidence and generated debate. The target in question was the response rate for company searches within Companies House Executive Agency. In an attempt to determine this target's achievement, the published reports for the 6 year period between 1993/4 and 1998/9 were reviewed for Companies House Executive Agency. This review of the annual reports revealed what initially seemed to indicate an improvement in activity and service, but was later questioned based on the outcomes recorded. This was a target set for the provision of a two-hour search service for all customers which was read in conjunction with the fact that the overall workload for the year was 4% below forecast and the searches down by 1.9%. The two-hour search became an achievable target without any great effort. Achieving the target seemed to indicate increased efficiency, but with a lower workload this did not really show improved efficiency. This brought to light the need for students to appreciate the criteria for setting targets. In addition the recognition of other variables and factors that could influence the outcome of the performance had to be taken into account. This example of improved performance quickly brought into question the notion of target setting as outlined in Davies & Warman (1996).

The achievement of targets is also questionable when a number of targets are grouped together to reflect the overall activity. If the target achievement for any set of activities is set at a figure below 100%, for example 80%, which may be deemed a satisfactory outcome. It implies that all targets are of equal weighting. This however may not always be the case, especially when some targets are imprecise. In addition, accounting methods applied to the analysis of the data

can affect the importance of performance indicators as a gauge of effectiveness and efficiency. This is consistency and manipulation of data with its selective choice of results is detailed in Davies & Warman (1998). This draws the attention to the Meteorological Office's use of only certain data to display a positive output. The data collected from the research into the Meteorological Office provided enough information to create a small case study which capitalised on the merits of case study teaching and learning.

From the research undertaken, two joint research papers were published, (Davies and Shellard (1997), and Davies and Warman (1998)). Both of these were published in US journals and thereby giving a contribution to knowledge on an international platform. These publications resulted in an invitation to attend the Asia Business Forum in Kuala Lumpur as key note speaker in 2002 (Davies 2000). This conference provided the platform to share research findings with international academics.

A contribution to knowledge of members of the CIPFA accountancy profession was achieved when the OLM material published for the training and education included a copy of a journal paper (Davies 2003) on performance measurement. This article appeared in two separate OLM textbooks Audit and Strategic Performance (CIPFA 2004a, 2004b). This recognition by the professional body provides evidence that this research output was deemed appropriate for the level of tuition necessary to attain the body's professional qualification.

This second theme therefore provided a contribution to knowledge to HE students as both undergraduate and postgraduate. The recognition by CIPFA made the research output available to accountancy trainees and thereby the work contributed to the knowledge of members of the profession. Finally, due to the public sector nature of the research, material designed for the undergraduate teaching was further fashioned to produce training literature for one and two training programmes for newly appointed internal auditors within local government and national health trust organisations. This training was managed and organised via the University's Commercial Service Office.

## **4. Theme 3 The developing role of the public sector auditor in corporate governance.**

### **4.1 Background**

As a development from the initial research into the changes in proactive audit activity this third and final theme maps the evolution from checker to assurance provider for internal audit within the public sector. The use of IT, the need for all auditors to become computer literate, coupled with the demand for effective use of resources, all contribute to the modern approach to audit. This encapsulates the concept of embracing the auditor role of acting as assurance provider and contributor to sound corporate governance. The four quarters outlined in diagram 1 (on page 7) illustrate the developments in audit practice, (especially internal audit in the public sector) and how they are incorporated into HE modules on accounting programmes. Whilst being recognised as independent areas of research the 3 themes represent some of the developments and changes encountered by the audit profession over the past 20 years. The links between all three stem from the initial developments in IT that made audit more sophisticated, to the reliance on IT in the analysis of data for performance measurement, to the recognition that audit has a role in corporate governance. This third theme therefore, whilst it is a standalone area of research, encompasses the previous elements on the role of audit in the public sector. These developments in audit activities have been incorporated into the design and content of audit related modules within the HE sector, in order to create a more dynamic and demanding learning experience.

The developments and resulting changes within the audit profession during the past twenty years, particularly in the public sector, have had an impact on the role and working pattern of the audit function. The role and responsibilities of the internal audit function have altered significantly from the historical checking and vouching approach attributed to the traditional perception of auditing. The changing nature of internal audit activity has also resulted in an alteration and shift in focus on training, at both university and professional levels. This final theme focuses on how internal audit embraces the changes identified by the political dimension of more accountability, openness and better governance. This completes the circle

identified at the outset where audit functions develop naturally due to circumstances, innovative technologies as well as political and public pressures.

One key influence on internal audit was the changing attitude towards public sector audit as outlined in Davies & James (2002). This was christened the 'Third Way', where the need for democracy embracing openness and accountability, along with modernising public services, had resulted in a plethora of initiatives including the inspection of services. This inspection role fell on the shoulders of the Audit Commission, as described under theme two, which, in turn, had an indirect effect on the working practices of internal audit, especially in terms of its relationship with the external auditor and the audit committee.

An example of a change in the role of the audit function was that of the modernisation agenda within local government, with its move away from the committee structures to 'cabinet' style governance. This instigated a different relationship between officers (head of audit being one of the officers) and members. Changes in committee structures, and a requirement for co-ordinated relationships between internal and external auditors, necessitated new forms of accountability within the public sector. As part of this development in governance and accountability, the audit committee emerged as a key player in the field. The Audit Commission (1996) identified areas where there could be improvement in governance through the workings of the audit committee. At this time in the late 1990s, the status of the director of finance, and indirectly that of the head of internal audit within local government, was being downgraded to second or third tier levels of management. The Audit Commission (1998) expressed concern over this erosion of status. The creation of the audit committee was seen as a way of counteracting this fall in status.

An important development impacting on both the external and internal auditor was the introduction of corporate governance codes, (of which there have been numerous new initiatives and codes since 1991) that introduced, amongst several other recommendations, the merits of audit committees. The Cadbury Committee Report on Corporate Governance (1992) advocated the 'Audit Committee' as an important weapon at the disposal of management in the war to improve internal control systems and risk management. The audit committee

emerged as a cornerstone of corporate governance within the private sector. Yet, the applicability and role of the Audit Committee in the public sector became a contentious issue and one for debate amongst auditors, councillors and executive managers. As part of the increasing awareness of the potential benefits of establishing audit committees, the Audit Commission (1996) published *Called to Account - the role of Audit Committees in local government*. This publication identified the merits of the audit committee as an overseeing body within corporate governance.

The introduction of an audit committee as a feature of corporate governance was embraced in many areas of the public sector without any controversy. However, compared to other public sector bodies, such as Health Trusts and Executive Agencies of central government, local government was a reluctant participator. Local government regarded the structure within local authorities as sufficiently supported by the numerous other committees. One stumbling block to this proposal was the difficulty with recruiting suitable members onto the audit committee. Clackett (2005) describes these problems which are just as applicable, particularly for small councils:

*'Identifying sufficient members with appropriate skills and experience can be difficult, especially as many such members could already be serving on other committees and thus may not be eligible for membership'. (2005:3).*

The advent of audit committees within the public sector displays the sector's commitment to governance codes. Unlike its counterpart in the private sector, where audit committee members are paid as non executive directors, the voluntary membership in the public sector does not carry with it any remuneration. This may be another factor that explains why recruitment of suitably qualified individuals is proving a problem.

## 4.2 Method

### Questionnaire Approach

The approach to the collection of data and information followed a similar pattern to that used in the first theme, namely a questionnaire, which on this occasion enabled both electronic and hard copy options for the respondents to use. Coupled with this, the use of focus groups enabled what Smith (2011) refers to as the ‘freewheeling approach’ to the collection of observations, generated by the use of a directed conversation as opposed to specific questions.

A collaborative research project undertaken across the whole of the public sector in Wales was an attempt at identifying the establishment of audit committees within Welsh public sector organisations (Davies & James 1998). Two years after the introduction of the one tier structure of local government in 1996, a questionnaire was distributed to all public sector organisations in Wales (Local Authorities, Health Trusts, Fire and Police Services). This enquired about the establishment of audit committees, their role, responsibilities and their involvement with internal and external auditors within the organisation. This output from the research acted as a catalyst for another two surveys during the next eight years. One other area of focus in this research was that of Housing Associations, a new ‘breed’ of public sector bodies that were taking on board private sector initiatives. Since the original research the Housing Association sector has developed to a much larger body and the governance of these associations has also evolved with this development. The audit committee and audit relationship has therefore re-emerged as a subject for further research.

An independent piece of research following the previous collaborative work in 1996 (Davies & James 1998) was undertaken by Davies (1999). This built on the findings of both surveys to identify internal audit developments in relation to corporate governance, assurance provider roles and the use of IT in audit. The focus was on internal audit within the public sector, and how the face of internal audit had changed and evolved from the traditional approach to audit. This research was supported by the Welsh Chief Auditors Group (WCAG), whose members were willing participants in focus group meetings and in providing feedback on the output

from the research. The ability to target the questionnaire to specific named respondents removed the dangers of simply sending questionnaires to unnamed individuals which invariably end up being consigned to the recycling bin.

The design of this research activity incorporated findings from other themes, in that the role of IT in audit was changing and the introduction of performance targets, and the need to verify source data, was new to the role for the internal auditor. In designing the questionnaire for assessing the changing role of the internal auditor, various guidelines and recommended practices published by CIPFA were useful benchmarks. This ensured that all aspects relating to the working practices of internal audit were included within the questionnaire. This approach to questionnaire design is consistent with Nash (1996):

*'A number of articles are written from the academic perspective and therefore by their very nature provide the ideal source from which to compare, they also provide a base from which to design questions for the survey'. (1996:4)*

The changing nature or face of the internal audit questionnaire was aimed at all internal audit staff irrespective of gender, age or position within the public sector. The aim was to establish and document the different views, perceptions and experiences to confirm the changes experienced by the staff. It commenced with a set of questions to establish some background details (but retaining anonymity), it provided data for establishing designation, gender and years of audit experience. The remainder of the questionnaire had six categories, which asked the respondent for their views on different subject areas. The findings from the survey were categorised under the heading of the 'changing face of internal audit' and documented in Davies (2001), along with conference papers and presentations to WCAG, (Davies & James 1998, 1999; Davies 2001a&b). A key finding from the survey was the revelation of how internal audit was emerging as a major function within the organisation. This was mainly due to the expectations from management that internal audit should provide advisory as well as assurance roles.



**Diagram 3 Enablers and Barriers to Internal Audit Development**, (below), (adapted from Davies & Aston 2001:264), provides an overview of the enablers and barriers perceived to influence the development of the internal audit function within local government.

The findings of the survey reflected these aspects of the internal audit function. The new approach embracing that of auditors emerging as business advisors is interesting in that the survey revealed that many were uncertain about their status and profile within their employing organisations. The enablers however indicate a greater link between audit and management.

The research results indicated that much depended on the status of the audit function and the relationship between management and the head of the audit group. There was however a strong recognition that the auditors could be used to a greater extent in the role of advisors and assurance providers. This is reflected in the changes from traditional audit services to that of a more dynamic business function that reviews risk management as a matter of course, instead of one that operates by checking for adherence to policies and procedures. These barriers and enablers help to reflect the development of the internal audit function.

The feedback to the WCAG, and the profession via seminars and regional group meetings provided an interesting and informative overview. This fuelled further discussion within the group for comparison of structures and opportunities to share ideas and practices.

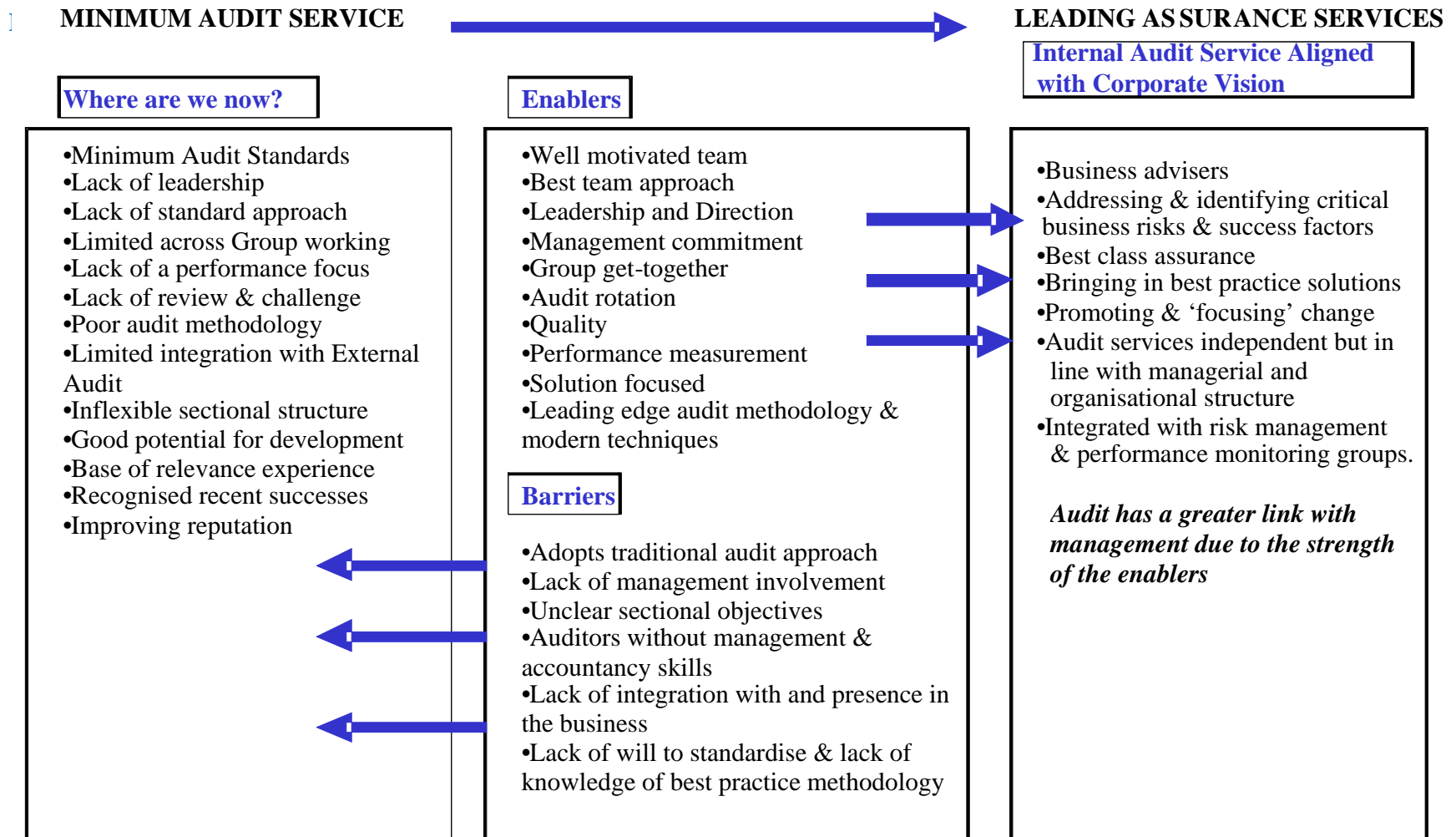


Diagram 3 Enablers and Barriers to Internal Audit Development

From the perspective of the use of IT within the audit function and especially its role in the developing role of audit, there was a lack of agreement. It was interesting to note how there seemed to be a lack of agreement on the use of IT as a key mechanism to completing all audit work. Respondents had varying levels of agreement on the role of IT as an audit tool. One key variable in this response was the respondents' ability to use the IT software used within the organisation. This reflects back to the value of experiential learning processes at both HE and professional training. Another aspect was the structure of the audit function, where some organisations had dedicated computer audit staff to undertake certain audits. The distribution of this same questionnaire ten years later would most definitely provide a more positive recognition of the use of IT in audit where the use of CAATs is now normal audit practice. The overall conclusion to this survey was that internal audit was experiencing a change in working practices, some of which was self driven, the other being driven by external factors. The diagram is useful in illustrating how the influences on the internal audit function have impacted on the development of internal audit and the acquisition of its new persona.

Five years later WCAG were again supportive of a further research project which focused on the internal audit and audit committee working relationship. This research focused on the situation that prevailed within local government in terms of its adoption of an audit committee. CIPFA (2005) published a practical guide for Local Authorities on the role and responsibilities of audit committees. This was an opportunity to see whether Local Government in Wales had embraced the concept of audit committees. It was also an opportunity to review the working relationship between internal audit and the audit committee. In 2005 the internal audit and audit committee working relationship questionnaire was distributed specifically to Welsh local authorities. The objective was to seek information that would indicate and identify any changes in attitudes in respect of establishing an audit committee. In addition, the questionnaire set out to establish the relationship between the auditors and the audit committee. A greater emphasis on risk management, and pressure from CIPFA to emulate the private sector initiatives in corporate governance, resulted in questions seeking confirmation and recognition of the merits of audit committees.

The desire to emulate the private sector, in terms of appointing an audit committee, may have been viewed as a positive step towards good governance. However, the private sector was not without its criticism. Spira (1999) questioned whether the audit committee was merely a ceremonial function. This function in itself thereby creates a comforting factor that gives legitimacy and access to resources. In 2003 Spira identifies that need for an actual working role for the audit committee. Despite the widespread adoption of audit committees within the private sector, post Enron had identified the necessity for the audit committee to be 'more than a ceremonial presence'. The role of an independent audit function was also intensified post Enron (Spira 2003).

The role of the audit committee within local authorities therefore had some conflicting pressure if it was to emulate the private sector. The expectations of good governance and the role of audit was a topical subject area. An initial focus group was held with the Welsh Chief Auditors Group. This was set up in order to identify issues which were of interest to the WCAG, and for research purposes in terms of potential value of any findings to the audit community and those studying the subject. The focus group identified key issues to include within the questionnaire, which enabled the questionnaire to be piloted prior to its completion and distribution.

Combining both the views of the focus group, and that of the CIPFA framework for audit committee structures the questionnaire comprised 9 sections with 70 (statement style) questions. From the total of 70 questions, 67 of the statements required answers that followed the Likert (1932) scale approach of strongly agree to strongly disagree on a five-point scale.

The survey was based on qualitative rather than quantitative responses, the questionnaire containing direct questions for identifying the existence of an audit committee and its membership and statements for agreement or disagreement formed the content of the document. The objective was to gather the opinions of the heads of internal audit on the working relationship that existed between them and the Audit Committee. A similar survey was prepared for the chairperson of the Audit Committee with similar or complementing

statements. Due to the small response from the audit chairs, the research focused on the responses from the heads of internal audit.

Overall, the responses of the chief auditors, also referred to as heads of internal audit (HIA), fell into the central tendency bias whereby the extreme responses of strongly agree or strongly disagree tended to be avoided by the majority. Based on the fact that the questionnaire was directed towards the HIA, the Delphi technique (Skulmoski et al, 2007) best describes this approach. This is because the HIA represent a collection of experts with the appropriate knowledge to answer the questions. As a group they were in a position to review the findings and were able to utilise the output to generate examples of good practice. This provided a starting point for discussion at their monthly WCAG meetings, at which the researcher was invited to attend three meetings. This qualitative research approach to the collection of observations, and the sharing of experiences was further enhanced by the fact that the research was undertaken as a conversation with the participants in a neutral setting. The observations and experiences of one would generate further debate and discussion. The anonymity factor may have also helped generate discussion as the participants were considered as a group and not as individual participants.

Unlike the previous questionnaires, this questionnaire was distributed electronically to the 22 HIA within the local government authorities in Wales. This enabled an option for electronic response or a more anonymous hard copy format. Heads of Internal Audit from eight authorities participated in the survey, along with four Audit Committee chairpersons. In addition, a focus group meeting with 18 out of the 22 Heads of Internal Audit provided a source of data linked to issues identified within the questionnaire. As the researcher was facilitator of a seminar on the topic organised by CIPFA North Wales and North West Regional Committee, it provided the opportunity to obtain the informal views of the participants at the seminar.

As the participants in this survey were entirely contained within the Welsh local government arena, the results were self contained. The development of a working relationship between internal audit and the audit committee in local government is going to be gradual, not

immediate. The survey highlighted the different stages or progress within each authority. A key recommendation of corporate governance is the establishment of an audit committee. Research output that identifies any stumbling blocks can provide information for research led teaching. It also acted as a benchmark for the various authorities at different stages of audit committee implementation. The WCAG used the feedback sessions as a forum that acted as an in house advisory group.

The survey results highlight the different levels of acceptance and recognition of the value of an audit committee within the Welsh local authorities. It also provided an insight into how the working partnership between both parties was developing and emerging. These research findings reflected those of Turley & Zaman (2004) in their review of audit committees within the private sector. They concluded that the evidence was limited and mixed when it came to assessing the value of the audit committee in corporate governance. The results of the survey, into audit committee and audit functions within local authorities in Wales, were initially fed back to the WCAG, prior to a conference paper and journal publication (Davies 2008a&b).

Interestingly in 2010 CIPFA published a paper on the role of the head of internal audit (HIA) in public service organisations. The paper identified the HIA as occupying a critical position within an organisation involved with enhancing good governance. In line with the objective of this research, the CIPFA paper confirms the role of internal audit and the value of attaining the right skills to facilitate this function:

*'Internal Audit sometimes act as consultants, providing assurance on current or proposed arrangements....But for consultancy to work well the HIA must ensure that staff carrying out the work have suitable skills'. (2010:8)*

Incorporating some practical and theoretical aspects of current issues affecting the public sector auditor within module teaching can aid the acquisition of some of these skills. More and more emphasis is placed on the changing role of the auditor and as a consequence the utilisation of current developments remains an important factor in the design and development of HE teaching material.

By keeping abreast of such developments, for example the changing emphasis on audit techniques for forensic accounting and auditing, recognising the changes in the corporate governance landscape and the expectations for greater management links the HE teaching experience remains exciting for both the student and the lecturer.

### 4.3 List of Publications and conference papers

#### Published papers

2001, 'The Changing Face of Internal Audit in Local Government - a survey on the views of Welsh Local Government Internal Auditors', *The Journal of Finance and Management in Public Services*, 1(1), pp.77 -96,

2002, 'Auditing The Third Way: A Review of the Developing Role of Public Sector Audit and Inspection', *The Journal of Finance and Management in Public Services*, 2(2), pp.15-26. (co author L. James)

2009, 'Effective working relationships between Audit Committees and Internal Audit, - the cornerstone of corporate governance in local authorities, a Welsh perspective', *The Journal of Management & Governance*, 13(1-2), pp.41-73, [on line] Available at: <http://www.springer.com>

#### Conference papers

1998, 'How do Housing Associations Measure up in the Area of Corporate Governance?', *Proceedings of the Mid West DSI Conference*, Lincoln, Nebraska, USA. pp. 132-134, (co author E. Shellard)

1998, 'Local Government Reorganisation in Wales - A Missed Opportunity for Audit Committees', *Proceedings of the Mid West DSI Conference*, Lincoln, Nebraska, USA, (co author L. James)

1999, 'Effective Audit Committees – The Key to reflective Corporate Governance in the U.K. Public Sector – A window on Wales', *Proceedings of the WDSI 28<sup>th</sup> International Conference*, Mexico. pp.93-95. (co author L. James)

2007, 'Audit Committees & Internal Audit - is it a marriage of convenience or a working relationship?', *Proceedings of 5th European Academic Conference on Internal Audit and Corporate Governance*, Pisa, Italy.

#### Feedback reports and training sessions

2005, 'A working relationship between internal audit and the audit committee', *presentation to at the Welsh Chief Auditor's Group meeting*, Llandrindodwells, Wales.

2006, 'Capitalising on Audit Committees', *North West & North Wales CIPFA Regional Audit Group (Weekend School)*, Chester. England.



#### 4.4 Contribution to Knowledge

In line with the overall objective of this research namely:

*The objective of the research was to critique how developments within the auditing profession were incorporated into Higher Education (HE) teaching.*

This third theme looked at the developing role of the public sector auditor in audit assurance and corporate governance. The changes in the role of internal audit as a result of increased public expectations on best use of public resources provided research opportunities to establish the driving forces, and identify the response of audit in these changing times. The contribution to knowledge here has a number of facets. Initially the findings were utilised as part of the teaching material for undergraduate and postgraduate modules on the BA (Hons) Accounting and Finance degree and the MSc Accounting programmes, for modules entitled Issues in Auditing, Audit and Accountability, and Corporate Governance respectively. The findings from the research provided material that generated debate, while the research approach was an example of how to compile and construct a questionnaire. Both the findings, and approach to research were used as examples for students undertaking their MSc Master's accounting research module. This involved tuition in the application of research techniques instruction and guidance on the compilation of questionnaires, their analysis and how to approach the task of critical review. Journal papers and conference proceedings were a direct result of these research activities. In addition to theses academic outputs the research led to other related activities such as membership of Further Education and Housing Association Board of governors. In keeping with the research area, chairing the Audit Committees seemed an obvious route to pursue. This resulted in a two way benefit in that the governing bodies of both organisations benefited from the background research, while the researcher also capitalised on the experience of Audit Committee membership.

Prior to undertaking any research, the researcher may have some perceived expectations as to the reasons and possible outcomes of the research. However, in this instance, it proved

interesting to identify the differences that existed in terms of the changes and changed approach to audit within the same sector. CIPFA guidelines and technical processes existed but circumstances, for example within each Welsh local authority, indicated that the changing face of internal audit was evolving at different rates and directions. Developments in processes and procedures were pertinent to the changing face of internal audit. Techniques of data collection, and therefore its audit and analysis, rendered the need for the auditor to develop new approaches to auditing. This represented a move from the *traditional approach* of vouching and verifying auditing, to a *systems based audit approach* where the emphasis is on compliance and substantive auditing, to the *modern audit approach* of focusing on risk as the focus of the audit. This last approach is often referred to as the *risk based approach* to auditing in line with the emphasis that is placed on concentrating audit activity in the areas of high risk.

The initial research in 1996 on the introduction of audit committees in the public sector, yielded 58 responses out of 90 distributed (64%); the variation in the nature of the responses provided the basis for comparison and analysis. Interestingly, out of the 15 responses received from the newly established unitary authorities (22 in total), only 2 had formed an audit committee. The survey results indicated a consensus on the main benefits arising from the operation of an audit committee:

- Greater assurance that audit recommendations are implemented and a focal point for both internal and external auditing.
- A clearer understanding of the cost effectiveness of management information.
- More defined responsibility for compliance with the Cadbury Code (1992) on corporate governance.

The outcome of the research into audit committees and internal audit within Housing Associations cited the main disadvantages being in relation to the increased bureaucracy that the audit committee might generate. Interestingly they commented on how only a small proportion of the Board of Management were made aware of full audit reports produced by internal and external auditors. The findings of this research were presented at a conference (Davies and James 1998).

The changing face of internal audit research (Davies 2001) provided a number of answers that confirmed the impact of the corporate governance codes on the developing role of internal audit. The response to the statement that ‘Auditors could be used to a greater extent as advisors and assurance providers’, gave a resoundingly positive reply where auditors felt they were not utilised to their fullest capacity as advisers and assurance providers. Both staff and audit managers surveyed agreed that there was a need for more staff training and, in a similar vein, more consultancy training was required. This means that the client (management) expectations and requirements are taken on board. The merits of undertaking consultancy training can assist the audit function in increasing its profile by offering a valuable service in addition to the services currently provided. The value-added role of the audit is reaffirmed by the recognition that the audit of today and tomorrow is changing to meet user demand.

In terms of the results on the working relationship between the audit committee and internal audit, the output identified a need for increased knowledge and understanding of the audit and accounting aspects of the authority. An acknowledgement that an increased understanding of auditing and accounting matters helps the audit committee to perform more effectively was not unexpected. What was disturbing was the response from two authorities who indicated that effectiveness had not increased. This raises the question as to whether the audit committees are ineffective due to a lack of understanding by its members, or whether the members are unwilling to increase their understanding of audit and accounting matters. There was a consensus that an acknowledgement of the procedures for assessing performance is essential if the audit committee is to work effectively. Another area of agreement was that communication lines between the audit committee members and the head of internal audit are paramount if the working relationship is to thrive. The findings acted as a conduit for discussion at the WCAG meetings where participants capitalised on the opportunity to exchange experiences and identify best practice where possible.

External representation of the research findings was facilitated by the WCAG as the involvement of this group provided an opportunity to disseminate the research findings into the professional world, outside that of academia. It also provided a level of recognition in

terms of acknowledging the value of the survey. The output acted as a facilitator for debate and exchange of information and ideas stemming from the different practices within each authority that participated in the survey. A positive and encouraging outcome of the research was when a group member used the outcome of the work to encourage his own authority to establish an audit committee. The contribution to knowledge from this perspective enabled the auditor to use the findings as a mechanism to convince the authority's cabinet to establish an audit committee. As a direct result of the feedback to WCAG an invitation to lead a seminar on audit developments was accepted for the North Wales and North West CIPFA region. A Welsh housing association, (Cadwyn Housing Association) used the research on audit committee and auditor working relationships for a training seminar for board members. The presentation contributed to the knowledge of the Board members in terms of the expected working practices of audit committees and internal audit.

Output from this research provided journal articles, conference papers and practitioner reports. The research activity also brought recognition from avenues other than academia. Involvement with the public sector, especially local government in Wales resulted in both the BBC and S4C (the Welsh Language television company) requesting expert opinions on issues affecting local government in Wales. The television and radio commentaries and opinions can therefore be regarded as a contribution to knowledge to the public.

As with the other two themes the objective of ultimately incorporating relevant and current developments within the audit profession within the HE teaching of auditing resulted in the design of cutting edge material whether as standalone modules or as key elements within existing modules. This resulted in a contribution to knowledge on the HE platform of undergraduate and postgraduate students and members of the academic community, both nationally and internationally. This third theme however was also pertinent to members of the profession and provided a contribution to knowledge that was utilized by management within the public sector.

## 5. Overall Contribution to Knowledge

### 5.1 An overview

The contribution to knowledge has two separate areas of outputs

:

- Disseminating the innovative curriculum / pedagogy design with the wider academic community, through conference papers and academic journals.
- Bringing findings regarding contemporary developments in the audit profession / role and responsibilities to the attention of the academic community as well as practitioners and managers.

Output from the research activities included conference papers, academic journal articles / papers, practitioner feedback reports and module development opportunities. In addition, the findings of the research have been incorporated into module handbooks, tutorial sessions as well as textbook chapters (Davies & Warman 1999, and Davies & Aston 2010).

Recipients of these outputs fall into three distinct categories:

- HE participants at undergraduate and post graduate
- Members of the profession, especially CIPFA members at conferences, regional meetings and training seminars
- Management, especially WCAG and Board members of a Housing Association and FE College

From the three themes a relationship has emerged. Theme 2, which researched the need for public sector accountability, links to theme 3, which looked at the role of the auditor in corporate governance in general (and in consequence in ensuring accountability). This in turn links both themes 2 and 3 to theme 1, the development of key auditing skills, (i.e. key

investigative competencies based on IT). This is particularly pertinent in the light of what is required in order to achieve theme 3 in the future, which is the successful integration of the auditor within the corporate governance function.

Innovative teaching approaches have resulted in successful funding applications from the BMAF community and internal recognition from the University in the form of module development funding, case study development and recognition for innovative approaches to module delivery and assessment in teaching. These resources have been for the use and application of different assessment processes, using case studies such as MS Office Excel as an audit tool outlined in theme 1.

Published journal papers have been used by CIPFA in its open learning material (OLM), while the technical department within CIPFA have utilised some of the research output to develop their own surveys in terms of the role of the internal auditor and corporate governance.

The publications fall into three categories: the use of IT in audit, performance measurement, and the changing face of internal audit in the public sector (including audit involvement with the audit committee). The objective of identifying the changing skills requirement, knowledge base and responsibilities of the audit function within the public sector, with an emphasis on local government, is obviously an ongoing project. There is an emphasis and recognition that auditor training and education need to reflect current issues and developments within the profession. The research output to date attempts to identify how the auditor has responded to the requirement of greater accountability and better governance in terms of performance measurement and audit committee relationships with the internal audit function. The various research outputs have all provided a basis for developing material for teaching in the vein of research led teaching and it has also acted as an invaluable source of material for the publication of a textbook on auditing (Davies and Aston 2010).

A consultancy project, that was undertaken for the Financial Reporting Council's (FRC) Professional Oversight Board (POB) on a review of the auditor training undertaken by the professional accountancy bodies, reflected the need to ensure that auditor training and

education reflects what exists within the work place. The training of auditors is an ongoing issue, even after the completion of the consultancy project, as the research findings provide a wealth of data that can be further utilised for the benefit of the academic and professional community.

### **5.1.1 Recognition and support for the work undertaken**

External and internal recognition for the work completed has come from:

- Successful grants and bids from BMAF, and from within the University of Glamorgan (CELT and CELL).
- Invitations to give a keynote address, deliver a presentation to professional body regional committees, working groups and seminars (Asia Business Forum, CIPFA regional groups and WCAG).
- Research fellow appointment by Grant Thornton

Due to the recognition and support provided, along with the achievement of the original objectives, research and consultancy opportunities produced material on auditor training and corporate governance. Two areas are currently being undertaken. Firstly, the utilisation of output data from the research into auditor training for the POB is ongoing. The intention is to further analyse the data in terms of the role of mentoring and to disseminate the findings to the wider academic community. Secondly, the research into the working relationship between audit committees and internal audit has gone full circle from the original work undertaken in 1996 by returning to the governance within Housing Associations. This work entails the adaptation of the questionnaire distributed within the Welsh local government bodies to assess the development of corporate governance and especially that of the audit committees within Housing Associations. This is further outlined in 5.3.1 (Current research and future developments) on page 91.

In terms of an indicator of overall success, the development of the various teaching materials has contributed to the positive recognition of the accounting programmes at the University of Glamorgan. This has been reflected not only in student feedback within the University's annual monitoring process, but externally where the accounting programme subject area achieved above average National Student Survey (NSS) scores in the subject area for 2008/9, 2009/10 and 2010/11 academic years.

In support of the overall contribution to knowledge the following section provides details of outputs that have used the publication from the research within their body work as citations.



## 5.2 Citations

As indicated below, papers from each of the three themes have attracted citations. Each paper is identified and followed by the citation as extracted from the electronic source.

### 5.2.1 A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool.

The application of research funding within teaching proved effective in terms of the time taken to develop a bespoke IT audit module using spreadsheets and developing appropriate datasets.

#### Using a computerised case study to teach computer auditing: the reasons, the approach and the student response

M **Davies** - Managerial Auditing Journal, 2000 - emeraldinsight.com

The rapid changes during the last ten years in computerised accounting systems have resulted in the need for accounting graduates to display a level of understanding and application of accounting software both in accounting and auditing. Undergraduates need to be prepared for the ...

Cited by 6 - Related articles - BL Direct - All 4 versions

#### The benefit of introducing audit software into curricula for computer auditing students: a student perspective from the University of Pretoria

**[PDF]** from up.ac.za GP Coetzee... - South African Journal of Higher Education, 2003 - up.ac.za

The use of computers in the learning process is a well-researched area. The introduction of computers and related audit software in the auditing field has had a major influence on the auditing process. Very little research has been done on the inclusion of computer audit ...

Cited by 2 - Related articles - All 8 versions

#### An information systems auditor's profile

**[PDF]** from csir.co.za M Carroll, A Van Der Merwe... - 2009 - researchspace.csir.co.za

The increasing dependence upon Information systems in the last few decades by businesses has resulted in concerns regarding auditing. IS auditing has changed from auditing "around the computer" to auditing through and with the computer. However, technology is ...

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#### Integrating the teaching of introductory management accounting and information technology: a case study

**[PDF]** from glam.ac.uk A Lane... - Journal of Applied Research in Higher ..., 2009 - emeraldinsight.com

THE USE of case studies in the teaching of business-related subjects has a long history; Hoskin (1998) traces its roots back to Harvard Law School in the late nineteenth century. Case studies have also been used extensively in the teaching of medicine, and other disciplines where ...

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### Teaching Accounting to Learners with Diverse Intelligence

**[PDF]** from [ied.edu.hk](http://ied.edu.hk) CF Chang - [papers.ssrn.com](http://papers.ssrn.com)

Abstract: This paper aims to discuss the practicality of several unconventional pedagogies recommended by researchers for the accounting curriculum, in response to the challenge of student diversity and learning ability as advocated by Howard Gardner in his Multiple Intelligence (MI) ...

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### The Development of Trainee Auditors' Skills in Tertiary Education

CV Helliard, EA Monk... - International Journal of ..., 2009 - Wiley Online Library

This research examines the skills that practitioners, academics and students think are important for trainee auditors to possess for a successful auditing career. The research is based on the educational theories of experiential learning and information-processing. These theories ...

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### **[PDF]** Audit Decision Making: Action Research, Pedagogy and Student Engagement

**[PDF]** from [usyd.edu.au](http://usyd.edu.au) KA Van Peurse - [apira2010.econ.usyd.edu.au](http://apira2010.econ.usyd.edu.au)

The purpose of this study is to evaluate that learned from the process of developing and testing an audit computerised learning package for the classroom. The contribution is in the knowledge acquired about what engages students in computerised programs and exercises about ...

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## **5.2.2 Public Sector accountability: the importance of performance measurement and value for money.**

The recognition of the research activity with a sponsorship from Grant Thornton as research fellow provided funding to publish and present papers on an international platform.

**[CITATION]** The value of performance measurement in the United Kingdom

M Davies, E Shellard - Government ..., 1997 - ASSOCIATION OF GOVERNMENT ...

[Cited by 8](#) - [Related articles](#) - [BL Direct](#)

### Using Government Performance Management Data to Identify New Business Opportunities: Examples from Government Services Outsourcing in the United States

LL Martin... - International Review of Administrative ..., 2004 - [ras.sagepub.com](http://ras.sagepub.com)

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**关键词: 政府绩效评估 功能**

陈天祥 - 中山大学学报 (社会科学版), 2005 - scholar.ilib.cn

在过去的20多年时间里,在新公共管理的背景下,

西方一些国家掀起了政府绩效评估改革.

它在以下几方面都发挥了积极的作用:一是在经济功能方面 ...

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**5.2.3 The developing role of the public sector auditor in corporate governance.**

This is an ongoing programme in that the public sector auditor is continually developing, as the expectations of the public and the importance of sound governance impact on the role of audit.

**[PDF] The Changing Face of Internal Audit in Local Government**

M Davies - Journal of Finance & Management in Public Services, 2001 - cipfa.org.uk

... Marlene Davies, Business School, University of Glamorgan ... Telephone: 01443 480 480

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L James, M **Davies** - cipfa.org.uk

... National Assembly for Wales **Marlene Davies** University of Glamorgan Business School ...

Volume 2 Number 2 Lisa James & **Marlene Davies** insert 10/9/04 8:59 am Page 16 ...

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**Effective working relationships between audit committees and internal audit—the cornerstone of corporate governance in local authorities, a Welsh perspective**

M **Davies** - Journal of Management and Governance, 2009 - Springer

Abstract This research looks at the working relationship between audit committees and the internal audit function within Welsh local government. The focus is primarily on the working relationship from the perspective of the head of internal audit, also known as the Chief Audit Executive ...

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**[PDF] The correlation between perceived internal audit quality and defined corporate governance soundness**

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This paper investigated whether a correlation exists between the perceived quality of an internal audit function and the soundness of its company's corporate governance structure. Compliance with ten disclosure requirements of the King II report was used to determine a corporate ...

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**[PDF] Audit committee responsibilities vis-à-vis internal audit: how well do Top 40 FTSE/JSE-listed companies shape up?**

**[PDF]** from [meditari.org.za](#) B Marx... - Meditari Accountancy Research, 2010 - meditari.org.za

Abstract Effectively functioning audit committees have proven to fulfil a vital role in strengthening the role of internal audit. This article presents the results of a literature review that pinpoints six responsibilities that audit committees should perform in relation to internal audit. These ...

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### **5.3. Summary**

Preparing this overview has been a demanding as well as a learning experience. It has provided an opportunity to reflect on the research undertaken and how the output has played an important role in guiding the design and delivery of auditing and other related modules. The intertwining of practical auditing, theory and current developments has brought together academia and the profession on a different platform. Applied techniques that bring to life theory have helped the students in their learning. The integration of current developments into the curriculum has also ensured that material retains its buoyancy and uniqueness which ultimately make it more interesting for both students and lecturer. The recognition that changes in audit culture and working methods provided the litmus paper for igniting the pathway towards forensic accounting and auditing. On the wide field research activities brought academia and management together in a successful working relationship.

This is not an end but a beginning; once the wheel is in motion it is difficult to stop the momentum. More research will evolve as a consequence of new awards such as the BA (Hons) Forensic Accounting, BSc Finance and MSc Forensic Audit and Accounting, where fraud prevention is as relevant as its detection. These areas provide new opportunities to develop new teaching material that will hopefully enthuse and enlighten future students of auditing. The resulting programmes and specific modules will provide a platform from which they will be equipped with insights into the world of auditing.

#### **5.3.1 Current research**

There are two main areas of where research activities are currently focused, (as outlined on page 84).

The consultancy work for the POB resulted in a substantial amount of data. Some of the data collected was not fully utilised and analysed for inclusion in the final report to the POB. As an ongoing research activity, the survey team have decided to revisit the material in an effort to apply the findings on a more general platform. The current research activity, (which is a joint

programme of work with the original team commissioned by the POB), is looking to inform the academic community about the value and perceptions of trainee auditors on the value of and expectations from work placed mentors. The current trend towards increasing the work based learning and the introduction of employability skills within the HE environment will benefit from this output. By recognising some of the issues the intention within the University of Glamorgan is to build upon the experiences of auditing trainees and hopefully apply good practices or avoid some poor working practices, when it considers the application of work based learning practices within its accounting degrees. Hopefully, the HE community and practitioners will also benefit from the research output.

The second area of research is that of revisiting the working relationship between audit committees and internal audit functions (Davies (2009)). However this revisit will focus on the working relationship between internal audit and audit committees within the Social Housing Sector, looking at the practice within the Welsh Housing Associations. Work has already commenced in terms of building links with those with overall responsibility for Social housing in Wales, namely Community Cymru and the Welsh Government. Feedback on the original questionnaire used for Welsh local government (revised for Housing Associations) has already been received along with provision for the distribution of the questionnaire with the support of Community Cymru. Unlike the original questionnaire where the collection and analysis of the responses from the participants was undertaken manually, the intention on this occasion is to employ a company to undertake the survey electronically using a similar operation to Lund Research when the POB consultancy work was undertaken. This will enable a quicker analysis of the data which can be imported into the final output report and academic paper. The involvement of Community Cymru in supporting the research will mean that the final findings will be made available to them which will add to the value of the research in terms of contribution to knowledge within the wider community and management. As with previous research work there will be an intention to build the findings into HE teaching. One area that falls neatly into place is the comparison of working practices which the post graduate students can review as part of their current issues in auditing module. Finally in terms of this working relationship between audit committees and internal audit, there is the possibility to undertake a

similar exercise in England for comparison purposes, where the volume of potential data will inevitably be greater.

### **5.3.2 Future developments**

Opportunities beckon in terms of international links between Glamorgan and partner institutions in Hong Kong and mainland China. The establishment of international partnerships, between the University of Glamorgan and academic institutions in China, has opened doors for collaborative research in the areas of audit and governance. These are two areas that are currently at the forefront of Chinese business. This cross cultural opportunity will identify the different approaches in business practice, especially in audit and governance. An increasing number of students from Asia specifically interested in corporate governance codes of best practice have already commenced their master's dissertations on this subject area. Initially the contribution from these students will support the acquisition of a greater understanding of working practices in China that will supplement academic research. This will also provide a more effective dissertation supervision support mechanism for the students.

There is no doubt that the experience gained during the past 15 years in undertaking academic research will continue to inform and enhance future research. The approach to research has evolved and improved, that in itself has been a learning curve. The completion of this overview is certainly not the end as the journey is just beginning.



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## 7. List of Total Publications, conference proceedings and other works

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### **7.3. Conference Contributions: Refereed and published in conference proceedings**

1997, 'The Use of Excel in providing Business Assurance', *CALECO 9<sup>th</sup> Annual Conference*, Bristol.

1998, 'The use of I.T. in Teaching Computer Accounting – the students' response', *Selected Proceedings of the 9<sup>th</sup> Annual CTI Accounting Finance and Management Conference*, York, pp. 65-69.

1998, 'Hands on to hands off – the lessons learnt in the delivery and teaching of computer audit', *CALECO 10<sup>th</sup> Annual International Conference*, Bristol.

1998, 'How do Housing Associations Measure up in the Area of Corporate Governance', *Proceedings of the Mid West DSI Conference*, Lincoln, Nebraska, USA. pp. 132- 134. (co-author E.Shellard).

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1999, 'The use of a computerised Case Study for the teaching of a computer audit module', *Proceedings of the DSI 5<sup>th</sup> International Conference*, Athens, Greece, pp. 244-246.



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2002, 'Performance Measurement in the UK Public Sector', *Proceedings of the Asia Business Forum Conference Key Performance Indicators for the Public Sector*, Kuala Lumpur Malaysia.

2003, 'Performance Measurement in the UK Public Sector: understanding performance indicators', *ACIPFAL 25<sup>th</sup> annual conference*, Cardiff, 25-26<sup>th</sup> June

2003, 'An overview of the use of performance indicators as a method of displaying accountability in the UK public sector', *Proceedings of The European Applied Business Research Conference*, Venice Italy.

2007, 'Audit Committees & Internal Audit - is it a marriage of convenience or a working relationship?', *Proceedings of 5th European Academic Conference on Internal Audit and Corporate Governance*, Pisa Italy.

2009, 'A review of Internal Audit functions of nine Captive Automotive Financing Companies within the UK, Russia and Italy'. *7th European Academic Conference on Internal Audit and Corporate Governance*, CASS, London. (co author Lena Reich)

2009, 'Practical training for auditors: the views of student', *National Auditing Conference*, Exeter, UK. (co authors N. Marriott, J. G. Evans & B. Telford,

2009, 'Playing CAAT and mouse in the tutorial class', *British Accounting Association Education Special Interest Group Annual Conference*, Essex England. (co author Theo Tryfonas)

2009, 'Practical training for auditors: the views of students', *British Accounting Association Education Special Interest Group Annual Conference*, Essex England. (co authors N. Marriott, B. Telford, J. G. Evans)

#### **7.4. Conference contributions: other - papers accepted without refereed acceptance**

1998, 'Local Government Reorganisation in Wales', *British Accounting Association Annual S. West Audit Group Conference*, Bournemouth, (co author L. James)

2001, 'Using case studies to deliver audit modules on undergraduate accounting programmes, the Glamorgan experience', *British Accounting Association Special Interest Group Accounting Education Conference*, University of Glamorgan.

2002, 'Incorporating work based experience into final year modules- audit and taxation', *Asset European Conference*, Cambridge England. (co author H. D. Williams)

2004, 'Good Practice in Assessment, *The Higher Education Academy conference*, University of Glamorgan.

2001, 'The Changing Face of Internal Audit in Local Government, a survey on the views of Welsh Local Government Internal Auditors' *ACIPFAL 23<sup>rd</sup> Annual Conference* Chester. 24-25<sup>th</sup> June

2003, 'Operational issues relating to an audit committee at a Further Education college and Housing Association', *BAA SWAG conference*, University of Glamorgan.

2006, 'Audit Committees & Internal Audit - is it a marriage of convenience or a working relationship?', *ACIPFAL 28<sup>th</sup> Annual Conference, working paper*, York, 28-29<sup>th</sup> June

2009, 'Computer-Assisted Audit Tools (CAATs) as a teaching tool for audit and IT modules', Poster presentation, *BMAF conference*, Cardiff Wales. ( co author Theo Tryfonas)

## **7.5. Reports and papers presentations to professional bodies and others**

2001a, 'The Changing Face of Internal Audit in Local Government - a survey on the views of Welsh Local Government Internal Auditors', *presentation to the Welsh Chief Auditor's Group*, Llandrindodwells, Powys Wales.

2001b, 'The Changing Face of Internal Audit in Local Government - a survey on the views of Welsh Local Government Internal Auditors', *presentation to CIPFA North West & North Wales Region Conference*, University of Manchester, Jodrell Bank Observatory Cheshire.

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2005, 'The developing auditor', *Training day for auditors. Local government South Wales Audit Group*, Newport, S Wales.

2005, 'A working relationship between internal audit and the audit committee', *presentation to the Welsh Chief Auditor's Group*, Llandrindodwells, Powys, Wales.

2006, 'Capitalising on Audit Committees', *North West & North Wales CIPFA Regional Audit Group (Weekend School)*, Chester.

2006, 'Skills and educational needs of contemporary auditors' *1<sup>st</sup> annual Workshop on Digital Forensics and incident Analysis*. Faculty of Advanced Technology, Glamorgan Business Centre

2007, 'The Impact of Sarbanes Oxley on Corporate Governance – compliance in theory & in practice', *Chartered Institute of Purchasing and Supply & SWIMM event Glamorgan Business School*, (joint presentation with Matthew Nash, General Dynamics).

2007, 'Fraud, IT and the Auditor' *Intensive Programme on Information and Communication Security (IPICS)*, Faculty of Advanced Technology, University of Glamorgan.

2008, 'The training of auditors within the professional accountancy bodies within the UK and Ireland', *Consultancy Report to Professional Oversight Board (POB) of Financial Reporting Council (FRC)*, London. (Details included within the POB annual report to the Secretary of State 2008). (co authors: N. Marriott, B. Telford & J.G. Evans)

2009, Training of Auditors within the professional accountancy bodies within the UK and Ireland, Feedback reports to accountancy bodies (ACCA, ICEAW, ICAI) re: report to POB, FRC, London . (co authors: N. Marriott, B. Telford & J.G. Evans)

## **7.6 Journal papers submitted and pending review**

A review of Internal Audit functions of nine Captive Automotive Financing Companies within the UK, Russia and Italy. (co author with Lena Reich). July 2011 at the amendments stage post peer review.

## **7.7. Open learning material**

2004a, CIPFA, Open Learning Material (OLM) and Diploma stage, module: *Audit and Assurance*, Pearson Education, (journal article inclusion (Davies 2003))

2004b, CIPFA, Open Learning Material (OLM) and Diploma stage, module: *Strategic Management*, Pearson Education, (journal article inclusion (Davies 2003))

2005, CIPFA, Open Learning Material (OLM), Diploma stage, module: *Financial and Performance Reporting*, Regional variation Appendix (Wales Appendix), Pearson Education

## **7.8. External Research Funding**

1998, Grant Thornton research fellow.

2007, Higher Education Academy sub group, BMAF (Business Management Accounting and Finance) Teaching and Learning Grant for developing datasets for use with Audit Command Language (ACL) to incorporate into the audit and computer forensics teaching.

### **7.9. Internal Research funding (with output reports)**

1996, 'Using a Case Study to Teach Computer Auditing' CELL (Centre for Lifelong Learning) research report, University of Glamorgan.

1999, 'System's Based Audit, Lisa's Lovelies Case Study', CELL (Centre for Lifelong Learning) research report, University of Glamorgan.

1999, 'Teaching difficult Subjects', CELL (Centre for Lifelong Learning) research report, University of Glamorgan.

### **7.10 Internal recognition for innovation in assessment**

2010, Centre for Learning and Teaching (CELT), award for innovative assessment on the module Cases in Auditing (final year module on the BA (Hons) International Accounting and BA (Hons) Forensic Accounting programmes).

## **8. Summary of Submitted Publications**

### **8.1 Theme 1 – A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool.**

#### **8.1.1 List of publications**

Davies, M., (1997), 'The Use of Excel as an Audit Tool', *CTI Account Journal*, 9(2), pp.24 – 29.

Davies, M., (1998), 'The use of I.T. in Teaching Computer Accounting – the students' response', *Selected Proceedings of the 9<sup>th</sup> Annual CTI Accounting Finance and Management Conference*, York, pp. 65-69.

Davies, M., (1999), 'Internal controls in a computerised system', In: Davies, J. R. & Warman, A., '*Accounting: a systems approach*', London, International Thomson Business Press, pp.291–304. (Chapter 18), ISBN 1-86152-037-9

Davies, M., (2000), 'Using a computerised case study to teach computer auditing: the reasons, the approach and the students' response', *Managerial Auditing Journal*, 15(4&5) pp.247-252.

#### **8.1.2 Statement of Contribution**

The author has played an active and significant part in all aspects of the above joint research.

Confirmation by Alison Warman, see below -

### 8.1.3 Confirmation of Contribution

Davies M (1999) *Chapter 18* within Davies J., Warman A., (1999) *Accounting A Systems Approach* Thomson Business Press Berkshire House Holborn. ISBN 1-86152-037-9  
Chapter 18 p291-304

This is to confirm that the statement of contribution and percentage attributed (Chapter 18) to the above is a true and accurate reflection of Marlene Davies's input to the research undertaken and textbook published.

Signed

..... *Alison Warman* .....

Date: ..... *25/6/09* .....

Alison Warman,  
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## **8.2 Theme 2 – Public Sector accountability: the relevance of performance measurement and value for money**

### **8.2.1 List of Publications**

Davies, M. & Shellard, E., (1997), 'Performance Measurement in the United Kingdom', *The Government Accountants Journal US*, 46, (3), pp. 48 -51. (50%)

Davies, M. & Warman, A., (1998), 'Auditing Performance Indicators - A Meteorological Office Case Study', *Journal of Cost Management US*, 12(1), pp. 43 – 48. (60%)

Davies, M., (2003), 'Performance Measurement in the UK Public Sector: understanding performance indicators', *The Journal of Finance and Management in Public Services*. 3(2), pp. 31-48.

### **8.2.2 Statement of Contribution**

The author has played an active and significant part in all aspects of the above joint research.

Confirmations by Elaine Shellard and Alison Warman, see below -

### 8.2.3 Confirmation of Contribution

#### 8.2.3.1 Elaine Shellard

Davies, M., Shellard, E., (1997), *Performance Measurement in the United Kingdom*, The Government Accountants Journal US, **46**, (3), pp. 48 -51. (50%)

This is to confirm that the statement of contribution and percentage attributed (50%) to the above is a true and accurate reflection of Marlene Davies's input to the research undertaken and paper published.

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**8.2.3 Confirmation of Contribution**

8.2.3.2 Alison Warman

Davies, M., Warman, A., (1998) *Auditing Performance Indicators - A Meteorological Office Case Study*, Journal of Cost Management U.S. **12**, (1), pp. 43 – 48. (60%)

This is to confirm that the statement of contribution and percentage attributed (60%) to the above is a true and accurate reflection of Marlene Davies's input to the research undertaken and paper published.

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### **8.3 Theme 3: The developing role of the internal auditor in corporate governance.**

#### **8.3.1 List of Publications**

Davies, M., (2001), 'The Changing Face of Internal Audit in Local Government - a survey on the views of Welsh Local Government Internal Auditors', *The Journal of Finance and Management in Public Services*, 1(1), pp.77 -96.

Davies, M. & James, L., (2002), 'Auditing The Third Way: A Review of the Developing Role of Public Sector Audit and Inspection', *The Journal of Finance and Management in Public Services*, 2(2), pp. 15 – 26. (40%)

Davies, M., (2009), 'Effective working relationships between Audit Committees and Internal Audit, - the cornerstone of corporate governance in local authorities, a Welsh perspective'. *The Journal of Governance and Management*, 13(1/2), pp,41-73, [on line] Available at: <http://www.springer.com>

#### **8.3.2 Statement of Contribution**

The author has played an active and significant part in all aspects of the above joint research.

Confirmation by Lisa James, see below -

**8.2.3 Confirmation of Contribution**

Davies, M., James, L., (2002) *Auditing The Third Way: A Review of the Developing Role of Public Sector Audit and Inspection*, The Journal of Finance and Management in Public Services, 2, (2), pp. 15 – 26. (40%)

This is to confirm that the statement of contribution and percentage attributed (40%) to the above is a true and accurate reflection of Marlene Davies's input to the research.

Signed 

.....  
Date: .....9 July, 2009.....

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Tel: 0292059912

## **9. Complete papers submitted in support of this work**

The following pages include all the submitted works applicable for this PhD by publication. They appear in page order based on the publication within the relevant journals/book/conference papers.

They are presented according to the order presented within each of the 3 themes.

**Theme 1 – A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool.**

**Paper 1**

Davies, M., (1997), 'The Use of Excel as an Audit Tool, *CTI Account Journal*, 9, (2), pp.24 – 29.

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Summer 1997



Accounting Finance and Management

## The Use of Excel as an Audit Tool. J & M Keltree plc.©

Marlene Davies  
School of Accounting and Mathematics University of Glamorgan.

ALP's (Accounting Ledger Packages) have been in existence for quite a long time as means of introducing undergraduate students to computerised accounting systems. However when it comes to introducing students to the audit of computerised accounting systems or the use of computers in auditing, there is no real equivalent. In order for students to appreciate the complexities of undertaking an audit of a large volume of computerised data there is lack of accessible data. This is because 'real life' companies do not wish their data used and manipulated by strangers, while there is the important issue of the Data Protection Act to consider.

It is not just the concept of data audit that has to be considered, but the security and control issues appertaining to computerised accounting systems. The text book approach to teaching the theory cannot really compete with providing students with a case study that brings to life the security and control problems associated with computerised systems. Students learn more by discovering for themselves rather than being told the right and wrong solutions from a text. A simulated situation set within a business environment gives the student an insight into business activity that they may not have previously encountered.

Faced with the task of teaching an audit module that required the continuation of the accounting system approach, it became evident that there was a shortage of teaching material in terms of hands on approach to computer audit techniques. The intention in terms of developing the programme of study through from the introduction of computerised accounting systems to the audit of computerised systems, was to provide the student with an understanding of the complexities of accounting and auditing with the use of the computer.

Prior to creating a set of data for teaching purposes, a survey of other Universities' teaching approach to computer audit was undertaken, this was to establish;

- a. the existence of current teaching methods that used a hands on approach
- b. the use of specific computer software

- c. the amount of syllabus time allocated to computer audit if not an identifiable separate module.

The outcome of the survey revealed that despite the fact that accounting systems audit is very much the essence of audit work, very little time is set aside to give students the opportunity to experience a hands-on audit of computerised accounting data. This is not surprising as the availability of source data is difficult to acquire. In addition, the use of specialist audit software packages requires a large volume of transactions for downloading into the program in order for them to operate effectively. The existence of appropriate data for downloading is not always a viable option for teaching institutions.

The solution therefore had to rest with creating a selection of data coupled with a case study that would be incorporated into the audit teaching programme as a series of tutorial tasks for the students.

The objective of the teaching programme is to introduce the students to the importance of;

- a. identifying audit risk associated with computerised accounting systems.
- b. taking into account the fact that the systems were computerised when planning the audit.
- c. devising a set of audit tests on the accounting system.
- d. identify the security and control objectives relating to the computerised accounting system.
- e. undertaking a series of activities and analytical review procedures on a set of data as though the data had been transferred onto a computerised audit software package.
- f. the qualities of a spreadsheet in introducing the student to the techniques of analysing large volumes of data to arrive at results that require further audit analysis and enquiry.

The aim therefore is to develop the student's analytical skills, inquisitiveness, probing ability and manipulation of data to a useful purpose.

The characteristics and properties of a spreadsheet such as Excel provides the following useful audit techniques: -

- a. arithmetical formulae.
- b. data sort.
- c. audit tools; precedents and dependants.
- d. auto filter.
- e. pivot tables and data mining.
- f. creation of graphs and charts.

By using Excel students appreciate how the computer can help in the audit activity. As nearly all accounting transactions involve the use of a computer within the business environment, there is a need for the auditor to be computer literate. The auditor also needs to be able to use the computer to its fullest extent. Auditors need to be able to review and examine financial information that is prepared from data stored and analysed on a computer in a logical and methodical manner. Whilst most students are capable of using the computer to arrive at different outcomes from base data, calculating and understanding the outcome is not always the same thing.

Specifically written and designed computer packages are all very well for the experienced auditors, however the trainee may not possess all the required skills to interpret the final outcome in terms of further testing and evidence accumulation.

This teaching approach therefore moves away from the old method of auditing around the computer to simulating the experience of auditing data downloaded into a format that enables audit testing and analysis. The principles of using CAAT's (despite not having commercial audit packages) can be taught through the hands on application of the spreadsheet.

The whole teaching programme revolves around a company that designs and produces giftware, J & M Keltree plc (see Appendix 1). A detailed case study coupled with a demonstration disk to bring the company to life with graphic illustration and narrative provides the core material. The payroll data is created on the Excel spreadsheet format for 100 employees (some current, some past employees). Each student has access to the demonstration disk and data disk via the network in the teaching department.

The development and creation of other source data in respect of purchase orders and payments, sales and receipting is the current project, and will provide a complete set of financial information for audit eventually. Once this set of data is complete

the programme of study will enable students to move onto MS Office Access to undertake a practical application of 'Relational Database'.

Based on the case study details the students will undertake a series of tasks that cover audit risk, planning, security and the control weaknesses associated with the accounting systems. These tasks can be completed without reference to the data disk. However, prior to using the data on disk, the students will work through a workbook outlining the properties of the spreadsheet to ensure familiarity with the auto filter, audit tool, etc., areas that perhaps they may not have encountered prior to using computer spreadsheets. The activities included in the workbook enable the student to progress at his or her own pace.

Examples of the students' tasks, included as Appendix 2, coupled with an extract from the workbook indicates how the properties of Excel are introduced to the student. Section six of the student tasks relate specifically to the data on the payroll. The tasks require the student to use the functions of the Excel spreadsheet to analyse and extract information useful for the audit. This means that tests such as checking the payroll against a staff list, confirming logical sequences of dates, reasonableness of amounts and age of personnel must be completed.

An extract from the source data that the students must test and a synopsis of the case study is also attached.

The case study forms the focal point of the whole module. The student activities' revolve around this one company. The audit findings and must be presented in either report format, working papers, or memorandums using Word. This enables the students to transfer selected data from Excel into Word and thereby illustrate some of their results in either graph or table formats if applicable.

The intention of this hands on teaching approach is to give the undergraduate student an opportunity to develop and possibly acquire additional computer literate, analytical, and audit skills.

Special thanks to June Edwards who provided the technical assistance on the Excel workbook.

This project was partially funded by the Educational Deveopment Unit at the University of Glamorgan.



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Alison Webb, An Introduction to file interrogation, *ACE Conference*, London 1994

Denise Gallagher, A Financial Accounting and Auditing Dataset for Teaching in higher Education, *Account* Vol. 8 No. 2 Summer 1996.

## Appendix 1

### Synopsis of the Case Study

#### J. and M. Keltree plc.©

A family owned company producing hand made crafts which has been purchased by an American company, Madhatter Inc.

The case study details are documented and illustrated in a booklet. This is supplemented with a presentation disk which gives a better picture of activities at the company. This is meant to give the student a feel for what is going on in terms of duties, responsibilities and system operation. Another disk provides the student with data in respect of the Payroll, the main area of the audit during this current visit.

The craft workshops make wall plaques, figures and resin cartoon characters, these are marketed to U.K. and U.S. markets.

Some financial figures, organisational structure and staffing levels are given to provide a more structured picture of the company activities.

The accounting system is computerised but there are a number of problems due to lack of defined duties and a haphazard approach to record keeping.

All systems have been computerised, i.e. sales and receipts; purchasing and payments; payroll and stores. However some manual records are kept mainly because of fear of system failure and lack of training given to the staff.

The responsibilities of individuals are described along with the operation of the current systems. The Financial Director is currently reviewing the potential benefits of introducing a new computerised accounting system, one that is tailored to the craft industry.

The payroll system is documented in some detail and it is this area that the auditor is going to concentrate upon. Tests will be undertaken on the

extracts of payroll data given on the disk, while the additional facts in respect of the payroll system provided in the case will form the basis of additional tests.

The student will be told that an audit is to be undertaken at J.& M. Keltree © and emphasis is to be placed on the payroll system.

## Appendix 2

### Student tasks

#### Introduction

The tasks set relate to J. and M. Keltree plc.©, the information given in the case study, on the presentation disk and data disk will enable the students to undertake the tasks required. Student tasks are designed to test their understanding of computerised systems. This entails students undertaking tests on the sample payroll data by following the instructions given in respect of Excel. Students will also have to consider the control and security implications relating to accounting records and transactions that are computerised. The objectives of the programme of work is to introduce the students to data interpretation and analysis with the aid of the computer which will eventually enable them to undertake tasks on relational databases as part of their audit and financial control activities.

It is not the intention of this programme of work to set all the tasks in one semester, the tasks have been designed in order to provide adequate syllabus coverage and student participation. This means that some of the tasks will be merely discussed in class while others will be set as group tasks and others that will require individual attention.

#### Tasks

##### 1. Audit planning and audit risk

- a. Identify the high risk areas in J. and M. Keltree plc.©.
- b. How will identifying high risk areas determine your audit approach and plan of work?
- c. What factors must the auditor consider when planning his audit other than the audit risk involved?
- d. How will the suspicion of fraud affect your work schedule?

##### 2. System design and development

- a. What approach should the auditor take

when asked to get involved with a system design and development? Your answer should consider both auditor and non-auditor involvement.

- b. Identify the initial factors that need to be considered prior to implementing a new computerised system in an organisation.

### 3. Current system evaluation

- a. Based on the information you already have, analyse the current computerised system and outline the weaknesses and problems that exist. Prepare your answer in the form of working papers
- b. From your working papers prepare a report for submission to management. Submit this report in an appropriate report format (you may devise your own report format or use one from the Microsoft Word Package)
- c. Your report has been written on the basis of the facts given to you. There may be issues which require further investigation. List a set of questions which you may want to ask in relation to the way any of the accounting systems operate.

### 4. Computer system controls

- a. What are the two categories of controls that are normally associated with computerised accounting systems?
- b. Detail the controls identified in part "a" of the question.
- c. Based on the controls detailed give examples of such controls within J. and M. Keltree. (you may sight examples of poor controls as well as good controls).

### 5. Payroll fraud

- a. Based on the information given to you about the suspected payroll fraud what will your approach be to this serious allegation by a member of the organisation.?
- b. In what way can IT be used to detect and prevent fraud occurring? Your answer should be theoretical at this stage and need not relate to J. and M. Keltree plc.
- c. What will your approach be towards the Financial Director now that an accusation of fraud has been made against him?
- d. Your audit manager has suggested that you interview some other members of staff in respect of this suspicion of fraud. What will be your approach, where will you undertake these interviews (if you decide to interview) and who will you interview?

### 6. Data Interrogation and Analysis

- a. By employing some of the techniques outlined in the work book , prepare a schedule of tests that you would undertake on the payroll data on disk. Do not undertake the tests at this stage merely outline the tests and indicate the objective behind the tests in terms of what you hope to determine from them. Remember to include 'Auto Filter' and 'Pivot Tables' in your data analysis.
- b. Undertake the tests outlined in 'a' on the selection of payroll data provided on the disk. Detail your results and provide hard copies of your results as well as saving the information on disk. Remember to indicate the Excel functions that you have employed.
- c. Explain the merits of data matching, provide examples of how data matching can give the auditor a source of information that may require further investigation.
- d. Draw conclusions from your test results and summarise them for inclusion in your report to management. Use tables, graphs and charts to illustrate your answers.
- e. Identify the course of action that you would need to follow in order to gather evidence to substantiate your findings on the payroll data.

### 7. Audit evidence

- a. What are the implications of gathering unlimited audit evidence?
- b. What are the merits of maintaining working papers?
- c. Give examples of the various working papers that an auditor will produce during the course of an audit.
- d. The use of spreadsheets, C.A.A.T's, specialist software and applications such as Microsoft Access all aid the analysis of 'Relational Databases'. Explain what the phrase 'Relational Databases' means and provide examples of the type of data that could be compared and interrogated.

### 8. C.A.A.T.'s

- a. Data mining refers to the technique of analysing and extracting information from large volumes of data. The introduction of computer software packages specifically designed to assist the auditor in his work has enabled the auditor to complete his work much quicker and in far more detail. Comment on the above statement, paying attention to the usefulness of computer

audit assisted packages and the possible problems that the use of computers can create for both the auditor and the client.

b. Describe the usefulness of using IDEA, (the commercial audit software package) that

will extract and analyse interactive data as a means of detecting and preventing fraud. Illustrate your answer with examples.

**J&M Keltree plc.©  
Management Board \* plus assistants**

*Chief Executive / Managing Director personal assistant	GWYN CHAMBERS RITA SPOSITO
*Finance Director accountant	JOSHUA MOFFAT LISA TOTTERDELL
*Marketing and production assistant	RICHARD DEBLING WENDY COLLIER
*Purchasing and transport assistant	MICHAEL ROBBY MICHAEL CARTER
*Personnel officer secretary	JENNY GODFREY LILIAN FREEZE

**J.&M. Keltree plc ©  
Staff numbers and cost centre codes**

Cost Centre	Name	Staff numbers
FF04	MANAGEMENT	10
GE00	ACCOUNTS	5
GM00	PACKAGING AND DELIVERY	5
CT00	WAREHOUSE	5
NP22	PAYROLL	5
CX00	CERAMICS WORKSHOP	15
ER05	WOOD WORKSHOP	15
SG06	RESIN WORKSHOP	14
GN03	SALESMEN	4
RF28	SALES SHOP	2
TOTAL NUMBER OF EMPLOYEES		80

**J & M Keltree plc. ©**  
**Staff list as per cost centre**

**Management**

Mr	Michael	Carter
Mr	Gwyn	Chambers
Ms	Wendy	Collier
Mr	Richard	Debling
Ms	Lillian	Freese
Ms	Jenny	Godfrey
Mr	Joshua	Moffatt
Mr	Michael	Robby
Ms	Rita	Sposito
Ms	Lisa	Totterdell

**Resin workshop**

Mrs	Mary	Churchill
Mrs	Diane	Coles
Mrs	Gina	Dando
Ms	Jennifer	Hart
Mr	Keith	James
Ms	Anne	Kimble
Mr	Tony	Lewis
Ms	Amy	Little
Mr	Kevin P	Pile
Ms	Carol	Powell
Mr	Edward H	Richards
Mrs	Gail	Richards
Mr	Kenneth	Smith
Mr	Kenneth	Sutton
Ms	Mary	Thomas

**Wood workshop**

Ms	Marjorie	Beames
Miss	Mona	Brown
Mr	John S	Brown
Ms	Jacqueline	Eddy
Miss	Judith C	Edwards
Ms	Katelyn	Evans
Mr	John A	Freese
Mr	David	French
Mr	John T	Gane
Miss	Gail	Hamber
Mr	Teddy	Harry
Mr	James	Hartland
Miss	Janet	Jones
Miss	Evelyn	McCaffery
Ms	Lizzie	Montieth
Miss	Elaine M	Page
Ms	Lucy P	Powell
Miss	June	Quaile
Mrs	Elizabeth	Taylor
Miss	Eileen	Thackery
Mr	Peter	Vowles
Mr	Joseph	Williams
Miss	Carol	Young

**Sales shop**

Ms	Susan	Clarke
Ms	Norma	Hughes

**Accounts department**

Mrs	Margaret	Baldwin
Mrs	Mellisa	Emsalm
Mrs	Mandy	Lockyer
Mrs	Mona	Wadeley
Mrs	Rosalind	Wind

**Sales team**

Miss	Yvonne	Emery
Mr	Andrew	Kent
Miss	Kathryn	Packam
Mr	Edward	Sellars
Miss	Joan	Smith

**Payroll section**

Mrs	Elaine D	Dunn
Mrs	Janette	George
Ms	Karen	Lowe
Mrs	Rachel	Ruddles
Mrs	Susan	Young

**Ceramics workshop**

Mr	Edward H	Baldwin
Mrs	Doris	Bowen
Mr	Bryn	Charlton
Mr	Arthur	Collier
Mr	Brian G	Crawford
Ms	Helen	Debling
Ms	Jennette	Emsalm
Ms	Angela J	Flood
Mr	Joseph	Hatch
Mr	Gordon	Lewis
Mr	George	Lindsay
Mr	Andreas	McCormie
Ms	Tandy	Minor
Ms	Jennifer	Morton
Mr	Brian C	Oates
Mr	Leonard	Oatley
Mr	Matthew	Prince
Mr	Mel	Robbins
Mr	Geoff	Shaw
Mr	Peter	Thompson

**Packaging and delivery**

Ms	Sally	James
Ms	Rachel	Jones
Ms	Megan	Moss
Ms	Terri	Norman
Ms	Alison	Snow

**Warehouse / Goods inwards**

Mr	Terence	Brown
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## **Theme 1 – A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool**

### **Paper 2**

Davies, M., (1998), 'The use of I.T. in Teaching Computer Accounting – the students' response', *Selected Proceedings of the 9<sup>th</sup> Annual CTI Accounting Finance and Management Conference*, York, pp. 65-69.



Accounting  
Finance  
Management

*Selected  
Proceedings*

*9th Annual*

*CTI-AFM*

*Conference*

*York  
April 1998*

## The use of IT in teaching computer auditing - the student's response.

Marlene Davies  
University of Glamorgan

### Introduction

The rapid changes during the last ten years in computerised accounting systems have resulted in the need for accounting graduates to display a level of understanding and application of accounting software both in accounting and auditing. Undergraduates need to be prepared for the twenty first century in terms of being able to understand the workings of the computer and the importance of using IT for information and managerial purposes. The University of Glamorgan has for the past fifteen years introduced an integrated systems approach to the teaching and delivery of accounting modules by using computer assisted learning and commercial accounting packages. In 1992 the Accounting and Finance degree was revalidated based on an integrated systems approach to the programme with a series of modules using the computer. These modules being,

Accounting Records	level 1
Business Information Technology	level 1
Company Reporting	level 1
Accounting Systems	level 2
Systems Based Audit	level 2
Computer Audit	level 3

The traditional theoretical accounting concepts are still taught but the emphasis is on providing a practical approach using case studies linked to computer software in order to improve student understanding, knowledge and application.

As the students progress from one level to the next they build upon what has preceded and further develop new skills such as auditing. Systems base audit and computer audit build upon the students understanding of integrated computerised accounting systems. It is the development of the computer audit module using the computer as a teaching medium, and specifically Excel as an audit tool that this paper concentrates upon.

### The Computer Audit module

Computer audit module is taught at level 3, and has as a prerequisite the systems based audit module taught at level 2. The systems based audit module concentrates on the control aspects of computerised accounting systems. Application, general and manual controls are integrated into a case study that requires the students to identify strengths, weaknesses and recommendations for improvements. The computer audit module develops the audit risk, fraud opportunities, and analytical review aspects of the practical audit of large volumes of data.

The traditional approach to the teaching of audit, based on the application of taught facts to scenarios of situations that require audit without the supporting data can be very frustrating for the student. This is especially so when they may not have the practical experience of the business environment. This is where great reliance is placed on the student's imagination and the tutor's ability to explain the issues faced by the auditor during an audit. The paperless office makes it more difficult to use a textbook based approach to a module that concentrates on the computerised accounting system audit. In an attempt to simulate a business situation for this module a series of demonstration disks were designed to provide a graphical picture of a business and its financial data. Personnel and organisation charts were created along with a database of information representing the payroll. All provided a backdrop from which the students could undertake an audit. The data was set up in Excel in order to enable the students to undertake data mining by

using the audit functions, data sort, auto filter, pivot tables, graphs and charts. All of this information forms the basis of a case study specifically designed for the computer audit module.

This module incorporated the computer as a source of information as well as a tool for both teaching and audit purposes. From the information supplied the students have to undertake specific tasks in the computer laboratories that compliment the lecture programme.

These tasks have to take into account the information relating to the case study.

- identifying audit risk,
- audit planning approach for computerised accounting systems audit,
- audit testing,
- security and control objectives,
- analytical review,
- interpretation of test results,
- creating working papers by utilising the computer as an audit tool
- reporting the findings to the appropriate level,
- use of spreadsheets in accounting and audit.

The objective is to develop the student's analytical skills, inquisitiveness, probing ability and data manipulation to a useful purpose. The principle rests on the old story of 'I see, I hear, I do and I understand'.

The choice of Excel needs to be explained here. It was chosen as a tool both for manipulation and to develop analytical skills, and had been used in previous modules to develop students' IT awareness. Specialist computer audit packages are all very well for the experienced auditor who is using company data, but the students needs to learn how to identify and interpret the results of the tests undertaken. The hands - on approach gives the undergraduate students an opportunity to develop and acquire additional computer literate, analytical and audit skills. For those students who do not feel comfortable using Excel there is a workbook provided which has been specifically written to complement the tasks that the students have to undertake. The workbook enables the students to work through the properties of Excel at their own pace prior to applying the audit tasks required.

### **The students' response**

The computer audit module has now been delivered to two cohorts of students. It seems appropriate therefore to consider the students' response to this audit module.

The objectives of the module are clear and easily identifiable,

- to expose the student to the importance of analytical review to the auditor in forming an opinion,
- to instil the importance of internal controls and dependency of some data on others,
- to provide a meaningful learning experience which is both valuable and stimulating.
- to utilise the hands- on approach to teaching in order to develop student computer literacy, audit and interrogation skills.

In order to establish whether these objectives were achieved, students were asked to complete a brief questionnaire, partly as part of the annual monitoring and review process and partly as a means of providing a base from which to further develop the module.

Appendix A details the questions asked along with the grade points for each answer.

The following table gives an indication of student satisfaction with the use of the computer, the case study and Excel in the delivery of the 'Computer Audit' module.

For 1996/97, 45 students completed the questionnaire, while 57 students replied to the questionnaire in 1997/98.



% very good + (grades 1&2)			
	1996/97	1997/98	
Question		%	%
1		40	47
2		42	49
3		44	35
4		58	49
5		51	28
6		49	37
7		51	47

% good + (grades 1,2 &3)			
	1996/97	1997/98	
Question		%	%
1		93	89
2		82	81
3		78	82
4		96	96
5		87	79
6		93	88
7		96	88

Not every student made specific comments in response to questions 7 & 8.

48% and 50% for 1996/97 and 1997/98 respectively came up with the following comments for best and worst aspects of the course. The comments are ranked in a descending order based on the number of students who mentioned that specific point for 1996/97. This is indicated by the number alongside, while a corresponding figure represents the results for 1997/98.

Comments	number of students	
	1996/97	1997/98
Question 7 (good points)		
enjoyed using the computer	20	22
use of data made it feel like a real audit	17	20
hands on experience of using Excel	9	22
useful workbook for self study	8	12
interactive tutorials	8	9
case study made the audit more interesting	7	10
Question 8 (bad points)		
computers proved too slow on occasions	7	6
the tasks set did not carry any assessment weighting	5	7
a great deal of tutorial work to complete	2	5
no model solution given for the case study tasks	0	3
not enough advanced computing	0	1
don't agree with using computers in teaching	0	1

**What next?**

Clearly once an assessment of a module has been undertaken the issues raised by the students need to be considered and if appropriate taken on board for future module delivery and content.

As an overview of the evaluation it seems that most students are generally happy with the use of the computer and the case study as a teaching medium. Listed below are some feedback comments to the students' comments.

1. There is always room for improvement and in this instance the development of a more interactive programme whereby students are given more feedback on the progress of the audit may be worth considering, especially where they may feel more secure with a set solution at various stages of the audit tasks. The drawback here is when tutorial groups are held at different times and due to the self study aspect students will progress at different paces. In addition at present there is only one set of payroll data available for audit, once a complete solution has been distributed there is always the possibility that students will merely copy the solutions instead of learning the audit techniques which is the whole objective of undertaking the audit of the data. The students do not seem to appreciate that it is the learning of the audit technique that is important and not obtaining a 'correct' answer to the case study.
2. Providing an assessment weighting may encourage students to take the tasks more seriously and aim to complete the tasks outside the set tutorial time. However due to the nature of the tasks and the fact that student tend to work as groups, assessment of an individuals efforts is not really practical.
3. Unfortunately the students did experience problems with the equipment in that on occasions the computers let them down. This problem lies outside the control of the module delivery programme and is due to be rectified during 1998/99.
4. Other external factors also have a bearing on the effectiveness of any new style of programme delivery. The student's prior knowledge of Excel will dictate their confidence and ability to experiment with the functions of Excel. In addition the student's cultural background and outcome expectation from a module must also be taken on board. In this instance a high percentage of students were from overseas where their normal teaching experience is that of talk and chalk, memorising facts and having set solutions to all problems. This is not conducive to developing an enquiring, innovative and probing approach to problem solving with individual interpretation as there is a fear of getting the 'wrong' answer.

### Conclusions

Feedback is encouraging and it provided the incentive to develop the module even further by introducing relational database into the audit.

The students have found the tasks demanding and the overall view indicates a general preference for the use of a computer based case study to learn practical auditing techniques. This module provides the students with a base from which to develop their appreciation of audit issues surrounding computerised accounting systems and the potential of using computer assisted audit techniques and specialised audit software packages.

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## Appendix A

Questions 1 - 6 require an assessment mark based on

- 1. = excellent
- 2. = very good
- 3. = good
- 4. = fair
- 5. = poor

Questions 8 & 9 require your comments

1. How do you rate the course content in terms of the computer related issues of auditing?
2. What is your view of the module workbook for self study in developing additional Excel skills and understanding prior to undertaking the audit tasks?
3. How do you rate the learning experience gained from the computer hands on approach to audit during the tutorials?
4. What is your opinion of the tutor assistance given during the tutorial sessions?
5. How do you rate the computer as a means of developing your data handling and interpretation skills?
6. How do you rate the case study as a vehicle to develop your own audit tests?
7. How useful do you think the computer is as teaching medium for this module?
8. What were the best aspects of the module?
9. What were the worst aspects of the module?

## **Theme 1 – A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool**

### **Paper 3**

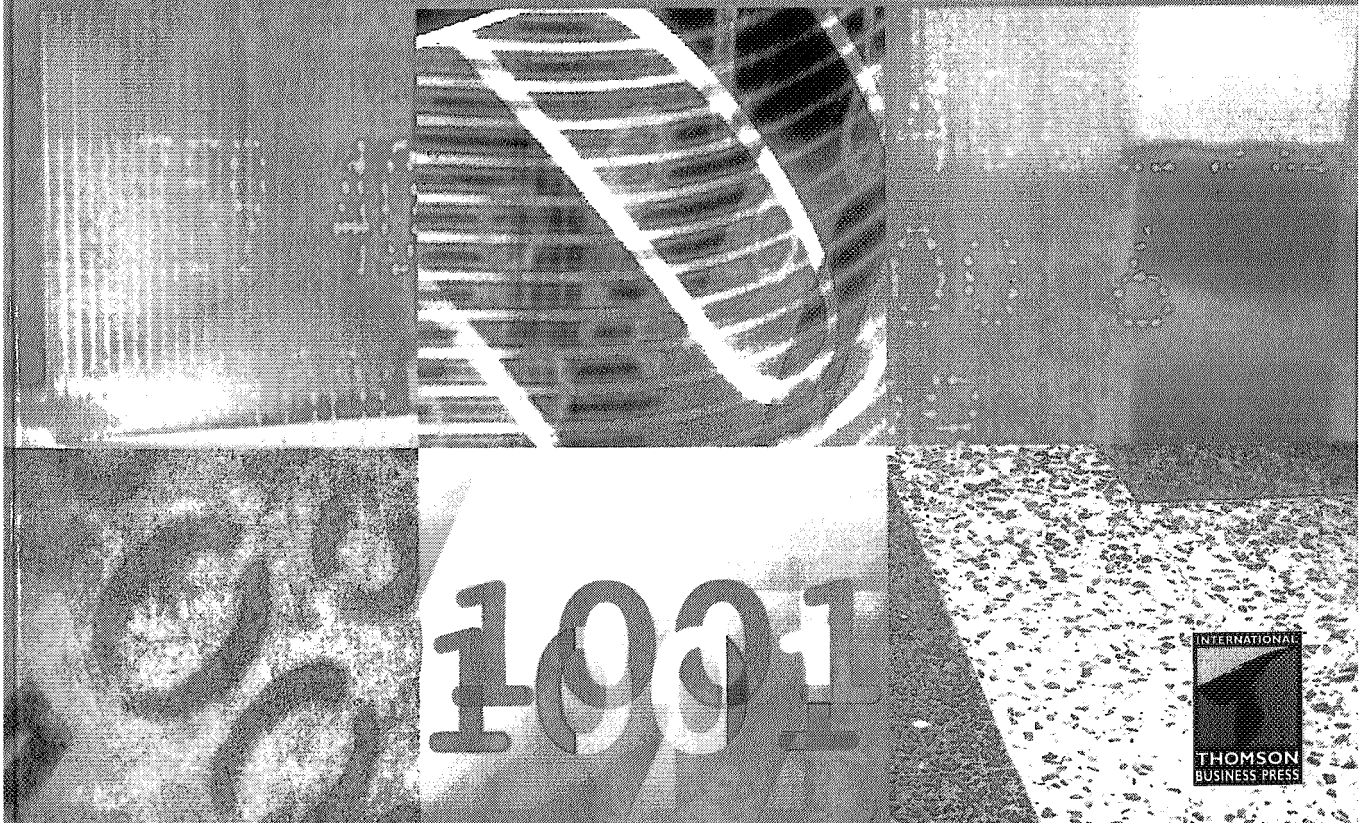
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# ACCOUNTING A SYSTEMS APPROACH

ALISON WARMAN AND JEFF DAVIES



INTERNATIONAL  
THOMSON  
BUSINESS PRESS



# 18 Internal controls in computerized systems

by Marlene Davies

## Learning objectives

After reading this chapter you should:

- understand how important it is to secure the computer not only as an asset but as an information bank
- appreciate the importance of implementing controls to ensure data security and integrity
- be able to identify the possible consequences of control weaknesses within an AIS
- understand the importance of installing appropriate controls as systems are designed and developed
- be able to identify the relationship between the controls associated with computerized systems and those of the traditional internal controls discussed in Chapter 3
- understand why computerized software packages require in-built controls to help prevent the destruction and disruption of the program and its properties.

## Introduction

You should now have a good understanding of the workings of an AIS system and the importance of ensuring that the data processed and produced reflect company activities. In this chapter we shall look at the security and control measures that are important for the effective and efficient operation of the accounting system.

When Azina and John first started their business Azina kept a close eye on all the expenditure relating to the business. She could almost tell exactly how much money was outstanding at any one point without looking at the records. As the business grew and more and more customers appeared along with a variety of suppliers, this meant that keeping a close eye on the level of income and expenditure became more difficult. Azina would rely on looking at the AIS for confirmation of the figures. Now that the record keeping has been delegated to a member of staff, Azina and John rely on the accuracy and integrity of the data produced by the computerized accounting system to help them plan their business.

Hindia is a school leaver who has just started working for John and Azina, she has five GCSEs and is keen to make a good impression with Azina. She has a limited range of computer skills mainly on word-processing packages, but is a quick learner and is keen to start on the accounting package.

Hindia's opportunity comes sooner than expected when Terry the accounting system operator suffers a severe attack of RSI (repetitive strain injury) and has to take two months off work. Hindia's first task is to enter the cheque income from outstanding debtors on the system when they arrive each morning. She notes the amount, debtor name and, where it exists, the invoice number. Hindia follows the **Sales Receipts** procedure as outlined in Chapter 6. After a few days Hindia feels very confident in using the system although she does not understand why there is a big fuss about matching reference numbers, invoice numbers and debtor listings. John and Azina, in the meantime, are quite happy with Hindia's work and Azina congratulates herself on appointing Hindia as she seems such a competent girl.

Just before Terry's return to work a very irate letter arrives from one of the company's best customers, Anthony Wong. Anthony is not at all amused by the fact that he has received a final demand for payment when he had already paid the amount within the time period that qualified him for an early settlement discount.

'How did this happen?' asks John,

'I shall check the records myself,' replies Azina.

Indeed when the records were checked it did indicate that Anthony Wong had not paid, however when Azina double checked with the bank, Anthony's cheque had been paid into the business account. This meant that somehow the income had not been properly recorded on to the system.

Azina checked with Hindia as to how she posts the entries and discovers that Hindia was not following the proper procedures for posting the entries. If Hindia did not find a corresponding invoice number or reference number on the receipt she merely looked for a debtor who has an outstanding amount that matched the amount received. She then proceeded to make up the information as she went along.

Hindia said to Azina: 'I thought that if the money was recorded and banked, then as long as the money was secure that there was nothing else to worry about, debtors would all pay up eventually and it would balance'.

Azina suddenly had visions of similar letters arriving from irate customers and instantly blamed Hindia for her lack of common sense. Later that morning Hindia left clutching her coat and in tears, declaring that she would never work for the company again.

The following weekend there was a break-in at the office, very little was taken apart from the coffee and tea kitty that were kept on the shelf behind the door. However when Terry tried to access the accounting system on Monday morning he found that all the previous months' records had been deleted and all new transactions failed due to a virus that had appeared on the computer.

'I thought you and I were the only one who knew the password,' he said to Azina.

'I must have given it to Hindia when she did some inputting for me while you were away,' replied Azina

Fortunately Terry had made backup copies of all entries up until the previous Thursday so it meant that only one day's records had been lost. These required re-entering once the computer had been freed of all viruses. Disappointment struck however when the backup files could not be located, the intruder had overturned a small wooden filing cabinet that contained the disks, the disks had fallen out and were now in disarray amongst the earth and water of the potted plant that had lived on top of the cabinet. It was impossible to identify the backup disk for the previous Thursday.

'There's nothing left to do but start collating the information from the invoices and individual statements of debtors,' said John.

'But it will take weeks,' replied Terry.

'Just as well your RSI is better then,' snapped John.

Later that morning, after the police had gone, John suddenly remembered Hindia talking about her boyfriend who was obsessed with computers and was forever developing new programs and trying to hack into systems. Somehow he could not but feel uneasy about the events of the weekend.

## **The importance of computer security and controls**

In Chapter 5 we looked at the importance of computer security and the importance of ensuring that adequate procedures are in place not only to secure that asset but to secure the data by making backup copies of the information held on the hard disk. We will now look at other aspects of computer security and controls within computerized accounting systems that need further consideration.

### ***Why is security important?***

The impact that the theft of a computer can have on an organization is not so much the replacement value of the asset, but the knock-on effect of the loss of information that the computer held. As more and more data processing is computerized and operations become more centralized there is a concentration of data held within the computer which if lost or destroyed can mean complete business failure. Companies will not be able to establish the amount of outstanding debtors, the current level of orders not processed or the reordering level of stock. In addition a great deal of time and money may be spent on recreating data at the expense of income generating activities. Safeguards need to be in place, therefore, to ensure that there is little or no opportunity for data loss, and that there is protection against hardware and software damage whether it be accidental or malicious.

The security of data is of paramount importance as the data held on the computer



are probably the company's most valuable resource. Data security is essential because without it then there is a possibility of:

- 1 financial loss,
- 2 computer fraud,
- 3 failure to comply with legislation, Data Protection Act, etc.;
- 4 competitors gaining an edge in the market due to unauthorized access to sensitive information.

### **Why are controls important?**

Controls exist to prevent errors or fraud occurring during data capture and data processing, and thereby to ensure that data are accurate, complete and valid to the organization.

The likelihood of errors and fraud occurring is much greater when systems have been computerized, mainly due to the volume of data handled and the speed of the computer in dealing with transactions. Under the same reasoning the probability of discovery is much less. Controls are therefore very important when it comes to the operation of computerized accounting systems. There is an increasing level of **business dependency** on the computer as the main source of information but businesses are also therefore more vulnerable to the dangers of business failure should anything happen to this source.

Large organizations invariably have sophisticated computerized accounting systems which in turn have more in-built controls to ensure data accuracy, completeness and integrity. Smaller businesses on the other hand tend to have smaller computers that do not always have sophisticated controls. The characteristics of micro systems means that special consideration needs to be paid to the existence of the appropriate controls.

Micro system data processing has a number of characteristics which demand the existence of adequate and reliable controls, these are identified here as:

- 1 the opportunity to change data without any trace, whether accidental or deliberate;
- 2 the possibility of unauthorized access to files and data;
- 3 the ease at which data can be lost when files are copied;
- 4 the susceptibility of files becoming lost through fire, flood or theft;
- 5 the processing capabilities of the computer are enormous, very often there is no human input which means that great reliance is placed on the computer;
- 6 the volume of data is large but the files themselves are physically small;
- 7 the direct entry of data via keyboards and the storage of data on disk means that very often there is no regular printing out of output as the information is easily accessed by reading off the visual display unit (VDU), thereby leaving no trace of activity;
- 8 quite often source documents are not retained or sorted in the same way as the computer record, and this makes any cross referencing difficult;
- 9 amendments to the data may not be documented, leaving only the most recent transactions retained on the computer;
- 10 the computer lacks judgement which means that errors which may have been a one-off in a manual system will continue in a computerized system until detected;

- 11 the systems require no special environment, providing open access facility and the opportunity for sabotage;
- 12 the computer is often only fully understood by one member of the organization, creating an ideal situation for fraudulent activity;
- 13 the user friendly operating facility of the micro computer means that lower grade staff can operate it without any prior training – this may appear to be an advantage, but a lack of staff knowledge can mean that errors can go undetected.

These characteristics also contribute to what the auditor refers to as the *loss of audit trail* within AISs. This is the facility to trace transactions through a system from source (e.g. customer order) to completion (for example turnover in the final accounts) or vice versa. A number of these characteristics are also true of computerized systems in larger organizations where there is a certain degree of decentralization to the accounting function.

The Sage accounting package has an audit trail report that lists every transaction that has been entered into the accounting system. According to the British Computer Society an audit trail is 'a record of the file updating that takes place during a specific transaction. It enables a trace to be kept on files.' Note how this overcomes some of the problems outlined above when we identified the characteristics of computerized accounting systems, especially those of small computerized systems.

## Security

John and Azina were quite happy with their accounting system until something went wrong. Some basic rules could have been employed to safeguard against the incidents that occurred in terms of the errors by Hindia and the break-in at the weekend. Physical security is straightforward: how did the intruder manage to break in? Are the windows secure, does the door have adequate locks and is there an alarm fitted in the building or even a security camera?

In a number of instances the size of the company and the amount of valuables on the premises as well as the cost will be weighed up against the potential loss. In some instances the insurance policy will dictate the rules of the game.

The security policy employed by John and Azina in respect of the data held, however, did fall short of the ideal situation. The intruder managed to access the files probably because he or she knew the password. Changing the password when Hindia left would have been quite easy to implement and could have avoided the situation they faced now. If they had followed a basic set of rules in respect of information security then they may not have experienced such a disastrous Monday.

### **British Standard BS 7799**

In 1993 a joint venture was set up between the DTI (Department of Trade and Industry) and a group of managers from leading British and International companies to provide practical advice on how to manage information securely. This was implemented in 1995 as a British Standard BS 7799. This reflects the British government's view of how important information management has become in the UK.

The BS 7799 standard has ten key controls that it considers an organization should follow. These are:

- 1 the establishment of an information security policy document;
- 2 the allocation of security responsibilities to named individuals within the organization;
- 3 the establishment of an information education and training programme;
- 4 a review to ensure that there is compliance with the security policy;
- 5 an awareness of and compliance with specific information security legislation, e.g. the Data Protection Act;
- 6 the documentation of any security incidents;
- 7 the existence of a procedure that ensures the securing of the organization's records;
- 8 the establishment of a virus protection policy;
- 9 the existence of controls to restrict any proprietary software copying;
- 10 the establishment of a business continuity planning programme.

As you can see this standard broadens the security issue from that of the computer equipment security to **information security**. This standard is likely to become the basis for an International Standard for managing information which recognizes the increased level of cross border information exchange.

### **Data Protection Act 1984**

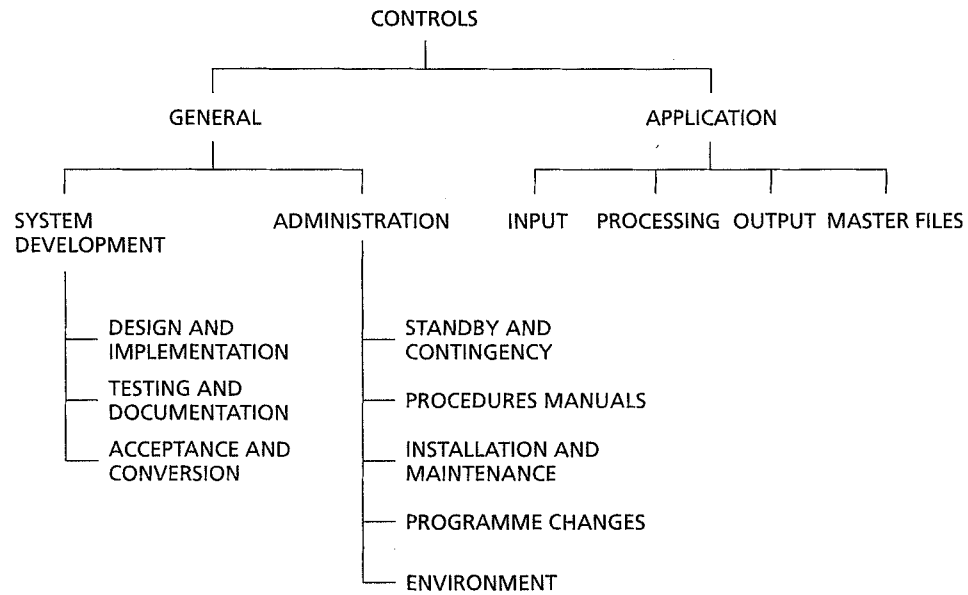
The implication of the Data Protection Act as far as John and Azina are concerned relate to the fact that they hold personal information on their computer in respect of individuals. The background to the Act is that there was a growing fear that information stored and processed using the computer could be misused. It was felt that an individual could be easily harmed by the existence of computerized data relating to that individual that was inaccurate or misleading. There was also the fear that the information could be transferred to unauthorized third parties at high speed at very little cost. The Act is therefore an attempt to provide a measure of protection to the individual.

The terms of the Act cover data about individuals and not corporate bodies, and data that are processed mechanically, by 'equipment operated automatically in response to the instructions given for that purpose'. This is important because:

- 1 manual data records are excluded from coverage by the Act;
- 2 data records that are covered include data processed not just by computer, but also by other equipment that processes personal data automatically.

### **Controls**

Let us now consider the control aspects in respect of computerized systems. Control systems for computerized systems fall into two categories, **general controls** and **application controls**. Controls cost money to develop and operate, and this means that when an organization considers the controls that should exist within its system it must strike a balance between the degree of control desired and the cost of achieving



**Figure 18.1**  
Internal controls in  
a computerized  
accounting system

**KEY CONTROL EXAMPLES**  
PASSWORDS; SECURITY MEASURES; TESTING; TRAINING; CHECKING; AUTHORIZATION; SEGREGATION OF DUTIES; VIRUS CHECKS.

those controls. When an off-the-shelf accounting system is purchased it is important to identify the level of control that exists within the package. If a system is tailor made or developed in-house it is important to specify the controls that should be contained within that system. This is where the advice of the auditor comes into its own by providing guidance in terms of recommending controls which may be missing and in identifying any risk attached to the existing controls. In the same way, when an item of hardware is purchased, it is important to ensure that provision exists to combat any malfunction or breakdown, while a regular maintenance agreement and repair facility in itself constitutes a control that safeguards against unwanted mishaps.

### General controls

**General controls** are defined as those controls that relate to the accounting environment within which the computerized accounting system is developed, operated and maintained. General controls can be either programmed or manual. The objectives of general controls are to ensure the systems are properly developed and implemented and to ensure the integrity of the program, the data files and the computer operations.

General controls fall into two categories, *administrative* and *system development*. General administrative controls are concerned with the integrity of data, program files and of computer operations. General system development controls are, as the words imply, concerned with the development and implementation of the system.

### **Application controls**

**Application controls** relate to the transactions and data belonging to each computer based accounting system. The objectives of application controls are to ensure the completeness, accuracy and validity of accounting records. These controls can either be manual or computerized, a manual total of receipts for future comparison is just as valid for ensuring completeness as a computer check on creditor number recognition for validity.

It is worth pointing out here that the distinction between general and application control is not always clear cut: password controls are important general controls to ensure file integrity but they are also application controls that ensure the validity of input in terms of restricting access to only those authorized to input information.

### **Files**

'Files' is a general term for stored data. **Data files** will hold a variety of information that can be classified into the following headings:

- 1 *Programs* – which are sets of instructions which dictate all sequential functions that are to be undertaken inside the central processor
- 2 *Transactions data* – this term refers to the data that can be read off the computer which relate to the current period's activities: e.g. cash received, goods and services invoiced, hours worked, stock movements. These are the data that are fed into the computer and which it uses to update the master files by following the programmed instructions within the programs mentioned above.
- 3 *Standing data* – is the term used to describe data that are of a permanent nature such as price lists, employee codes, overtime rates, creditor names and addresses, debtor reference numbers, stock codes.
- 4 *Master files* – as the name implies, are files that are of lasting or continuous importance, the term master files also refers to files whose content is subject to frequent changes but are none the less important, e.g. stores ledgers sales and purchase ledgers.

When reference is made later on to the controls applicable to the various categories of files, the above explanation will help to clarify the type of data under discussion.

### **Examples of controls**

In this section we will look at examples of controls that should exist within a computerized environment. As controls exist to ensure the smooth operation of computerized information the examples discussed below will show how their existence can help to prevent any of these situations occurring.

The examples used will quote the same controls for more than one preventative activity, as this highlights the importance of certain controls that can often be taken for granted and not seem significant but when considered in the full context of what it does, the control becomes a cornerstone for ensuring business continuity. Password controls, division of duties, operations manuals, and authorization are some of the controls that will appear on more than one occasion in the following examples.

### **Examples of general administrative controls**

- 1 *Controls to protect the computer environment* – While the modern computer is less susceptible to environmental hazards, humidity, dust and temperature can still lead to incorrect processing and data loss. The equipment, like all electrical equipment, can overheat, while magnetic or electronic fields anywhere near the machine or the stored data represent danger. Apart from the obvious in terms of the safe location of the computer to avoid theft, these controls include arrangements in respect of vandalism, sabotage, fire or flood, adequate insurance cover, inventory of hardware and software as well as standby facilities and disaster recovery plans. Included within these controls are **virus checks** in respect of viruses introduced accidentally or deliberately. These virus protection controls come as specific software packages and need to be regularly updated in order to combat all new viruses. These controls are therefore an attempt to ensure the continued existence of the computer in a format that ensures continued activity for the business.
- 2 *Controls to ensure that system software is properly installed and maintained* – The proper installation of systems software is an essential element of the efficient and effective operation of the computerized system. It is necessary therefore to have procedures in place to ensure that the software is installed under a controlled environment. Only authorized personnel should deal with the installation in order to monitor exactly what is installed. This avoids system overload, and provides a record of all installations for the maintenance and upgrade facility. As far as software access is concerned, there has to be an access control facility that is set up in such a way that it provides access only to the relevant personnel for system operation and processing.
- 3 *Controls to prevent unauthorized amendments to data files* – Unauthorized amendments to data files can lead to disastrous results, making the data that are deemed reliable to become meaningless. These amendments can be either accidental, malicious or fraudulent. The controls that need to be present here include password protection that both prevents unauthorized access and identifies access attempts. These passwords need to be regularly changed and subject to termination at set times to ensure that they do not become common knowledge. Other controls are the authorization of jobs prior to processing to ensure that only relevant processing applicable to the system software is undertaken and the physical protection of data backup files and set procedures in respect of authorized and required amendments, which in turn identify those which are unauthorized.
- 4 *Controls to prevent or detect unauthorized changes to programs* – These controls exist to prevent accidental and fraudulent corruption of program logic during program maintenance or program execution. This means that segregation of duties, training of personnel, and supervision of staff controls should be in place for program maintenance as well as the other controls of authorization of jobs prior to processing. The recording of program changes, integrity of backup copies, and comparison of production copies to controlled copies. Controls such as restricted access, the investigation of unusual delays and rotation of duties all help in ensuring the prevention and detection of unauthorized changes to programs.
- 5 *Controls to prevent or detect errors during program activity* – Controls here

include the existence of an operations manual in order that all personnel involved in using the computer are aware of how to operate the package. In addition the manual will give the procedures that need to be followed before, during and after the task is complete. There is a need to set up a job scheduling programme in order to ensure that adequate cover and supervision is provided by appropriately qualified staff. Emergency backup procedures need to be made known to personnel and the staff involved with operating the computer need the correct training and supervision. The training programme of personnel also rests on the quality of personnel appointed initially. There is a requirement for the appointment process to include job descriptions and for those appointed to have the basic skills that can be built upon during training. This appointment process also has to take up references to ensure that staff appointed do not have a past history of computer sabotage or fraud.

- 6 *Controls to ensure continuity of operations* – As businesses can fail due to computer failure there has to be a good set of procedures in place to ensure continuity of business. Controls here are represented by regular testing of good backup facilities, protection of the power supply and a review policy by designated individuals of the emergency and disaster recovery plans. Failure to implement these when they are required will render their existence worthless. Maintenance agreements and insurance policies must be periodically reviewed to ensure that any amendments or additions to the computer facility have been noted and appropriately accounted for. The protection of equipment against fire, flood and smoke damage must also be reviewed. Consultation with the chief fire officer if necessary will ensure that all the up to date precautions have been installed and are operating properly.
- 7 *Controls to control access to the operation of terminals* – Physical restriction for controlling access comes in a variety of formats: locked rooms with the distribution of keys to authorized users only, smart cards and code locks. A password logging on system restricts access to the operation of software in terms of programs and files. These files need to be accessible only to those with the right level of password accessibility. In other words some data may not be accessible to all users of the files in which case the data need to be appropriately sectioned into areas for different users. If an attempt is made to access data without the appropriate password then an error system should be set up in such a way as to lock off a terminal from the system. As terminal activity should be logged, the unauthorized or invalid access attempt can be identified. Where continued attempts are made at the same terminal then the situation should be investigated to determine whether the access attempt is merely an employee error or whether there is a serious unauthorized access attempt.

### ***Examples of general systems development controls***

- 1 *Controls over system development* – As inadequate systems can cause large losses it is important to ensure that standards exist to prevent poor design specifications, inadequate testing and implementation of systems. There should exist a plan of activity that identifies the role of specific personnel in the system development. This plan should consider user needs, time scales and issues such as cost-benefit

analysis to ensure that an application is computerized only if it is beneficial to do so. A basis needs to exist for management to be able to review and understand the system. This is where a proactive internal audit section can be involved to provide advice based on past experiences or technical knowledge of the controls expected to exist within a computerized system.

- 2 *Controls to ensure proper documentation is kept* – A good standard of documentation promotes an efficient and effective operation by users and computer personnel. When amendments are set up, an amendments register should be completed as well as when any recovery measures have to be undertaken after a disaster. It is important therefore to have good quality documents, well-written standards that are followed and an enforcement policy to adhere to these standards. Once a proper and complete system documentation is created it needs to be maintained and reviewed. Specific officers need to have responsibility for ensuring that records are maintained and that the appropriate standards are followed.
- 3 *Controls to ensure that all program amendments are tested and documented* – Controls are important to avoid new errors in the program and to deter any element of fraud. Program changes require authorization by user departments in writing and at the appropriate level of authority. The changes need to be assessed by a systems analyst and amendments specified in sufficient detail to enable the programmer to make the changes. Once the changes have been made they must be tested and the amendments documented and monitored when it 'goes live'. Program changes can range from a minor alteration of an exception report to a major redesign. The majority of installations have a set of standards for testing and documenting changes. These standards ensure that testing procedures are adhered to, with appropriate approval and recording of the changes by the users and management. This enables a record to be kept of all changes, thereby ensuring that should it be necessary to back track then the information is available. It also provides a record of who authorized the changes to be made. Segregation of duties, training and supervision controls are important here because, without the appropriate training, amendments may be made without consideration for the impact on other facilities within the computer.

### **Examples of application controls**

Application controls deal with the controls over data in terms of input, processing output and master file entries.

- 1 *Controls to ensure data input is complete, authorized, accurate and valid* – Input data can contain errors: human error is one of the greatest data security weaknesses and minimization of errors is therefore essential. Staff training and supervision are manual controls that can help in reducing the potential errors. Data input documents need to be designed in such a way that the input operator can complete the task properly without missing any important or relevant information. When data input is via the keyboard then the screen should be formatted to help the operator input the correct data. Staff who enter the data need to be encouraged to look for errors. This includes visual checks of the data that appears on the



VDU screen while batch input data totals should be checked against computer produced listings of the input data. Data input needs to be completed in a set time, relevant payments and recording of data into time periods ensures that the financial information produces a meaningful picture. This means that apart from manual agreements of control totals other checks such as sequence checking and programmed matching of input are required. Programmed matching involves the input is matched to a control file that contains details of expected input. There also has to be a procedure to deal with the re-submission of rejected input data.

Data input authorization involves the checking of transactions for the appropriate authorization. Invoices, for example, need the proper authorization code or signature to confirm the payment is due or that goods have been received and that no prior payment has been made. It is important that manual checks are undertaken on authorization prior to input, clerical review of the control totals after processing should also be undertaken to ensure that no unauthorized items have been entered. Authorization limits can be programmed to detect any payments or amounts exceeding the limit set. This control ensures that payments, even if authorized, are identified as being in excess of pre-set limits – these controls are called *confirmation limits*. In such instances transactions will require either further authorization or be rejected from the system.

Controls in respect of data input are required to ensure that data fields are accurate, these include items such as the amounts, account numbers and payment date on invoices. Batch control totals provide a check on accuracy but more importantly programmed checks ensure data verification for accuracy and validity. Programmed controls are check digit verification, reasonableness checks and existence checks. *Check digit verification* checks enable reference numbers to be arithmetically checked for the required relationship to the rest of the number to be checked. *Reasonableness* checks look for the logical relationship between files, and *existence* checks look for valid codes when data are input. Controls also exist to ensure that all input data are subject to *completeness* checks – these ensure that each record that is created contains sufficient information to make the *audit trail* effective.

- 2 *Controls to ensure all data are processed accurately and completely* – Once data have been input, the computer is expected to process the information accordingly and this is why control totals are written into the programs to ensure that no records have been lost, no records have been duplicated, the input files have been read fully and that all records have been written to the output files. The controls for processing are similar to those applied to the input of transactions, controls batch reconciliation ensures completeness and accuracy although now the reconciliation is made after the update and not after the initial entry. Summary processing is a method by which individual values are totalled and compared to total amounts elsewhere. The sum of the depreciation of individual assets can be compared to the depreciation of the total asset value.

Data may be rejected or fail to be processed after the initial input. Controls need to exist to ensure that when the data are valid they can be re-entered into the system. This often requires a separate activity that identifies the mishaps and thereby avoids any possibility of duplication. Invoices that may have been entered correctly for the correct amount may, during processing, be subject to a hiccup in

the system rendering the amount incorrect. There is a possibility that the computer may reject the second input as the invoice details have already been identified and processed. In such circumstances authorized re-input of the transactions has to be recorded.

- 3 *Controls over the output of computer transactions* – In a batch entry system where data are batched and put into specific sections or departments, there should be a check to ensure that the output matches the original input to confirm that all the processing has been undertaken. Any input records that have failed to complete the loop in terms of input–processing–output need investigation to determine the cause of the error. Once the output has been checked it must be correctly distributed and appropriately recorded.
- 4 *Controls over the use of correct master files and standing data files* – Master files and standing data file amendments must be complete, accurate and authorized. The controls used during transactions input are the same for these amendments. Validity of the data and the files is essential, the opportunity to amend the incorrect master file or standing data file must not occur. Due to the importance of these amendments there is a need to implement a more stringent control procedure of a one to one checking coupled with record count or batch total each time the file is used. All amendments that include additions and deletions can be confirmed by a simple comparison of the original totals plus additions less deletions, and this ensures the continuing correctness of master files and standing data files. A specific cyclical check on the correctness of these files by users will also ensure that any invalid data amendments are identified early and acted upon accordingly.

### Computer fraud

Computers provide their own special opportunity for fraud. Concealment is easier while the absence of monitoring and supervision gives the fraudster the opportunity to undertake the fraudulent act. Centralization of systems enhances the opportunity of perpetration and also concealment. Automation makes the small fraud worthwhile when repeated on countless occasions. It also enables the fraudster to ‘set up’ indefinitely by amending program instructions or diverting output activity in terms of cheque destinations and payee names. All of this can continue to operate with the perpetrator having left the scene.

It is impossible to combat all the problems associated with computer fraud. However the existence of strong controls can act as a means of combating the problems associated with computer fraud. Hackers and fraudsters succeed because others let them in, either on purpose or unwittingly. Control aspects are therefore important in the fight against computer fraud. The safe custody of passwords and authentication codes, segregation of duties between the setting up and the processing of transactions are some control requirements.

### Summary

This chapter has identified the importance of ensuring that proper controls exist within the computerized accounting system of an organization. There are two compartments in which to place controls – general and application.

General controls provide the protection under which the computer is developed, maintained and implemented. Application controls relate to the running of the computer in terms of the inputting, processing and output activities of the system as well as the operation of the master file.

Businesses depend more and more on the computer, making the computer important for business continuity. The computer should be treated as a major asset for the organization because of the amount of business activity that revolves around it.

### Key words

application controls pp. 296, 298 • audit trail p. 295 • business dependency p. 294 • data files p. 298 • general controls pp. 296, 297 • information security p. 296 • virus checks p. 299

### Practice questions

- 1 What are the two main categories of computer system controls?
- 2 What are the controls that should exist when systems are designed and developed?
- 3 What are the controls that relate to the environment within which the computer exists?
- 4 What controls would you expect to see in respect of data input?
- 5 What are the controls relevant to the processing of data?
- 6 Which controls would you expect to exist to confirm the accuracy and correctness of data output?
- 7 What are the controls for ensuring the accuracy and validity of master file and standing data file amendments?
- 8 Describe the different controls that an organization can implement to safeguard against computer insecurity.
- 9 What general controls do you think John and Azina should introduce in light of their recent experience with the break-in and loss of data?
- 10 What application controls would you advise John and Azina to introduce for data input and master file amendments?

## **Theme 1 – A Case Study approach for audit and forensic accounting module delivery using Excel as an audit tool**

### **Paper 4**

Davies, M., (2000), 'Using a computerised case study to teach computer auditing: the reasons, the approach and the students' response', *Managerial Auditing Journal*, 15(4&5) pp. 247-252.

# Using a computerised case study to teach computer auditing: the reasons, the approach and the student response

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## **Keywords**

Auditing, Computer-based training

## **Abstract**

Stemming from the need to develop a teaching programme for the delivery of computer auditing/computerised system audit that involved a more hands-on approach, this research describes the identification and creation of a case study, workbook and a spreadsheet of source data for students. Results indicate that students prefer using the computer-based case study to learn practical auditing techniques.

## **Introduction**

The rapid changes during the last ten years in computerised accounting systems have resulted in the need for accounting graduates to display a level of understanding and application of accounting software both in accounting and auditing. Undergraduates need to be prepared for the twenty-first century in terms of being able to understand the workings of the computer and the importance of using IT for information and managerial purposes. The School of Accounting and Mathematics, at the University of Glamorgan, has for the past 15 years introduced an integrated systems approach to the teaching and delivery of accounting modules by using computer-assisted learning and commercial accounting packages. In 1992, the Accounting and Finance degree was revalidated based on an integrated systems approach to the programme with a series of modules using the computer.

In line with the overall philosophy within the school for the accounting modules, the teaching approach used to deliver the auditing modules at the university has been steadily changing over the past few years, from the traditional talk-and-chalk to that of more hands-on auditing. This is to create an awareness of auditing methodology in the work environment and give students a taste of practical auditing. When a new module was introduced onto the accounting degree programme which took the title computer auditing this provided an ideal opportunity to design a new teaching programme, using the computer as an audit tool, rather than concentrating on the controls and security aspects alone.

The paperless office makes it more difficult to use a textbook-based approach to a module

that concentrates on the computerised accounting system audit. In an attempt to simulate a business situation for this module, a series of demonstration disks were designed to provide a graphical picture of a business and its financial data. Personnel and organisation charts were created along with a database of information representing the payroll. All provided a backdrop from which the students could undertake an audit. The data was set up in Excel in order to enable the students to undertake data mining by using the audit functions, data sort, auto filter, pivot tables, graphs and charts. All of this information forms the basis of a case study specifically designed for the computer audit module.

The objective behind developing a computerised systems audit module was to introduce students to a hands-on approach to computer auditing techniques, coupled with the task of providing the students with the opportunity to understand and appreciate the audit methodology and objectives. Leading on from this, students will also gain computerised data auditing skills plus an insight into the interpretation of test results from an audit standpoint. This will ultimately mean that students will develop an awareness of why the tests are undertaken, and therefore it will not merely be an exercise in manipulating data but a true application and understanding exercise.

Accounting ledger packages (ALP) have been in existence for quite a long time as means of introducing undergraduate students to computerised accounting systems. However, when it comes to introducing students to the audit of computerised accounting systems or the use of computers in auditing, there is no real equivalent. In order for students to appreciate the complexities of undertaking an audit of a large volume of computerised data there is lack of accessible data.

The initial research concept stemmed from the need to develop a teaching programme for



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the delivery of computer auditing/computerised system audit that involved a more hands-on approach, as compared to the theoretical approach, which did not give any computer based activities for the students. In order to provide a teaching approach which gave an insight into the real world of auditing there was a need to assess what teaching methods were currently employed in other institutions, and develop a programme for the auditing module on the BA (Hons) Accounting and Finance degree that would meet with both academic and professional requirements in developing students and knowledge.

The current methodology and approach to the teaching of auditing has made very little use of hands-on computer auditing techniques. The traditional approach has centred on the theoretical issues and control aspects of computerised accounting systems; for example, understanding the security problems associated with computers or the potential areas for fraud. In the workplace, auditors also need to be familiar with accounting systems in terms of the input, processing and output facets of computerised systems on more of a practical than theoretical basis. Auditing involves auditing through the computer not merely around the computer and for this reason it is important for students to have the opportunity to audit data and draw conclusions that will aid in their final audit opinion of the financial statements.

While there exist a number of computerised audit systems which may either be off-the-shelf products or in-house specifically designed ones, there are still a number of characteristics that are common to all of them. They are all concerned with testing data to provide assurances that the systems are operating effectively and that there are no material mis-statement or errors. It is in this area of analysing and auditing data that yields a potential for the development of hands-on approach to the teaching of auditing.

## **Research approach undertaken**

### **Stage 1 – questionnaires to internal audit departments**

The initial exercise entailed circulating a questionnaire to 41 internal audit departments or sections. This was distributed to local authorities, health authorities and NHS Trusts. The purpose of the questionnaire was to establish the use made of computers in auditing by the auditors. The main aim of the questionnaire

was to identify the audit approach to computer systems audit in the workplace and also name the various software packages that were in use by the auditors from those designed in house to those specifically designed and available "off the shelf". The intention was to identify the use of the computer in undertaking routine audit work as compared to specific computer audit and audit report writing tasks.

Public sector organisations were chosen because:

- They have a legal requirement to have an internal audit. Private sector, limited companies, while they may have either an internal audit department or financial control section, do so on a voluntary business requirement basis.
- These organisations employ a large number of personnel, as well as being major revenue expenditure organisations – the audit sections would therefore be familiar with auditing large volumes of transactions with varying values, which meant that database analysis would lend itself to computer based auditing techniques.

### *Questionnaire summary*

The summary results revealed that the majority of the audit sections used word-processing and spreadsheet packages, as well as specialist off-the-shelf audit software packages designed specifically to audit certain accounting software. A number used in-house interrogation techniques on their accounting systems, which was to be expected, especially as their accounting systems had probably been specifically designed in-house in the first place.

The response was good; 26 audit sections/departments replied (representing 63 per cent), all of which had answered all the questions.

Table I gives the breakdown between in-house designed audit packages, audit software packages and the use made of Excel/Word and Lotus.

### **Stage 2 – questionnaires to other teaching institutions**

The next stage in the programme was to find out how other institutions taught computer auditing and how much use was made of computers in giving students hands-on experience. Other institutions' approach to

**Table I**

	Computer audit packages	Excel, Word/Lotus, AmiPro
In-house	15	17

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teaching computer audit would provide confirmation of the current thoughts on the approach to using computers for teaching computer auditing. A questionnaire was sent to all UK universities offering an undergraduate degree programme in accounting, or accounting with other subjects.

The objective of the questionnaire was:

- To identify the degree programmes that included auditing and/or computer auditing modules as part of the programme of work.
- To identify from the modules that were specifically related to auditing the amount of time allocated to computer auditing.
- To identify the use made of computers in teaching computer auditing and or other aspects of auditing, e.g. flowcharting for control purposes and word-processing for report writing.

The response rate to the questionnaire was encouraging, with 69 per cent of the questionnaires returned. A summary of the results indicates that while computer auditing is a recognised element of a number of accounting degree programmes, not a great deal of time is devoted to its teaching, despite the fact that most auditing is involved with computerised accounting systems, while even less time is allocated to teaching hands-on computer auditing. Based on the comments received from the questionnaire, it is not through lack of need but through lack of available material to use, that computers are not used by institutions in teaching computer auditing.

Table II gives an overview of the amount of time allocated to computer audit, when it is not a stand-alone module, and the use made of computers in teaching the computer audit element of auditing.

While only a small number of institutions teach computer auditing as a named module/course within the degree programme (12 per

cent) the remaining 71 per cent (while having a certain amount of computer auditing within their auditing course), do not make use of the computer as a means of giving students hands-on experience in computer auditing. All major organisations now keep their accounting records on computer; an introduction to database auditing should form an essential part of the accounting students' course of study. This would aid students' understanding of the potential problems associated with computers as well as giving them an opportunity to interpret test results.

The original concept seemed therefore to be falling into place based on the need to ensure that undergraduates grasped the general understanding of the principles and practices of computer auditing. It also met with the present thinking for reducing the number of contact hours between student and tutor. By introducing a computer-assisted learning programme, students would be able to work at their own pace

#### *Questionnaire summary review*

What emerged from the two questionnaires was that, while the professional auditor works in organisations that have different computerised accounting systems and make use in-house of the audit packages and Microsoft office/lotus suite packages, the overall objective remains the same. That is to ensure that control systems exist, that the data do not contain any material errors or a potential for fraud, and that the auditor can rely on test results in order to draw an opinion on the financial statements.

The method of delivering computer-auditing modules requires the use of computers in order to create an understanding of the concepts. There are various auditing computer packages, ranging from bespoke ones specific to certain organisations, to the popular ones available on the market. In order to give a basic

**Table II**

Percentage allocated to computer audit	Number of universities	Computers not used in teaching	Use of Excel or Lotus 123	Use of IDEA or ACL	Other computer software
100	2	0	1	1	1
40	1	0	1	0	1
30	2	1	0	1	0
20	2	0	1	0	1
15	5	4	0	1	1
10-14	11	7	3	1	2
9 or less	9	4	4	1	2
0	4	0	0	0	0
	(no computer audit)				
0	7	0	0	0	0
	(no auditing)				

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understanding of data mining, in relation to what the auditor has to do with the data, the best course of action is to use Microsoft office's Excel spreadsheet. Basically because this is the software available at the University and the students have been introduced to the software in other module studies. It also cuts down on the cost of purchasing new and additional software.

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### **The computer audit teaching programme**

#### **Design and development**

Based on the results and the positive thinking behind the original idea, the next stage was to design a case study, workbook and a spreadsheet of source data on disk for students which incorporated computer auditing hands-on with audit principles and methodology. The teaching of auditing module students could then take on a new dimension. The plan of action centred on using the Excel spreadsheet to house a substantial amount of data that could be analysed and tested by the student. A combination of audit techniques, based on the spreadsheet set of "tools" menu, enabled "data mining" to be undertaken.

As a background to the task, a mini case study was written outlining a company which had had its records recently computerised. Initially the emphasis would be placed on personnel and payroll records, which would provide ample source of data for analysis. This module incorporated the computer as a source of information as well as a tool for both teaching and audit purposes. From the information supplied, the students have to undertake specific tasks in the computer laboratories that complement the lecture programme.

The whole teaching programme revolves around a company that designs and produces giftware, J & M. Keltree plc. A detailed case study coupled with a demonstration disk to bring the company to life with graphic illustration and narrative, provides the core material. Payroll data produced on the Excel spreadsheet format for 100 employees (some current, some past employees) provides data for analysis. Each student has access to the demonstration disk and data disk via the network in the teaching department.

The information relating to the employees was input onto an Excel spreadsheet. The data had to be input manually, even though Excel has a capacity to download data from another source. Accessing payroll data from a firm or institution was not practical due to Data Protection legislation; the data was

therefore "manufactured" for the purpose of this exercise. This data source would then provide the students with material on a disk from which to undertake the exercises and tests outlined in the workbook. The workbook would provide examples of data and test results, but would not be the same data. The reasoning behind this was to ensure that the students arrive at their own test results, recommendations and opinions.

By using Excel, students can appreciate how the computer can help in the business assurance and review activity. The characteristics and properties of a spreadsheet, such as Excel, provides the following useful business assurance techniques:

- Arithmetical formulae to ensure consistency in calculations.
- Data sort, where data can be broken down into manageable segments and used to identify certain aspects of a large volume of data.
- Audit tools; precedents and dependants, where the interrelationship between certain sets of data can be identified and used as an assurance as to the logical creation of dependent data or prerequisite data.
- Auto filter, which allows data to be analysed and grouped by different categories.
- Pivot tables and data mining, to probe the existence of underlying source data and recreation in graphical format.
- Creation of graphs and charts, that enable the reader to understand by means of pictures trends and forecasts.

These tasks have to take into account the information relating to the case study:

- identifying audit risk;
- audit planning approach for computerised accounting systems audit;
- audit testing;
- security and control objectives;
- analytical review;
- cost comparisons, trend analysis and some value-for-money issues;
- interpretation of test results;
- creating working papers by utilising the computer as an audit tool;
- reporting the findings to the appropriate level;
- use of spreadsheets in accounting and audit.

The objective is to develop the student's analytical skills, inquisitiveness, probing ability, and data manipulation to a useful purpose. The principle rests on the principle of "I see, I hear, I do and I understand".



The Excel tasks are supported by a workbook that gives a stage-by-stage progression through the relevant computer tasks. Within the workbook there would be screen dumps to show students the various stages they should be at when they use the functions attributable to Excel; this will help the students proceed along the correct path in order to familiarise themselves with using Excel. The exercise will then have achieved two objectives: that of introducing auditing tests on data listings, and introducing the students to more complex aspects of Excel, thereby developing student skills in auditing and computer applications.

By having data to analyse, test, and draw conclusions on, the students will be required to consider the broader issues surrounding computer audit and present their conclusions in a report. This in turn develops their report-writing skills, and uses the report-format document in Microsoft word. The case study forms the focal point of the whole module; the student activities revolve around this one company. The tasks require the student to use the functions of the Excel spreadsheet to analyse and extract information useful for the audit. This means that tests such as checking the payroll against a staff list, confirming logical sequences of dates, reasonableness of amounts and age of personnel must be completed. The audit findings must be presented in either report format, working papers, or memorandums using Word. This enables the students to transfer selected data from Excel into Word, and thereby illustrate some of their results in either graph or table formats if applicable.

The intention of the hands-on teaching approach is to give the undergraduate student an opportunity to develop, and possibly acquire additional computer literate, analytical, and audit skills.

#### Limitations

There were limitations/parameters within which the project had to operate:

- Commercial software packages such as IDEA/ACL are expensive audit packages to purchase and only operate well when a large volume of data requires analysis.
- Students may find themselves employed in an environment that does not have either of the software packages chosen.
- The objective is to introduce concepts and develop student awareness, not to specifically train individuals to operate named computer audit software.
- Cost is a major factor in deciding the approach to follow; the university currently has Excel available, and it

seems a waste of resources not to capitalise on assets already in the university's possession.

#### Student responses

The computer audit module has now been delivered to three cohorts of students. It seems appropriate therefore to consider the students' response to this audit module.

The objectives of the module are clear and easily identifiable:

- to expose the student to the importance of analytical review to the auditor in forming an opinion;
- to instil the importance of internal controls and dependency of some data on others;
- to provide a meaningful learning experience which is both valuable and stimulating;
- to utilise the hands-on approach to teaching in order to develop student computer literacy, audit and interrogation skills.

In order to establish whether these objectives were achieved, students were asked to complete a brief questionnaire, partly as part of the annual monitoring and review process, and partly as a means of providing a base from which to further develop the module. The following points summarise the feedback obtained from the student questionnaires, both the annual monitoring review and the specific questionnaires.

#### Benefits for the students

- Creates a living situation that allows them to analyse and test in a realistic way, rather than imagine or surmise their course of action.
- Adds to developing student confidence in using computers.
- Provides a variation to the traditional teaching approach. Scenarios and case studies in the past did not contain volumes of data, and their analysis was very superficial.
- Enhances the teaching of auditing, encourages interactive audit, and allows individuals to progress at their own pace.
- For those without any experience of the workplace, it gives an opportunity to undertake realistic tasks.

#### Practical outcomes

The practical outcome of this approach to teaching auditing is that it will:

- Replace paper-based activities with a simulated situation of the workplace.
- Produce an integrated approach to the delivery of computer auditing.

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- Enable students to undertake tasks that will yield answers that need interpretation.
- Provide the students with the option of working at their own pace.
- Assist students in the creation of working documents and report writing.
- Enable tutorials to be more effective, which should give students a higher level of understanding of practical auditing issues.
- Provide students with a skill and ability profile that is beneficial to potential employers.
- The use of a case study brings the audit issue to life and yet manages to cover all the traditional audit teaching that was previously taught by lectures and example questions. The tasks attached to the case study are such that the students cover all the syllabus without it becoming a chore.

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### Conclusions

This teaching approach therefore moves away from the old method of auditing around the computer, to simulating the experience of auditing data downloaded into a format that enables audit testing and analysis. The principles of using CAAT's (despite not having commercial audit packages) can be taught through the hands-on application of the spreadsheet.

The feedback has encouraged the development of a more advanced case study approach where data will be input onto a commercial software package – Pegasus Opera – and the information eventually downloaded onto Excel for further analysis. Additional data will be introduced for sales orders, work demand patterns and delivery records as well as sales invoices. This will enable the student to cross-reference the sales invoice, to the work schedules and deliveries.

The students have found the tasks demanding, and the overall view indicates a general preference to using a computer-based case study to learn practical auditing techniques. This module provides the students with a base from which to develop

their appreciation of audit issues surrounding computerised accounting systems, and the potential of using computer-assisted audit techniques and specialised audit software packages.

### The future

It is anticipated that introducing an interactive on-screen display disk, that depicts the scenario in graphic format, can only further develop this project. Details of the company in the case will be found on screen with different scenarios built into the programme. Individual job specifications for certain staff members, along with some problems that exist within the company, will then set the scene for a potential fraud that the students can investigate.

It is hoped that the project can be developed a stage further by introducing students to Access from Microsoft Office suite. This will enable even greater data analysis on relational databases. In addition, there is potential here to design a CD-ROM, which would give a detailed and graphical scenario of a company's activities, detailed sources of data and organisational structure, as well as being completely interactive. Students would be able to ask questions, receive answers immediately, and have feedback to their evaluations/recommendations. This would certainly be a true multimedia interactive audit module case study. Work has already commenced on the idea, while enquiries are in hand to seek potential sources of funding.

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## **Theme 2 – Public Sector accountability: the relevance of performance measurement and value for money**

### **Paper 1**

Davies, M. & Shellard, E., (1997), 'Performance Measurement in the United Kingdom', *The Government Accountants Journal US*, 46(3), pp. 48 -51. (50%)

# The Value of Performance Measurement in the United Kingdom

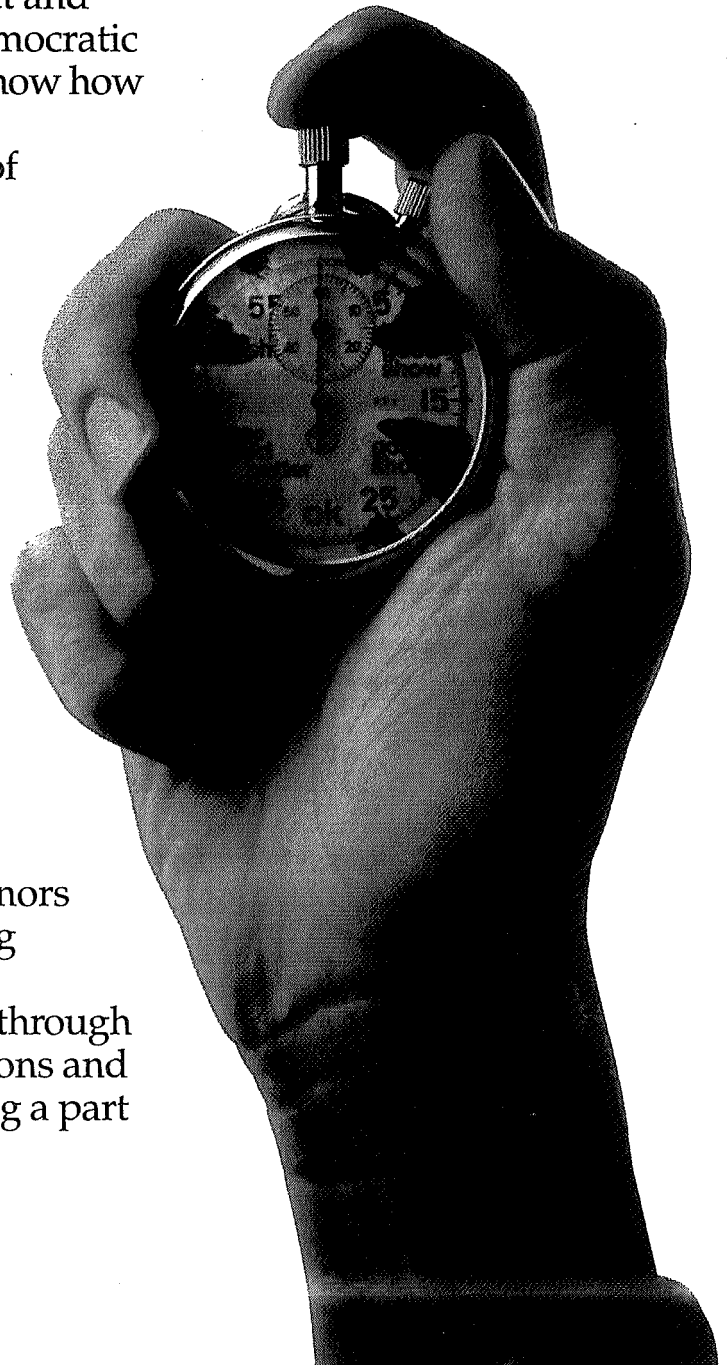
By: Marlene Davies, PGC Ed. Dev., CPFA, and Elaine Shellard, PGC Ed. Dev., CPFA

## The Background

Public funds are the revenues and expenditures that public sector organizations collect and spend on behalf of the public. In a democratic society every citizen has the right to know how public funds are spent.

In the United Kingdom this concept of informing the public about how public sector organizations manage and spend public money has taken the form of published performance indicators. These indicators are now an important means of assessing the worth of activities provided by public sector organizations.

Although some public sector organizations have provided information such as unit costs (for example, per tramway mile and per pupil) since the last century, a dramatic increase in the amount of information published by the public sector has occurred beginning in the 1980s, when the providers and governors of public sector services started giving assurances about the validity of their expenditures. This has been achieved through the use of statistics and cost comparisons and through value-for-money audits being a part of the public auditor role.



Cost comparisons can be made of unit costs over time, between organizations and departments, while budgets can be compared to actual costs.

Care needs to be taken when comparing costs, as it is necessary to compare like with like. Similar services provided by similar organizations do not always incur the same basic costs due to environmental factors, and this can distort comparative figures.

### **Efficiency**

Efficiency is concerned with the relationship between input and output; the objective is to obtain the maximum output from a given level of input. Efficiency aims to evaluate the processes used in an organization. Examples include the number of grant applications processed per member of staff, or the number of complaints received by a department regarding response time to inquiries and requests made by the public.

### **Effectiveness**

This relates to the achievement of organizational goals and objectives. Progress in devising performance indicators in this area has been slower than the first two. Most government organizations have a number of objectives, some short term, some long term, and there may at times be a conflict between them. Some objectives may not lend themselves easily to measurement, for example, ensuring the security and stability of the country. Measures of effectiveness may be divided into two broad areas:

- Measures of output, such as the service that an organization provides. Examples include the number of surgical procedures performed by a clinic, or the examination results for a school or college. Problems arise when trying to measure productivity. The productivity of an invoice clerk in terms of invoices processed per hour is quantifiable, but it is more difficult to apply productivity to casework carried out by a social worker, as each case takes a different amount of time to resolve.

- Measures of outcomes, is the longer term objective. Examples include mortality rates, homelessness levels and unemployment levels. The problem with using these types of measures as performance indicators is that they may be influenced by a number of factors. For example the mortality rate of the population may improve as a result of improved health care provision, or because of improved housing, reducing pollution levels, better employment prospects or improved dietary standards.

### **Quality**

This is perhaps the most difficult and contentious area of performance measurement. Whatever indicators are devised to measure this area will be subject to criticism, because quality is by nature subjective. School examination league tables, for example, have been rejected by many as a measure of quality of education provided, as they do not account for the quality of the intake of the school, the teacher/pupil ratio or class size. As an indicator of quality in education, school examination league tables have been the subject of much public debate.

It may be that no single indicator can be on its own a measure of quality. Rather, a number of indicators taken together will provide a more reliable quality measure. Thus,

when evaluating a school, a prospective parent would evaluate not only the examination results and pupil per teacher ratio, but would take into account all the other resources available within the school and the impression given by current pupils and their parents. Performance measures do not yet exist for all these functions, and although progress is being made, it is questionable whether a decision of this type would ever be based solely on performance indicators. The indicators instead provide independently audited information that is compared to other similar establishments.

As a response to the criticisms mentioned above for those indicators attempting to measure quality, attention has been focused recently on the development of value added indicators.

As the name implies, the intention is to measure the value added by an organization; for example, to relate output to the input, and measure by how much the output has been improved—in other words, the value that has been added.

Much of the media attention to value added indicators has focused on schools, and refining the examination results tables to account for the type of input, such as the level reached by pupils when they enter the school. This may be explained in part, by the fact that the data are now becoming available as a result of the introduction of the National Curriculum<sup>9</sup> and testing for all children at the ages of seven, 11, and 14. However, the principle of measuring value added may be extended to other areas. NHS recovery rates, for example, are influenced by the type of patient, such as their age, general health and whether they suffer from any other medical condition, which all influence the outcome of a particular course of treatment.

### **Summary**

To summarize, therefore, the primary worth of performance indicators can be demonstrated in their ability to:

- measure financial performance;
- indicate the volume of output;
- assess the quality of service, including standards of service that individual users can expect; and
- evaluate the efficiency and effectiveness of service activity and delivery.

The purposes of performance measurement can be identified as being a means to:

- ensure accountability;
- improve service delivery;
- demonstrate efficiency;
- identify goals within departments;
- help motivate personnel achieve their objectives;
- aid management in assessing staff performance;
- indicate to outsiders that money is not wasted in the public sector;
- provide a standard by which to gauge the change in level of activity from one year to the another;
- give a basis for comparison with other organizations;
- provide a base from which to assess activities when preparing tenders for work; and
- provide objective quantifiable measures on which to judge performance and value-for-money.



The government of the United Kingdom has more recently emphasized the concept of performance indicators as a way of displaying accountability within the public sector.

It has become fashionable to refer to public sector organizations as needing to be accountable and providing value for money. Performance indicators and predetermined targets are used to measure the efficiency and effectiveness of organizations in meeting their objectives. These targets can be set by a variety of sources. For example in the case of government agencies, the targets are set by the relevant minister and government officials, while other organizations may have their targets related to criteria set by "standards of best practice." Performance is measured against specific output targets, financial targets and activity levels that must be met during the financial year. Inputs, outputs and impacts are subject to performance measurement.

The users of performance indicators can vary a great deal to the activity. It is not just the providers of the service who review these indicators to prove their worth or to justify the level of expenditure. As these performance indicators are published in the annual financial statements and in the national press, they often form a platform for pressure groups to compare services.

Benchmarking and charter marks are used as guidelines for setting targets. These are based on the best performance achieved by similar organizations, which then establishes goals to improve efficiency and effectiveness. Organizations tend to use these to prove their worth to the public. Local Authorities are now only as good as last year's performance, and this may or may not be as good as the neighboring authority.<sup>1</sup>

Performance indicators crop up everywhere in the public, from the number of "A" level passes at the local comprehensive school to the number of patients treated for hip replacements in the community hospital.

The question that begs to be asked is: what makes a good indicator of performance? The criteria of accountability and the provision of a worthwhile service represent the basic requirements of any public sector organization.

A way of assessing this accountability is through the use of performance indicators. This involves looking at actual performance that is quantified and compared to benchmarks, estimated calculations, predetermined goals and targets. This becomes an exercise that results in an evaluation of the worth of a service. The questions that need to be asked are:

- What exactly does an indicator or achievement of a predetermined target tell the reader about the service?
  - Can meeting a goal or target in itself be regarded as adequate proof of the provision of a worthwhile service?
- When assessing what makes a good indicator, issues that need to be kept in mind are:

- how were the targets and indicators set?
- when were they set?
- who was responsible for setting them?
- is there provision for reviewing and monitoring the process of setting indicators?
- what will be the behavioral impact upon the managers and personnel involved in meeting these targets?
- what will be the short and long term implications on performance, if activity merely revolves around achieving targets?
- are there any influencing factors that need to be taken

into account when interpreting indicators?

Once indicators become part of an organization's activity measure, the source data used must be carefully chosen so that it does not become misinterpreted. An awareness of issues outside the financial arena is also important.

For example, in "Homing in on Performance..."<sup>2</sup> social housing performance indicators from local authorities and housing associations<sup>3</sup> are compared. However, it is pointed out that differences in the type, size and turnover of housing stock inevitably will have an impact on re-let intervals, maintenance and management costs.

Consistency and accuracy are important to ensure that the indicators are not subject to manipulation and incorrect interpretation. Incorrect interpretation can lead to false results and incorrect presentation of end result data.

## Objectives of Performance Indicators

The objectives of performance indicators may be divided into the following areas:

- develop and improve accountability;
- ensure that value-for-money is obtained; and
- monitor the quality of the service.

## Accountability

Public sector accountability has become a topic of increasing concern for a number of reasons. These include the change in the United Kingdom Local Authority's role from that of a major provider of services to that of enabler. There is also the increased use of appointed bodies such as NHS Trusts<sup>4</sup> and school governing bodies to deliver services, and the development of Executive Agencies<sup>5</sup> to deliver Central Government services.

These developments are part of a trend towards the fragmentation of service and evolution of responsibility for those services. In turn, this has raised questions over how these newly developed services are to be controlled. The introduction of The Citizens Charter by the Government has also placed greater demands on public sector organizations. Not only must they deliver a predetermined level of service, but they must also inform the public of the level of service that should be provided. Performance indicators tend to be used as standards and records of achievement in such cases.

One way in which control can be exercised and performance monitored is through the use of targets and benchmarks. For example, the Audit Commission<sup>6</sup> has set a benchmark re-let period of three weeks for social housing.

The Audit Commission has a number of publications that give guidelines on the publication and use of performance indicators.<sup>7</sup>

## Value for money

The traditional definition of value for money, developed by the Audit Commission and National Audit Office<sup>8</sup> recognizes three main areas:

## Economy

Economy exists when goods and services (inputs) are obtained at the lowest cost. Measures of economy relate to the input of resources. Examples include unit costs, such as cost per pupil at schools, or cost per dwelling for refuse collection.

## Conclusion

Performance measurement is here to stay. As the measures used are refined, and a history of performance is established within the public sector, their use is likely to extend into new areas such as funding decisions.

Performance indicators interpreted in isolation need to carry a health warning, as external factors may have a bearing on the results provided by the indicators and achieved targets as implied in the examples above.

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## End Notes

1. Local authorities are the second tier of government in the United Kingdom. They are funded both from Central Government grants and local property taxes. Local authorities provide such services as education, social services, environmental health and leisure services.

2. "Homing in on Performance: Social Housing Performance in 1994 Compared." Published by the Housing Corporation and the Audit Commission, December 1995.

3. Housing associations are public sector organizations established to manage the provision of rented housing to the public.

4. National Health Service (NHS) trusts are the main providers of hospital-based health care under the NHS.

5. Executive Agencies are new entities that have replaced certain government departments. They are independent bodies that operate as much as possible as business entities, producing annual reports and accounts. They are required to publish performance indicators regularly, which are assessed against targets for each agency.

6. The Audit Commission has overall responsibility for the audit of local authorities and health authorities in the United Kingdom.

7. Audit Commission publications on performance targets and indicators include: "Citizens' Charter Indicators: Charting a Course," 1992; "Watching Their Figures: A Guide to the Citizens' Charter Indicators," 1994; "National Publication of the Local Authority Performance Indicators: Results of the Commission's Consultation Exercise," 1995; "Have We Got News for You: A Guide to Good Practice in Publishing Local Authority Performance Indicators," 1995. All publications available from the audit commission in Bristol, England.

8. The National Audit Office is the Central Government's independent audit body. It audits all Central Government departments and reports to Parliament via the Public Accounts Committee.

9. The National Curriculum is a national education program that all schools must follow in the United Kingdom.

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## **Theme 2 – Public Sector accountability: the relevance of performance measurement and value for money**

### **Paper 2**

Davies, M. & Warman, A., (1998), 'Auditing Performance Indicators - A Meteorological Office Case Study', *Journal of Cost Management US*, 12(1), pp. 43 – 48. (60%)



## INTERNATIONAL PERSPECTIVES

# AUDITING PERFORMANCE INDICATORS: THE METEOROLOGICAL OFFICE CASE STUDY

Marlene Davies and Alison Warman

*In 1990, the U.K. government introduced a system of performance indicators and targets to government agencies. To monitor the results of this program, the National Audit Office studied the effects of these changes on one such agency. The results of the study show that attempts to implement performance indicators in the public sector face different obstacles than those found in the private sector. The article discusses these obstacles, as well as the solutions to overcome them.*

It is fashionable to think of public sector organizations as needing to be accountable and providing value for money. The "Citizen's Charter," introduced in the United Kingdom in 1990, is an attempt at encouraging and improving a more customer-oriented and "user friendly" approach in the perfor-

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mance of public sector organizations' activities. To demonstrate and measure achievements of the public sector organizations in meeting customer expectations, the U.K. government introduced a system of performance indicators and targets, applicable on a national and local level.

Nowhere is this system more evident than in the high profile conversion of Central Government Departments to Executive Agencies during the past eight years. Government operations ranging from the Royal Mint to the accounting functions for the Armed Forces, CADW (Welsh Historic Monuments), and the Office of National Statistics are all now required to operate as separate organizations accountable to their particular government department but are operationally and financially responsible for their own affairs. Efforts such as *The Next Steps Initiative*<sup>1</sup> and *Executive Agencies: A Guide to Setting Targets and Measuring Performance*,<sup>2</sup> set about to improve the management of executive functions of government while agencies are

expected to use resources efficiently and effectively to provide good quality of service in accordance with the Citizen's Charter.

In their haste to become more accountable the government decided to follow private sector reporting models to produce glossy annual reports for the Executive Agencies in a style reminiscent of the large public limited companies. In addition to the private sector-style accounts, these reports are required to contain as a minimum, financial, quality, and efficiency targets as well as performance indicators that have been set by their sponsoring departments for the accounting period. The government requires all agencies to set the minimum targets.

The important-looking documents produced are very impressive, but the question needs to be asked as to the success of these reports. How successful are the performance indicators and targets as a means of monitoring and measuring performance and in demonstrating the value of money offered by the public service? Given the

haste by which these systems were introduced and the level of expectation of these reports, the National Audit Office<sup>3</sup> report on the evaluation of performance on the Meteorological Office's reported activity for 1994-95 should have come as no surprise and should serve as a warning to other public sector organizations.<sup>4</sup>

This report was the first of its kind in terms of evaluation of reported performance indicators, and the factors that it spotlighted should not be shrugged off as a problem of one errant agency, but should be of concern to the whole sector. There is scope to consider the outcome of the first NAO audit of performance indicators and assess not only what can be learned from the exercise but also to consider the problems associated with interpreting performance measurement as outlined by indicators and targets.

### **GREAT EXPECTATIONS**

The problem of changing the culture of an organization from that of a public service under the umbrella of a government department to a quasi-independent or stand-alone agency subject to private sector practices should not be underestimated. The "new style" organization must increase efficiency and be responsible for the first time for its own personnel, marketing, and financial functions. The end product of publishing successful performance indicators and target achievement must display how well the agencies have been successful in dealing with these challenges.

The NAO report points to a number of problems in this regard, such as lack of personnel experience within agencies and the misunderstandings regarding responsibilities and authority. They

*The government and the public appear to take the place of the primary users and their interests are in efficiency and quality.*

conclude, "It is important to ensure that agency skills are in line with delegations and to exercise care in using these powers."<sup>5</sup>

### **Recipients of the Report**

One question that springs to mind is for whom are these reports prepared? In the private sector considerable discussion has taken place to attempt to identify users and their needs. The primary user group in the private sector is generally expected to be the investor group with interest in such matters as returns on investments, risk, and capital growth. The reports produced have evolved over many years experience.

For public sector organizations, such as executive agencies, the user group is different. The government department and the general public appear to take the place of the primary users and their interests are in efficiency and quality of service. Interestingly, unlike their private sector counterparts that send accounts free to members of the public on request, the executive agencies who are by definition a public sector organization accountable to the public, charge for copies of their reports. Presumably the government departments are considered to be the primary users and receive free copies. If the government departments are the primary users of the information, it begs the question whether the style adopted by the reports and developed for report-

ing to investors in the private sector is the most appropriate.

Agencies have on HM Treasury accounts directives adopted the professional accounting standards developed for the private sector, (i.e., the U.K. GAAP). However even with specific guidelines on the reporting of performance indicators and targets for minimum financial, quality, and efficiency targets, there is nothing that imposes the number of indicators and targets. Agencies have had, therefore, to therefore decide for themselves on this issue and, as a result, the number of indicators and targets vary substantially from agency to agency.

This discretion is reflected in the different number of indicators and targets set for the various agencies. The Royal Mint for example has to meet one target each year while the Office of National Statistics publishes more than *thirty* targets, making the assessment of overall performance a daunting task. It worth noting however, that when the agencies have several indicators and financial targets they are prioritized and are generally split between key targets, other targets, and lower-level targets.

### **PERFORMANCE INDICATORS**

It is ironic that at a time when the Accounting Standards Board is trying to wean the stock market analysts away from the use of single measures of a company's performance, that the government should be seeking to impose such measures on the agencies. The Accounting Standards Board argues that the indicators mean nothing when removed from the context of the report from which they are drawn. It is the picture portrayed by the *whole* report that is important, not the narrow aspects in iso-

lation. The public sector would be wise to borrow this concept from the private sector.

The use of indicators as a means of control is open to criticism. The behavioral aspects of setting targets within an organization are equally applicable in the public sector. Targets can motivate but can also demotivate. Certain indicators can concentrate on very narrow aspects of performance, and managers can fall into the trap of focusing on these to the detriment of other aspects of the organization. Where they are tied to performance related-pay, this type of indicator can generate a very short-term approach and prevent the development of a long-term strategy. From the monitoring and control viewpoint, concentration on a handful of targets can divert attention from the full picture of the operation of the agency.

If, despite the disadvantages, this type of indicator is used, then a framework of good practice is essential. The guidelines initially issued by the treasury entitled *Executive Agencies: a Guide to Setting Targets and Measuring Performance* offers guidance in the setting of standards, but the NAO report highlighted areas that require further attention.<sup>6</sup>

### THE NAO REPORT

The Meteorological Office became a Next Steps Executive Agency within the Ministry of Defense in April 1990. Its stated aim is "to provide the UK military and civil users an effective, modern and efficient National Meteorological Service."<sup>7</sup>

The government has a policy of periodically reviewing executive agencies' progress and performance. The NAO report published in August 1995 provides

*Concentration on a handful of targets can divert attention from the full picture of the operation of the agency.*

such an evaluation. The methodology employed during the Meteorological Office review was that of an audit and analysis of performance every year since it became an executive agency.

The report identified a number of factors of general interest that caused concern from the audit of the Meteorological Office (Met Office). These are noted as key points throughout the report and state that as far as performance indicators are concerned the following are relevant:<sup>8</sup>

- *Consistency* in the selection of indicators to be used as a means of monitoring and assessing progress from year-to-year.
- *Measurement* procedures to be agreed upon so that requirements are fully understood and there is no room for alternative interpretation.
- Indicators should be selected to *focus* on key performance areas and support the objectives of the agency.
- Targets set for the indicators need to be reviewed each year in the light of achievements to ensure that they remain *challenging* but achievable.
- The targets achieved must be subject to independent and effective verification or *audit* to ensure that the system retains credibility and operates effectively.

### Consistency

As a new approach, it was inevitable that there would be changes to the monitoring and control procedures as experience was gained by the operating agencies. The selection of effective performance indicators is an art that improves with practice and experience. It was therefore inevitable that the indicators would change during the first few years as both agency and government department realized which factors required control.

However, as the National Audit Office pointed out for the Meteorological Office, where the targets constantly change it was difficult to monitor and assess performance. It also made it difficult for the agency to establish a sense of ownership and achievement. The targets ideally used should "cascade" through the organization to form the objective for each aspect of the agency's work. This is impossible if the targets change regularly. Changes in direction are themselves demotivating to staff. Changing goal posts too often only leads to comparison problems that render a misleading view of overall performance.

In its evaluation of performance within the Met Office the NAO commented that "the Meteorological Office has not had a settled basis for measuring its overall performance."<sup>9</sup> For example, in the 1991-92 report, the target for net operating costs was not met, while in the 1992-93 report the cash limit was exceeded. Additionally, in 1994-95 report, the Met Office set its target on net expenditure. It is only after taking into account these constantly changing targets that it is possible to undertake comparisons. The Met Office is not the only agency with consistency problems; the

Office of National Statistics also appears to create a whole new set of indicators annually.

### Measurement

Targets need to be delivered carefully and in objective terms. It is important that no room for alternative interpretations exists. The case of the Met Office illustrates the problem of approving targets on one basis, only for them to be assessed and reported on another.

This highlights the need to select indicators that are *objective* measures and to explain exactly what is being measured. If the performance indicators can be based on audited data then so much the better. Because of the lack of objective or clear measures, the reader of the published reports cannot identify if there are discrepancies. There is a presumption that published data is reliable. If this proves not to be the case then the whole system for all agencies loses credibility.

The NAO's audit of the Met Office highlights this issue when it comments on how they encountered difficulties in agreeing on the reported efficiency improvements of the Met Office for 1993-94. This was due to performance being reported on a different basis than that set within the target.

The Met Office has ten business areas each with thirty-five lower-level targets to meet and each business area meets these as part of the overall corporate target. The efficiency corporate target for the Met Office for 1993-94 was to increase efficiency in business areas by 2.5 percent and to require each of the ten business areas to meet this level. Lower level targets are specific to the business area (e.g., forecast accuracy, customer satisfaction, and warning alarm rates for gale warnings for shipping).

*There is a presumption that published data is reliable. If this proves not to be the case then the whole system for all agencies loses credibility.*

The lack of objective measures caused a rather large discrepancy in the NAO's and Met Office's efficiency rates. The Met office reporting that they had achieved 75 percent of their lower level targets for efficiency improvement. However, the NAO found that only four out of the ten business areas (40 percent) achieved the corporate target.<sup>10</sup>

Another published performance indicator that caused concern related to the achievement of an overall 4 percent increased efficiency. However, the facts show that increased efficiency was based on only seven out of the ten business areas, and even within these seven a significant allowance was provided when assessing any improvements. Further, the methods used to measure efficiency varied between the business areas.<sup>11</sup> This provides a working example of how important the interpretation of indicator measures is to the reporting of achievement.

### Focus

The art of setting indicators lies in the ability of the designer to distill the essence of the agency's goals into a measurable number of objectively measurable indicators. As previously mentioned, indicators and targets should not be read independently of the full reports from the agency to which they relate. Thus, they are a means of summarizing the achievements of the agency but should not draw attention from the overall picture. The best indicators should, in-

stead, focus the attention of the agency staff on achieving the long-term aims of the agency.

The problem is similar to the published accounts of private sector companies attempting to represent a "true and fair view." While professional accounting standards are intended to promote the concept of the true and fair view, there will be occasions when, to achieve this view, compliance with standards will need to take second place to the overall need for a true and fair view. In other words, even though indicators need to be set with care and be properly focused, there will be times when, to achieve the aims of the agency, achieving specific targets will take second place to achieving the long-term objectives of the agency.

The Met Office set thirty-five lower-level targets for its ten business areas in order to measure its Corporate Target in 1993-94. However, when it came to measuring these lower-level targets, it only measured twenty-seven out of thirty three (two were omitted) to judge its overall performance for customer satisfaction. This, according to the Met Office, gave an achieved performance result of 82 percent.

The NAO, however, discovered that in two of the twenty seven cases where the Met Office had assessed the target as having been achieved, performance was actually *below* target. As a result of these findings, the Met Office actually achieved twenty-five out of thirty-four targets, a 74 percent achievement, thereby missing the target of 80 percent.<sup>12</sup> When ten business areas are added together to provide one overall indicator, there is bound to be some averaging, and the business area that marginally fails to

meet its target has a significant effect on the overall achievement.

### Challenging Targets

While the performance indicators chosen need to be consistent over time, if achievement is to be assessed, the actual target levels required for those indicators need to be reviewed in light of performance. It is equally important to review these whether the organization meets them with ease or whether they fail to meet them at all. In the former case, unless they are reviewed, no challenge exists and efficiency is not improved. In the second situation it is necessary to identify why there is a problem and set a target that can be achieved with some effort.

If nothing is done in either situation, problems of demotivation can occur. Setting target levels is an issue for negotiation if they are to operate effectively. Targets should not operate in a vacuum; an awareness of other factors concerning the agency should be made known to the reader of the report.

While the Met Office targets have changed over the years, the concept of setting a challenging target is illustrated by examining another Executive Agency, Companies House, whose targets have not changed over the past few years. The Annual report indicates that the targets are being met. Further consideration of the information found within the annual reports, however, implies that a change in activity and focus affects the agency's potential for meeting the targets.

In 1993-94, a target for Companies House was to provide a two-hour search service for all customers. However, when the overall workload for the year was 4 percent below forecast and searches decreased by 1.9 percent, the two-hour search service be-

*An independent audit  
is not a luxury,  
it is a necessity.*

came an achievable target without any great effort.<sup>13</sup> To assess performance on the basis of the original targets can be misleading in such a case, when other issues are taken into consideration.

The situation becomes even more complicated when staff pay is linked to achieving the targets. This is an exercise that needs experience if it is to work. It strengthens the need for an independent audit of the reported achievements. The temptation to overemphasize success to achieve results over and above the set targets to obtain a greater reward can be very strong.

### Audit

It is important for the system's credibility that the targets to be used for monitoring or control be very carefully selected and independently verified. The NAO examined whether the Met Office's quality targets complied with best practice criteria. An audit of the targets' compliance with best practice was based on the criteria of being relevant, bounded, comprehensive, valid, reliable, and consistent.<sup>14</sup>

The audit of performance indicators is essential to ensure that the indicators give a true representation of activity. Considering these best practice criteria, the NAO identified fundamental weaknesses and targets that could be open to misinterpretation for the Met Office. The NAO report, in paragraph 3.38, questions the relevance and validity of the target to achieve 80 percent of Business Plan targets. Examples of the quality

targets set are, "to develop a customer satisfaction index...", "to initiate a regular programme of liaison meetings....," and "to maintain a rolling programme of reviews..."<sup>15</sup> As indicated above, given the measurements imprecise nature, achievement may not be clear cut.

The achievement of targets is also questioned when a number of targets are grouped together to reflect activity. If achievement of any 80 percent is satisfactory, then it implies that all targets are of equal weighting. This may not always be the case, especially when some targets are imprecise.

As the NAO report indicates, it is possible to have very different interpretations of the results of the indicators based on the data analyzed. Accounting methods applied to the analysis of the data can affect the importance of performance indicators as a gauge to effectiveness and efficiency.

For example a full cost accounting approach versus the marginal cost basis will yield a different result. The Committee of Public Accounts expressed concern that the Met Office's Commercial activities (provision of weather forecasts to the Civil Aviation Authority, local authorities, and the public) were not meeting the cost of central overheads. If full cost accounting is applied, then in 1993-94 the activities fall short by £4.5 million, while operating on a marginal cost basis revenue would have exceeded estimated marginal cost by £400,000.<sup>16</sup>

An independent audit, then, is not a luxury, it is a *necessity*. The credibility of the whole system of agencies is put at risk if the data from one is found to be unverified and open to dispute. Where performance-related bonuses are linked with the outcomes, it is unreasonable to expect the staff con-



cerned to be responsible for the measurement and reporting of results in an objective manner when the very same results will determine their own pay. This is particularly so where targets are not easily verified objectively.

### THE NAO'S CONCLUSIONS

The overall conclusions of the NAO on the Met Office includes five specific target issues:

1. Need a more consistent target for revenue from commercial services. Audited annual accounts would provide a more reliable basis for assessing performance.
2. Develop an overall improvement measure in their computer model.
3. Focus quality targets on key outputs. Some quality indicators need more "robust" measurement.
4. Targets should take into account past performance to remain challenging and it is important to ensure that achievements are assessed and reported on the same basis as the approved target.
5. Need for independent verification of reported performance.<sup>17</sup>

### CONCLUSION

The 1995 NAO report on the Meteorological Office Executive

Agency represents a useful warning about the problems that agencies can experience with the application of the performance indicators and targets. It is important that it is seen as a useful lesson for other departments and agencies and not just filed on the shelf. The Met Office may have been the unfortunate first one subjected to an evaluation, but the message applies to all when it comes to stressing the value of auditing performance indicators.

Finally, the Met Office became a Trading Fund in April 1996—the NAO considered this move as one that will provide a more financially-based efficiency measurement. This in turn provides a sound base from which to complete an audit of the indicators.

The NAO have not undertaken a specific evaluation of performance on executive agencies since 1995; however, that is not to say their annual audit of the Agencies excludes an audit of performance indicators. Given the issues surrounding the interpretation, understanding, and establishment of worthwhile indicators, the role of the auditor is very much that of evaluator and assessor ensuring the performance indicators used. The auditor will also need to ensure that there exists a system for the accuracy and complete-

ness of information collection, recording, and publication, which in turn provides assurances to those using the published results.

### Notes:

1. TCSC 7th Report 1990-91, House of Commons, 496.
2. HM Treasury, *Executive Agencies: A Guide to Setting Targets and Measuring Performance*, (London: HMSO, 1992).
3. The National Audit Office is the independent auditor for government departments and related bodies in the U.K.
4. National Audit Office, *Report by the Comptroller and Auditor General, The Meteorological Office Executive Agency: Evaluation of Performance* (HMSO London, HC. 693 Session 1994-95).
5. *Ibid.*
6. HM Treasury, *Executive Agencies: A Guide to Setting Targets and Measuring Performance*, (London: HMSO, 1992).
7. Framework Document (April 1990).
8. National Audit Office, *Report by the Comptroller and Auditor General, The Meteorological Office Executive Agency: Evaluation of Performance*, Key Points, paragraphs 2.45, 3.17, and 3.44.
9. *Ibid.*, Key points, paragraph 2.24.
10. *Ibid.*, Key points, paragraph 2.20.
11. *Ibid.*
12. *Ibid.*, paragraphs 3.7, 3.8 and Key points, paragraph 3.9.
13. A. Warman and M. Davies, "Game of Moving Targets," *Accountancy Age*, (July 1995).
14. National Audit Office, *Report by the Comptroller and Auditor General, The Meteorological Office Executive Agency: Evaluation of Performance*, Appendix 3.
15. *Ibid.*, paragraph 3.38.
16. *Ibid.*, Key point, paragraph 2.31.
17. Recommended by the Committee of Public Accounts PAC 34th report 1993-94, House of Commons 279 Driver and Vehicle Licensing Agency.

## **Theme 2 – Public Sector accountability: the relevance of performance measurement and value for money**

### **Paper 3**

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# Performance Measurement in the UK Public Sector: understanding performance indicators

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### **Abstract**

Performance measurement has over the past 20 years become an important aspect of service delivery and assessment in the UK public sector, not to mention its impact on the political platform as a means of either advocating success or conversely as a means of highlighting failures against expectations. The development of performance measurement and its related target setting and resulting indicators is an area that is full of expectations, disappointments and impacts on the service provider and recipient. This paper looks at the background to the current state of play in performance measurement, the new initiatives that have been introduced to assess performance, a review of the literature and illustrative examples consider how performance measurement has been interpreted and used. The role played by audit in this assessment process is outlined and considered in terms of its responsibility in providing the assurances that are inevitably required when any form of service delivery is reviewed under the remit of displaying accountability. Examples are used to illustrate the issues highlighted and discussed in terms of the criteria for setting targets as well as the behavioural implications attached to the interpretation of expectations and results. Finally, the potential for research for undertaking a comparison of performance indicators and their impact on perceptions and provider reactions is considered.

### **Introduction**

The U.K. Government has consistently over the past decade placed greater emphasis on performance indicators as a means of displaying accountability within the public sector. Performance Indicators and preset targets are used to measure the efficiency and effectiveness of organisations in meeting their objectives. Performance is measured against specific output targets, financial targets and activity levels that must be met during the financial year. Inputs, outputs and impacts are subjected to measurement in order to indicate activity and performance.

As a backdrop to the introduction of performance measurement it is worth mentioning the legislative developments, environmental, cultural and social impacts that have contributed to its elevated position. Local government in particular has come a long way since the inception of the Poor Law Act of 1834 and the Municipal Corporation Act of 1835, the structure and nature of service delivery and management has developed to a degree that there is very much a sense of expectation as to the level and quality of service provision. Greater public awareness and interest in public sector management, has led to a greater degree of involvement from individuals. This has stemmed in part from the demands for greater financial contributions that are placed on the fund contributors, which in turn has led to greater expectations of accountability. Similarly greater demands on the provision of public sector services, has meant that service providers have to ensure that all the resources utilised are providing value for money in terms of efficiency, effectiveness and economy. These factors have placed performance measurement at the forefront of information source for evaluating and assessing the use of scarce resources.

Devolution has contributed to the process of accountability where the Welsh Assembly and Scottish Parliament now have a forum from which regional issues can be debated at a regional level. Performance of the local services may be under a watchful eye but so are the devolved governments. On an organisational level, decentralisation and budget delegation allowing low level cost centres to take control of their budgets has created a need for additional management information in order to maintain control and awareness of events, activities, outputs and impacts. Both devolution and delegation have increased awareness and the need for information that stems from performance measurement. The increased use of information technology not only revolutionised the way services were delivered but also changed the approach to record keeping and the management and audit functions. The emergence of timely management information systems have enabled both advisors and decision makers to identify crisis areas and introduce remedial action far quicker than would otherwise have been possible. This has increased not only

volume of information available but also the demand for more accountability by the very fact that supposedly the information can be accessed by the electorate.

The emergence of pressure groups on a local and national scale has meant that issues ranging from local groups campaigning for city centre bypasses to the Green Peace fight on environmental protection have put performance on the debating platform. Private sector mirroring has resulted in the creation of internal markets, and market testing. While privatisation and the introduction of the Public Finance Initiative has resulted in a need for greater awareness on how to manage projects, the need to undertake risk management, and the need to take account of the resulting impact of the public private merger on projects. All of these rely heavily on the use of performance-related statistics and results in order to evaluate and support decisions.

Government cutbacks on funding to local and centrally funded government bodies, has resulted in greater pressures for service provision at a local level, such as the care in the community where certain mental health service provision has shifted from the health sector onto the local government sector. Inevitably this has been at the expense of other services which had placed the need to review performance based on indicators and targets as a means of reallocating funds.

Local government saw the introduction of performance measurement as a legal requirement in 1990, when the Audit Commission was given a duty to draw up a list of indicators for measuring performance of local public sector services. The first list was published in 1992 after local authorities were required to derive, have audited and publish a series of performance indicators set by their external auditors on behalf of the government. Local government reorganisation of 1996 had as part of its remit an objective to streamline the operation and decision-making structure for services to be provided at the most effective and efficient manner, this in turn would be assessed via performance indicators and the meeting of targets. This process was intensified by the introduction of Best Value in 2000, where under the best value regime, local authorities were required to demonstrate the achievement of value for money and continuous improvement in the quality of service provided to their customers.

The Comprehensive Performance Assessment, and Programme for Improvement in Wales superseded the Best Value regime and is designed to be more of a self assessment process for service delivery and improvement. The process is still subject to Audit Commission review but emphasis now falls on corporate performance instead of an evaluation of individual services. Performance is the key to greater financial freedom, 'where the resultant assessment (is used) as a basis for rewarding good performance and identifying substandard performance by focusing on outcomes rather than just inputs' (Seal and Ball, 2003).

Central government's decision to create Executive Agencies in 1988, to run its departments and business units where practicable within agreed policy and resource frameworks, also placed a heavy reliance on performance measures and target achievement to assess results. The idea of an Agency was to improve efficiency and quality of service based on the theory that by relating outputs to the costs involved, managers could make better choices. By setting out in advance the expected achievement plan the subsequent review and evaluation should, at least in theory, be improved. It was also deemed a means of displaying more accountability in terms of public expenditure. This is questionable when 'the targets themselves are bewildering in their range, with no need for comparison between agencies a free hand is permitted', (Warman and Davies, 1995). Ten years on the theme of reforming service delivery and undertaking an assessment based against preset targets was part of the 1998 document Public services for the future: modernisation, reform and accountability. Again, lists of targets were identified for Whitehall and service providers to meet, these original targets however very often have a short 'shelf life' and can become 'curiously dated' (Travers, 2003).

### The value of performance measurement

The introduction of performance indicators for comparison can be viewed as an incentive to government to take stock of how well a service is provided and the creation of benchmarks for year-on-year improvement all adds to the objective of better service provision. In a democratic society, where every citizen has the right to know how public funds are spent, this concept of informing the public on how government manages and spends public money via published performance indicators has become an annual league table review. The Audit Commission published an annual schedule of performance indicators that are used to highlight good and poor performing service providers. It is not only the auditor who uses these indicators to assess whether the organisation has matched up to the criteria of economy, efficiency and effectiveness. These performance indicators are published in the annual financial statements, in the national press and often form a platform for pressure groups to compare service provision. They are regularly used by the media to highlight areas of poor provision, and very often on a selective basis without explanation to the public on other underlying factors that are not readily identified from the indicators. Benchmarking and charter marks are based on the best performance achieved by similar organisations thereby establishing goals for the visible improvement of efficiency and effectiveness. Organisations tend to use these as a means of indicating their worth to the public. Public sector organisations are only as good as last year's performance and this may or may not be as good as the neighbouring authority, health Trust or similar organisation.

The Audit Commission's perspective on performance measurement value is summarised as:

If you don't measure results, you can't tell success from failure.

If you can't see success, you can't reward it.

If you can't reward success, you're probably rewarding failure.

If you can't see success, you can't learn from it.

If you can't recognise failure, you can't correct it.

If you can demonstrate results, you can win public support.

What gets measured gets done.

This however can be questioned on the basis of how well results are measured, are the figures and results accurately documented, and are there ulterior motives linked to the way the results were collated or recorded? When it comes to 'seeing success', who will see this success and will they be in a position to assess the success? How will the result be rewarded, will there be an incentive to record success in order to receive monetary rewards? Performance-related pay based on a successful service result can be subject to manipulation or misinterpretation of the results. Public sector services are not always easily categorised into success stories, as there may be a long lead time before any successful result is achieved, measuring over one period may not therefore be appropriate. While demonstrating success may be the primary objective where only positive performance is highlighted or predominantly sighted without consideration for the other indicators or failed targets, rendering performance results being used selectively for specific ends. If the adage 'what gets measured gets done' is true, there is the potential that services or activities that are not measured may not get done at all, or services may be focused only towards those measured at the expense of others.

The Chartered Institute of Public Finance and Accountancy (CIPFA), the public sector accounting body, has identified how performance measures can be used both internally and externally to enhance accountability (CIPFA, 2000). Internally they can be used to aid policy making, planning, budgeting, improving quality service provision, monitoring economy and ensuring equity in the distribution and access to service delivery. External performance measures have many uses and benefits in allowing the comparison of output or performance against targets for previous years or similar organisations. They can be used to highlight areas of public interest or relevance, identify trends over time and assist in the development of benchmarks, norms or targets. The effectiveness

of performance measurement in these areas does however depend on the reliability of the data, on who collected the data, and how the end result was presented and interpreted.

The value of performance indicators therefore is not only that of displaying accountability, but also that of playing an important role in the overall management of the organisation in terms of the planning, development and policy making process. The measurement of performance is an increasingly important part of the management of public services, and intrinsic to performance management approaches. The measurement of units of production and activity has progressed from the measurement of outputs to the measurement of outcomes, and this is now a focus of performance in public services. It has moved on from the cost of teacher and overheads per pupil, to the amount of time spent in exam preparation, to the number of GCSEs passed and the numbers going on to higher education or obtaining jobs. Measuring outcomes for the well-being of society or economy, or quality of life is more difficult and relies on an underpinning of well regarded research and theory. Nevertheless as governments at all levels seek ways of demonstrating that public money has been put to good use, and as the demands on public money and public services are increasing then the emphasis on performance continues to increase in order to display improved service provision.

The pursuit of accountability requires something 'firm' upon which to fix judgements, some kind of evidence that responsibilities and aims have been met. The following are examples of the range of measures that yield evidence about activity levels. Attached to each one is a comment on how revealing the result is about performance, based on the information that is not provided.

**Inputs** – e.g. staff numbers per establishment, and level of expenditure. There is no indication as to additional problems that staff may face that require the additional inputs. Recruitment of specialist staff may prove problematic in some areas and may only be rectified with increased salary offers. Comparing the number of housing benefit officers within neighbouring local authorities may indicate varying numbers but may not take into consideration the fact that staff have been 'poached' from one authority to another by incentives over and above the norm. Using numbers in isolation does not always provide useful information.

**Outputs** – e.g. quantity of service provided in terms of hours of home care. There is no indication of the extra service that could be provided if more staff could be recruited. This is often the case in rural areas where the demand for home care cannot be met due to a shortage of staff.

**Quality** – e.g. percentage of household waste collections missed. The percentage figure does not indicate how many householders failed to put out the household waste on the correct day or time.

**Speed** – e.g. percentage of emergency housing repairs completed within 24 hours, is subject to interpretation of what constitutes an emergency repair, and whether a repair is deemed to be only a temporary measure or a full repair.

**Efficiency** – e.g. cost per person in residential care, does not take into account external factors of special needs for equipment and diets.

**Outcomes** – direct measures of the achievement of service objectives, e.g. to educate children, these are subjective in terms of results as even with examination results the size of classes and quality of teaching staff is not taken into account. One local authority in England during the lead time to summer 2003 examinations opted to try to improve their ranking for GCSE results within the authority by paying pupils to study. Those pupils who had the potential to succeed in their GCSEs were given a monetary incentive and additional help with their studies. The question to ask is whether the objective was to increase the pupil's potential for success or that of the school's examination success in terms of the league tables.

**Consumer satisfaction** – e.g. the percentage of users satisfied with a service, this is very subjective as what may be considered satisfactory to some may be deemed to be excellent by another. A relatively low level of service may be deemed very good when compared to no service at all.



**Equity** – e.g. the percentage number of public buildings that provide special access ramps for the disabled, some buildings by their very nature may be accessible by the disabled and may not require the special access ramps, they however will fall outside the performance indicator rating.

**Targets** – e.g. achieve a 6 per cent annual rate of return, this begs the question why 6 per cent, and whether it should be subject to review.

### **Comparative data**

Although some public sector organisations have provided information such as unit costs (for example, per tramway mile and per pupil) since the nineteenth century, the dramatic increase in the amount of information published by the public sector has occurred since the early 1980s. This is where the providers and governors of public sector services have attempted to give assurances about the validity of their expenditure. This has been achieved through the use of statistics, cost comparisons and through value for money audits being a part of the public auditor role.

To determine the standard to set for a given performance measure or indicator it is useful to make comparisons against a like activity or organisation. There are four main performance comparators. Those that are set against targets that may be determined internally or externally, those that are assessed over time, usually over a period of a year, those that are set against comparable organisational units, and finally those that are set against benchmarks. Comparisons against benchmarks assess the performance that should be expected by adoption of best practice standards built on rational argument and professional judgement. Benchmarking substitutes measures with absolute standards. A basic comparison between organisations is expenditure levels. This includes data that is capable of being measured in financial terms such as unit costs. Unit costs have several uses as performance measures for evaluating services, they can act as an aid in the setting of prices for other providers, they can be used to compare prices and costs for purchases, and can be used to establish realistic criteria on which to invite tenders for goods and services.

The use of comparative data can act as a confidence booster for organisations and managers in terms of reaffirming that they are doing the right thing at the right price whilst also meeting organisational objectives. Organisations must however be satisfied that they are comparing like-with-like, and not using comparative data to display themselves in a positive light by using results selectively. Comparative indicators based on inter authority, per school or hospital, whilst in name is of a similar nature, there can never be a true identical organisation to compare like-with-like and the comparison must therefore be read with that knowledge in mind.

### **Characteristics of performance indicators.**

If accountability and the provision of a worthwhile service represent the basic requirements of any public sector organisation then the performance indicator is an important element in the equation, Davies and Shellard (1997) ask the questions:-

- *What exactly does an indicator or meeting a pre set target tell the reader about the service?*
- *Can meeting a goal or target in itself be regarded as adequate proof of the provision of a worthwhile service?*

The NHS waiting lists are regularly recorded as indicators of poor service, while meeting a target can indicate success, but neither will tell the reader about the treatment received whilst in hospital.

Davies and Shellard also discuss the characteristics of 'good' or worthwhile indicators by questioning how, when, and why indicators are established in the first place. Their questions seek to establish the reasoning behind the establishment of the indicators and their impact on service delivery:

- *How were the targets and indicators set?*
- *Who was responsible for setting them?*

Unfortunately it seems that 'no efforts were made to agree the individual targets with those actually running services. When faced with public questioning about how the initial targets were set,

ministers and officials agree that many were simply plucked from the air' (Travers, 2003).

- *When were they set?*

Some of the original targets have a curiously dated look to them. For example, a 1998 concern with domestic burglary and car crime seems more than a little quaint against today's backdrop – just five years later – of gun crime and international terrorism. Others, such as a Home Office target to reduce access to drugs for people aged under 25, look wide-eyed and naïve' (Travers 2003).

- *Is there provision for reviewing and monitoring the process of setting indicators?*

The Audit Commission has an input into confirming the information supplied for performance evaluation under its audit role, but how much influence does it have in the process of setting targets is debatable.

- *What will be the behavioural impact upon the managers and personnel involved in meeting these targets?*

The temptation to under record or exaggerate results may override the reality of data accuracy, while the pressures of meeting targets may jeopardise the quality of certain aspects of service provision.

- *What will be the short and long term implications on performance, if activity merely revolves around achieving targets?*

When indicators revolve around a time frame of normally one year for comparison purposes, the longer term implications can easily be missed.

- *What are the factors that need to be considered when interpreting indicators?*

The interpretation of indicators often carries a 'health warning', and just as there are plenty who are not immune to ignoring 'health warnings' in their normal lifestyle, and end up with major health problems in later years. This is surely also true of indicator interpretation, failure to read the warning signs can lead to problematic service provision.

If performance indicators are to fulfil their expected role and yield positive answers to the above questions they need to possess characteristics of consistency, measurement, focus, and be challenging and capable of verification. The consistency characteristic may be viewed in terms of indicator information as indicators that are used to monitor and assess progress from year to year need to have a framework that recognises any changes in the way they are measured and the way that services are provided. Any such changes will alter the comparison level, and render any results meaningless. Adjustments may have to be made or differences accommodated in the indicator interpretation, although this can render any comparison subject to mistrust and manipulation. Examples of how performance indicators can be affected can result from very simple factors such as the change in the mode of service delivery, e.g. manual to automation, to complex external influences such as changes in legislation and social attitudes. In establishing a system for measurement, the target requirements need to be fully understood by both management and officers alike, in order to ensure that there is no opportunity for an alternative interpretation. This should eliminate those targets that may not be achieved or where some 'easy' options may not truly reflect performance. For maintaining a strong focus it is important to place the appropriate emphasis on the key areas and maintain the focus, otherwise too many indicators will cloud the issues and nothing will be achieved in terms of meeting target measurement. The resulting data will render the indicator meaningless and be misleading while nothing is actually achieved in terms of the measurement. Indicators will need to be subject to annual review in order to remain challenging but achievable. The Audit Commission constantly comments on this need for annual review. Finally, the requirement for an independent audit and verification is the key to retaining credibility. The fact that the data is subject to independent review adds to the accountability and assurance aspect of how much trust can be placed on the resulting information.

### **The potential for misunderstanding and misinterpretation.**

Once indicators become part of an organisation's activity measure, the source data used has to be carefully chosen in order that it does not become misinterpreted. An awareness of issues outside

the financial arena is also an important factor. The Housing Corporation report (1995) illustrates this, where social housing performance indicators from Local Authorities and Housing Associations are compared. Differences in the type, size and turnover of housing stock are highlighted as having an impact on re-let intervals, maintenance and management costs. This is reaffirmed by Tai Cymru (1997) the government body that controlled Housing Finance in Wales, in its guide as to how well associations were performing. Two tenant related indicators selected from the 12 indicators used by Tai Cymru, namely, the time taken to re-let empty properties, and the proportion of emergency and urgent repairs completed within target times (within 24 hours and 5-7 days) are used to illustrate the potential for misunderstanding. (Appendix A sets out the data).

Information not immediately identified from this table is that the target completion times for emergency repairs vary between 4 hours and 2 days, while difficulties in re-letting a small number of properties can have a marked effect on the average re-let time for a small Housing Association. As with all performance indicators therefore, they need to be read with caution. For example, the percentage of emergency repairs in target time for Cadwyn and Glamorgan and Gwent are on par, but they operate in different areas with different profiles. Cadwyn is located in Cardiff, and has to provide city living for key workers who cannot afford their own place in a booming economy. While Glamorgan and Gwent operates in the South Wales Valleys where there the problem is that of an overhang of unfit properties from a past industrial era. Definitions are also a problem as each Housing Association has its own definitions, e.g. of repair category. There is a need to standardise definitions and reporting throughout an industry to make any sense of these indicators, but establishing standardised definitions and reporting structures is not an easy task when every organisation has its own distinctive characteristics and features. Housing Associations in Wales have moved on since 1997, their targets are now established by the Welsh Assembly Government, and whilst some of the indicators seem only to make sense to the WAG, the Associations themselves make an effort to convey the results to their tenants through various means. Probably the most effective is that of news sheets that outline performance results with 'happy smiling faces' for the areas that have improved and a 'sad face' where the targets have not been met or have slipped from previous years. How effective this method is when changes are so minor in relation to the overall picture is debateable, for example one Cardiff Housing Association identified that its rent collected as a percentage of rent collectable was worse in 2002/03 than the previous year, as the percentage had dropped from 98.6 per cent to 98 per cent. This in itself may not seem very serious in terms of percentages, however the key to this is amount of rent not collected as well as the fact the range for all the Cardiff Housing Association ranged from 98 per cent to 99.5 per cent. This made this particular Association bottom of the table for rent collection, but as a contrast the percentage of tenancies in arrears showed this particular Association the best performer with 30 per cent as compared to a range of arrears from 30 per cent to 70 per cent. This Association therefore is 'best' and 'worst' in terms of two specific indicators; does it mean that on average it is performing well?

#### **Shortcomings of performance measurement, targets and indicators.**

The government itself recognises that performance measurement is subject to a health warning. 'If some performance data are so unreliable that they cannot withstand scrutiny, it is questionable whether they are worth disclosing unless they carry a suitable 'health warning' for the benefit of those who otherwise might rely on them' (UK Government Report, 1996). Performance measurement enables the identification of good and poor performances, and helps indicate operational improvements. Devolved spending authority, improved incentives, better information, greater accountability and the use of cheaper private sector suppliers will all contribute to economy, efficiency and effectiveness (Jackson, 1995). In spite of the usefulness of performance indicators, they do have limitations. The measurement of performance through indicators to inappropriate areas may be a waste of resources. To specify which areas are inappropriate is not easy, but two general conditions are relevant: performance indicators are not helpful and may be harmful when

there are no clear measures of output, and when goals to be achieved cannot be easily identified (Lapsley and Mitchell, 1996).

In order to avoid falling into the 'health trap' the whole picture needs to be considered not just certain aspects. This takes into account the corporate objectives as a whole not just the individual departmental objectives. The Treasury is set to scrap more than a third of its targets for Whitehall departments amid claims that they were confusing and not taken seriously by senior officials. The move follows complaints about conflicts between targets and performance indicators set by the Treasury, Downing Street and the departments themselves. The number of targets has already been cut from 512 in 1998 to 160 in 2000. 'We have targets set by the Treasury and then the prime minister makes a speech and suddenly we have different targets,' said one official involved in the spending talks. 'There is a temptation to ignore the targets, because they are often vague and don't match the political priorities of the moment (Ryan, 2002).

Interpretation within the correct context is vital, as the very reason for utilising the published information is to influence, inform or undermine other information. Reporting is subject to the way in which the source data was collected and analysed, this also depends on the remit of the report writers and the accessibility of the source data, which in itself may be subject to interpretation. Meeting targets does not automatically indicate good performance - the targets may not have been set at an appropriate level in the first place, instances of moving targets and changed circumstances can render the original targets meaningless in terms of increased efficiency. When Companies House experienced a lower level of activity it still had as its goal the same target for processing enquiries and filing returns as when activity was higher. 'In Companies House the target is to provide a two hour search service for customers. When the overall workload for the year was 4% below forecast and searches down by 1.9% the two hour search service becomes an achievable target without any great effort' (Warman and Davies, 1995). Achieving the target became relatively easier and seemed to indicate increased efficiency. Meeting targets year-on-year may not be a true indicator unless the targets used are consistent or take into account changes in activity levels. Not all indicators are audited, and therefore their reliability and the assurances they carry may be suspect. The changes that occur in organisational status, activities, or management structure are not reflected in indicators. The NHS Confederation policy director, said the performance assessment system was retrospective and did not take account of whether trusts were already improving. Nor did it investigate the complex and often long-term reasons for failure. Also, there was no transparency in the way the indicators were selected, and the assessment criteria were subject to last-minute changes. He added that the quality of the data used was poor and did not take into account the views of either staff or patients (Ward, 2002). There are behavioural implications attached to performance target-setting and goals that can be detrimental to the objective of performance measurement, as well as causing undue stress on the workforce and management involved. As Steve Bundred (2000), Chief Executive of Camden London Borough Council, has stated, 'in councils where services have been labelled as 'unlikely to improve', senior officers are reporting that the impact has been hugely demoralising to staff'.

If a standardised review and interpretation approach is employed such as a management checklist this can in turn have its problems which can be broadly categorised as, ambiguity, displacement, omission, and conflicts. Ambiguity, where there is no satisfactory definition of output, for example, the visible improvement in the populations health cannot be attributed to changes in medical practices solely, better living conditions, better employment conditions and better education can all contribute to a healthier nation. Displacement is where management will focus on performance indicators where the quantifiable aspects of service delivery receive most attention. Aspects of delivery that have a subjective nature to their provision, in terms of quality are often avoided. Omission occurs when the targeting of a few key indicators may have the unintended consequence of the omission of other significant indicators. Conflicts take place when the collision of public



service ethos with accountable and commercial management ethos may not always lie side-by-side in an amicable manner; profit motives and effective public sector service delivery are not in the same category of management strategy. Joined-up service delivery problems of conflicting targets, where particular care has to be taken for the development of services in the joined-up domain (where local government and health providers link up to provide services). 'There is a real danger that the targets set for individual service providers will work against them carrying out joint projects. Public auditors will need to pay particular attention to the coherence of performance measurement in these areas and could have a vital role to play in identifying any such dysfunction' (Williamson 1999).

When it comes to the workforce who have to deliver these services, performance targets that are set by managers with no input from other personnel, can lead to less job satisfaction along with the possible loss of motivation. This approach is in direct conflict with the intention of best value, where the intention was to unleash potential for innovation and responsiveness in order to promote continuous improvements in local service standards. If performance indicators are to act, like budgets, as a technique to control costs and raise standards through people, then as such everyone in the organisation feels their impact. Stakeholders today demand value for money and expect public sector organisations to provide this, the organisations therefore aim is to achieve economy - by spending less, work efficiently, - by spending well, and be effective - by spending wisely. This they hope to achieve through applying best practices in both the management and delivery of services. However the three "E's" approach is a very complex system and can be difficult to implement and just as difficult to measure. It has been seen to shift blame and increase pressure on individuals. It shifts blame by concentrating on an individual's effort and not on a holistic view. increases pressure on individuals where it can cause budget holders to adopt a "watchdog" attitude that leads them to work in direct conflict with other departments by "picking holes". All of which can cause ill feeling within an organisation.

Studies of human relations agree that most people want to feel a sense of achievement in the work. The meeting of pre-set goals gives a feeling of success but the failure in meeting these goals could result in loss of interest at work, the lowering of their standard of achievement, loss of confidence and a tendency to give up quickly. In addition there may be a fear of change, reluctance to accept new working methods or jobs, or where there is an expectation of failure. With loss of concentration - escaping from this "expectancy of failure" by daydreaming, experiencing difficulties in working relationships, an "out of their depth" feeling, and a tendency to blame others can all stem from the demands of meeting goals.

As an example, the education sector illustrates this aspect of de-motivation. Some schools naturally perform less well than others will, this however is not necessarily to do with the management but can be due to the lack of resources within the school. This means it is much harder for schools to obtain targets, that in turn can lead to de-motivation. Being at the bottom of the schools league table may lead to teachers becoming de-motivated to achieve the targets. If targets are set too high and unrealistic, they become unattainable. Some teachers may be aggrieved if others teachers' targets are much easier to achieve but gain the same reward as them. In the same context teachers may also feel aggrieved if others teachers' rewards are greater for achieving the same level of targets as they achieve. This is where an argument for the merits of performance measurement can be used to display its ability to clearly communicate and reinforce messages about what is important in the organisation and to engage people in alignment objectives. It can also promote learning as managers sift through performance data and discover pockets of excellence and weakness, where more information about what works and does not work is used as a training tool between trends and relationships. If set correctly they can provide incentives for improving performance, and can be used as measurements to evaluate continuous progress. People will be motivated to achieve targets if there is a reward or incentive to achieve this target. This could come in the form of bonuses or pay rises. Targets can lead people to believe that they have a meaningful job, i.e. that the work place has a reason and they are contributing to the

success of the organisation. For example targets can work well with staff who have a strong need to achieve, due to the fact that meeting targets will lead to achievement. Linking rewards and incentives to performance can mean that staff will strive to meet targets due to the chance of promotion. Targets can also lead staff towards job satisfaction, as achieving them could mean they have helped provide a worthwhile service.

It can be extremely demanding for managers when they have to meet strict targets. This can often lead organisational or divisional managers into uncharacteristic behaviour and push them into making bad decisions. There is the danger that an authority or public service can skew its main priorities towards meeting artificial targets and away from solving real problems. Strict adherence to achieving the performance targets set from the agreed performance indicators should not become an end in itself. The performance indicators should not exist in isolation, but should be used in the context of the integrated system of planning, budgeting, objective setting, monitoring and control. Where PRP (Performance-Related Pay) is in existence then managers will have a greater incentive to meet pre-set targets, and in some cases will do whatever it takes in order to do this, again moving away from the real issues. Performance-related pay schemes may encourage false reporting of achievements, as the National Audit Office (1995) evaluation of performance in the Meteorological Office Executive Agency illustrates. The NAO identified how performance target achievement was the basis for a performance-related pay when on audit the reported target was not actually achieved. Finally in order to make it appear that public services have actually met the required targets, managers may manipulate figures and distort information. The 'adjustment' of waiting list within the health service is a well known area where controversy has arisen as to the true meaning of the data supplied.

#### **The audit of performance measurement**

The creation of public sector audit bodies in the format of the Audit Commission in 1982 and the National Audit Office in 1983 provided a formal structure to the external audit function of central and local government. Both the National Audit Office and the Audit Commission have a remit to audit performance. The 1990 Local Government Act charged the Audit Commission with three tasks:

- To specify a set of national performance indicators for local authorities (councils, police and fire services, waste disposal and parks authorities);
- To arrange for the information to be audited by local auditors;
- To make appropriate comparisons of performance between authorities and over time.

Following annual consultation with local authorities and with national and voluntary organisations, the Commission specified a set of indicators each financial year from 1993/94 onwards. The Commission increased the range of local authority services covered by these indicators each year – by 1999/2000 there were in total 240 Audit Commission performance indicators (ACPIs). While many of the Audit Commission indicators could be characterised as input or output indicators, others highlighted efficiency and effectiveness. After validating the data with auditors, the Commission then published each year a range of reports with comparative data. In general, these included compendia of data on all indicators for English councils, for Welsh councils, and for police and fire services. The Commission produced other reports on services areas such as education and environment, and also geographical areas such as London. These reports stimulated considerable interest from the media and subsequently from members of the public.

The Audit Commission has revolutionised the audit approach from that of merely imposing a probity or 'voucher-bashing' audit to that of a sophisticated audit embracing a management, consultancy and advisory role. 'Reports in the public interest' in local government published by the external auditor have increased significantly in the last five years resulting yet again in the demand for greater accountability, openness and reliance on the auditor to provide assurances. Members of the electorate are no longer tolerant of poor management and corrupt activities within the public sector and use performance indicators to support their claims. Far more people are willing to express their

views publicly and express their concerns by voting against the offending councillors at the next local election if corrective action is not undertaken at the time when issues arise.

The National Audit Office's remit is that of helping the nation spend wisely, and its work aims to put forward constructive ideas and recommendations that will help government departments and executive agencies to achieve better value for money. The Treasury's report on 'Executive Agencies: A guide to setting targets and measuring performance' (1992), clearly sets out the measures covering financial performance, output, quality of service and efficiency. The NAO operates under its role as monitor of the delivery of public services including performance measurement. This is undertaken in line with its own published guideline of 'The Audit of Executive Agencies', (1991), where performance against key financial targets is audited and compared with the previous five years. Other performance measures used as a basis for performance related pay or bonuses were also subject to audit and validation. The increasing emphasis away from input measures to output measures has led the NAO to undertake validation studies in order to assess performance in terms of customer and client satisfaction. The validation exercise by the NAO gives an opinion on the accuracy and appropriateness of reported performance information. It is not easy however to assess how much influence the NAO has on the setting of targets.

The role of the auditor in assessing performance also came to the fore with the publication of the Citizen's Charter in 1991. The provision of information to the public collated by the auditor did come under some criticism; Pollitt (1994) refers to the reservations initially expressed with regard to the usefulness of the charter itself while Bowerman (1995) expressed concerns over the wisdom of handing over the design and collection of the information to external auditors. The expertise of the external auditor in the realms of value for money audit was the mainstay of the auditor skill in performance indicator audit. This approach to data analysis was limited and focused in the main on economy and efficiency, the traditional strength of professionals trained in the area of accountancy. However, the bias towards results-orientated government has led towards a focus on outcomes and the rise of effectiveness as the most prominent 'e'. 'It is in this domain that traditional auditors from financial background feel most exposed. The concept of effectiveness and customer satisfaction does not sit well into the category of financial audit' (Power, 1995). The government recognised that 'auditing best value will, however, require new perspectives and a broad range of skills, so the contribution of the external audit service will need to be supplemented by that of others' (Welsh Office, 1998). Nevertheless the audit of performance remains in the hands of the external auditor to validate data and provide assurances on the information provided.

### **Best value and performance measurement**

The UK Government conceived the concept of Best Value shortly after election in 1997. Best value means that local authorities and other agencies provide cost-effective, high quality services, focused on the needs of local people. Best Value aimed to shift emphasis from the concerns of service providers to the needs of service users in an effort to ensure continuous improvement in the quality and efficiency of service provision. This involved the preparation of a performance management and planning framework, the production of a public performance report and the demonstration of the achievement of best value by the use of a series of prescribed key performance indicators and other local performance indicators. Authorities were and still are encouraged to make use of competition, benchmarking and other management accounting techniques to demonstrate the delivery of best value. The process was subject to external review under the Best Value Inspectorate and validation by the appointed external auditors, appointed by the Audit Commission to assess the quality of service.

Performance Indicators have been a key tool to help achieve Best Value, they allowed authorities and the public to monitor the level of services being provided. The implication of the introduction of the Best Value initiative within local government was to set the audit duty. This meant that there

was a requirement for all the key steps and/or processes to be audited, with the audit to question whether the Best Value approach was being carried out rigorously and systematically. The audit was expected to validate performance against targets, and to report back to the authority and make recommendations where necessary. In the case of the need to intervene and take over the service provision, the audit could only recommend intervention if an authority failed to respond promptly and effectively to the audit findings and recommendation. Finally, the audit had the remit to report publicly on authorities' performance against their stated objectives.

The introduction of Best Value saw the responsibility for setting performance indicators for local government rest in the hands of Central Government. From the financial year 2000/01 the Government set around 170 best value performance indicators (BVPIs). The Commission continued to set a small number (around 50) of supplementary indicators for the first year of best value, but for 2001/02 and 2002/03 decided not to set any local authority PIs. The Government and the Commission jointly reviewed the ACPs prior to the selection of the first year of BVPIs and as a result a greater proportion of indicators deal with outcomes, many resulting from surveys of the public and service users. For a selected number of the BVPIs there are national targets for achievement – usually based on authorities reaching within five years the performance level achieved by the top performing twenty five percent of authorities. The eventual outcome of a BV review is to categorise authorities into 'high performers', 'strivers', 'coasters' and 'poor performers' (DTLR, 2001). Welsh authorities have been given the label of 'poor performers' as compared to their English counterparts. A joint research programme between the Local Government research unit and Cardiff University set out to dispel this myth.

The results from the joint programme found that the rate of change in performance in English and Welsh local government has been identical, yet the inspection results indicated that the future prospects of improvement were different in both regions. The conclusions from the study stated that,

'Our qualitative research suggests that Welsh authorities have been judged inferior by the Audit Commission, the BVI (Best Value Inspectorate) and other organisations because they have been slower to 'modernise', have a departmental rather than a corporate working structure, and provide most services in-house. ....given that the performance of Welsh authorities is good, it might be the case that they have developed systems and a service style that fits their environmental and political contexts.....their failure to embrace 'modernisation' is the reason for their success....Local councils, and other parts of the public sector, need to be judged on their service achievements, not on their adoption of the latest management fads promulgated by central policy makers' (Boyne *et al.* 2002).

This study highlighted the problems linked to interpreting indicators at inspectorate level, how can the electorate therefore be expected to make any reasoned conclusions from the selected results published?

#### **Disadvantages and problems associated with best value**

Only the most dedicated bureaucracy-watchers could possibly make any use of all the information being provided. Despite the media making it public information, few members of the public have the degree of statistical skill needed to interpret the information nor the interest to use the hundreds of figures and measures available (even if it were possible to). There is also the tendency in the media to focus on the sensational rather than the mundane, an excellent rating is unlikely to hit the headlines while the poor performers will usually get plenty of publicity. Local authorities spend a great deal of time and money on various public consultation efforts in an attempt to work out what the public wants. Opposing this is the difficulty of seeing just how far service levels of quality have changed, or how far inspections have related to public demand – it may seem therefore to be a waste of time and money? 'The statutory framework for Best Value proved to be too prescriptive with strong pressures for uniformity, placing



constraints on the opportunity to be innovative. Corporate health indicators concentrate on processes rather than outcomes. There were a range of indicators associated with some services while others were ignored. The BV intention to unleash innovation and responsiveness left authorities with a burden of having to produce sets of local performance indicators' (Boyne *et al.* 2002).

### **Star rating system**

The list of government initiatives to improve the quality of service provision is ceaseless; the flavour of 2001 was that of the star rating system. It was decided to publish performance indicator data, in which poor performers would be named and shamed into improvement. This should (in the extreme) allow consumers of public services to 'exit' from poor providers and transfer their consumption to another hospital or school, for example. This also results in funding mechanisms being brought into line with those with better performances - money generally follows pupils, students and patients. Yet the problem of how to improve service delivery still exists. The case for the National Health Service highlights this issue where, 'public spending on health in the UK has risen by more than 50 per cent in real terms since 1990/1. As a proportion of GDP, NHS spending is up from 4.9 per cent to 5.9 per cent in 2001/2. Despite this barrage of cash, performance indicators show little or no improvement in service delivery. Targets are missed. There is a strong perception that hospitals are permanently on the brink of an all-out crisis' (Travers, 2001).

The star rating system has been summarised as a 'rough-and-ready' measure of service quality that the public can understand, based on the fact that it can be easily communicated to the public by the media. Recognition of a star rating is likened to the stars awarded to hotels, and the need for a complex interpretation of several different indicators is eliminated, it is a case of just checking the star rating. The Audit Commission recognised it as a move away from the 'one-size-fits-all' to accounting for performance. It is a simple way of differentiating between authorities, so that future inspection could be made easier. This begs the question as to whether a five star or four star rating does actually differentiate between service provision when there are so many variables to accommodate. There is no clear way of identifying the factors that feed into the star grades. There is the question of how the various factors translate into stars? If there is a reluctance to explain or identify these factors then there is the suspicion of uncertainty attached to the star rating. It is no wonder therefore that local government are less than enthusiastic about the star system because it may be over simplified and incapable of taking local factors into consideration.

In an NHS Alliance survey of 115 Primary Care Trusts (PCT) published in September 2003, 23 per cent said there were 'significant' or 'many' inaccuracies in the performance indicator data published by the Commission for Health Improvement in July. Primary care representatives complained that was 'outrageous' that data used to help determine primary care trusts' star ratings was plagued by inaccuracies that could not be rectified. A number of PCTs stated that either the Department of Health or their strategic health authority had told them they could not challenge the published data preventing mistakes from being corrected. These differences lead to errors which can mean the distance between a two-star and three-star status can deprive them of additional funding. The Alliance's survey also revealed that most PCTs felt there was insufficient transparency in the way star ratings were assessed and they were not a fair way of measuring PCT performance, and that the targets measured factors that had more to do with local deprivation than PCT performance. Oversimplification may mean an easier read to some, but the overall impact is far more damaging when funding issues are attached to them.

### **Comprehensive performance assessment in England (and the Programme for Improvement in Wales)**

In Britain, measurement systems tend to mature within 3 years, the weaknesses and shortcomings of the BV programme led to it being replaced in 2002 by the Comprehensive Performance Assessment (CPA) in England (and the Programme for Improvement in Wales) which incorporate

two components, a service assessment and a corporate assessment, 'an inspection with a lighter touch' (Brown, 2002). The CPA is about helping local authorities improve their services to the community. Not only does it assess how well the local authority delivers the services, but it also looks at how the council is run. By looking at how councils are run it provides a guide as to how well the council can deliver their services in the future. The ranking for service delivery is measured by the Audit Commission in terms of excellent, good, fair, weak and poor. This move away from evaluating individual service areas to a ranking of corporate performance is based on producing a balanced score card on an evaluation of categorised services delivered. The scoring of categories in order to arrive at an overall rating can be deemed too simplistic in its approach. Two local authorities have during 2003 successfully questioned their ratings. Torbay Council in December 2002 threatened to seek an injunction to prevent the Audit Commission from publishing its CPA assessment as 'poor'. Torbay argued that minor score differences in two categories would have seen its rating as 'fair' as compared to the overall 'poor' that the Commission had calculated. The London Borough of Ealing also questioned their assessment and successfully challenged the Audit Commission's 'weak' ranking to be altered to read as 'fair'. The Audit Commission will no doubt not want too many of these challenges that question its authority.

### Conclusions

Performance measurement as an activity does have ground to be an effective means of assessing service delivery. They can provide evidence to assist in the planning, the policy making and the monitoring of activities and events. Numerous targets and indicators have been established, tried and tested on various services leading to instances of improved service delivery and have certainly generated awareness for the need for improvement. However the problems of data collection, performance indicators interpretation and the impact in terms of resulting reports does not bode well in terms of their effectiveness in improving service delivery. Misinterpretation, misunderstanding manipulation, and the 'health warnings' do nothing to enhance the value of performance indicators. Even when targets are met there is always the doubt as to whether they were too easy to attain, while under achievement does not always indicate a lack of performance or potential for improvement.

In 2001 the Audit Commission completed a strategy consultation which allowed people to give their own opinions on the use of performance indicators. In response the Best Value Contact Officer's Group was of the opinion that: 'There are too many performance indicators, some of which are more relevant to the collection of national statistics than improving local services. These should be culled and focus placed on a much smaller number of KEY indicators which are relevant to the general public'. In 2003 the Audit Commission launched a broadside against the government's profusion of nationally set targets for local services, warning that they can distort priorities and lead to 'perverse consequences'. The public spending watchdog warns that many targets set in Whitehall are at best ineffective and at worst encourage the practice of 'gaming', where staff focus on meeting targets to the detriment of other parts of the service (PFA News, 19-25 Sept 2003). The Audit Commission it seems recognises the fact that 'targets need to be used more intelligently', and 'should never be ends in themselves' (McHugh, 2003).

Despite the recognition that performance indicators have their shortfalls, the never ending use of performance indicators as a means of displaying accountability, value for money and methods of allocating budgets is likely to remain an important aspect of the public sector. The scope for researching the use and impact of results, rankings and ranges of indicators is just as 'never ending'. Unfortunately the UK Government's obsession with introducing new initiatives does nothing to instil confidence in the previous regime or in the future sustainability of current schemes. 'Other countries must look at the British government's obsession with public sector performance – and its measurement- with disbelief. There is no doubt that recent developments in audit, inspection, performance indicators, Best Value (including star rating and CPA)...has given this country (UK) the most sophisticated mapping of public service underachievement in the world' (Travers, 2001)

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**Appendix A**

2 tenant related indicators, - the time taken to re-let empty properties, and the proportion of emergency and urgent repairs completed within target times (within 24 hours and 5-7 days)

<b>Housing Association.</b>	<b>% re-let within one week</b>	<b>% emergency repairs - in target time (average 24 hours)</b>	<b>% urgent repairs - in target time (approx. 5-7 days)</b>
HAFAN	100	98.33	97.61
PEMBROKESHIRE	100	100	97.4
PONYPRIDD & DISTRICT	98	97	95
FAMILY(WALES)	94	92.5	91
SWANSEA	90	98	95
MOORS COMMUNITY	84	98	95
TAFF	83	99	99
MERTHYR TYDFIL	77	97	86
NORTH WALES	77	96.6	97.4
EASTERN VALLEY	76.2	96	95
CADWYN	71	93	90
CHARTER	70	93.67	94.13
MID WALES	64	98	94
DEWI SANT	59	93	93.8
CLWYD ALYN	53	84	88
GWERIN (CYMRU)	50.4	99.1	94.1
GLAMORGAN&GWENT	49.65	93.4	93.07
ERYRI	49.63	85.7	85.5
CANTREF	49	93.8	95.6
HAFOD	48	99.61	98.18
RHONDDA	48	99	95
ADAMSDOWN	45	94	92
UNITED WELSH	44	99.3	95.5
AELWYD	43	96.9	92.8
CYNON TAF	42	93.06	94.2
NEWYDD	41	93	95.5
BRO MYRDDIN	34	99	96
WALES & WEST	32.19	87	92
GWALIA	19	93.46	90.99
CLWYD	15	99.61	98.48
FIRST CHOICE	N/A	96.7	96.3
TROTHWY	N/A	96.7	97.73

Source, Tai Cymru (1997)



**Theme 3: The developing role of the internal auditor in corporate governance.**

**Paper 1**

Davies, M., (2001), 'The Changing Face of Internal Audit in Local Government - a survey on the views of Welsh Local Government Internal Auditors', *The Journal of Finance and Management in Public Services*, 1(1), pp.77 -96.

# The Changing Face of Internal Audit in Local Government

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A Survey On The Views  
Of Welsh Local Government Internal Auditors.

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### **Introduction**

A number of changes have taken place in local government during the past twenty years that have changed the way internal audit operates and manages its activities. Legislation has played an important role in these changes, but other factors such as the information technology explosion and environmental awareness have also had an impact on the development of internal audit. Coupled with these changes, the expectations of stakeholders in the public purse have become more pronounced as well as audit's own perception of itself. It is these changes and their influence on internal audit methodology and approach that this paper looks at in terms of their impact on and response by internal auditors within the Welsh local government sector. The personal aspirations, fears, expectations of those in the front line of these changes can provide an interesting comparison with the internal audit theory and textbook ideas on the development of internal audit.

There is no doubt that internal audit as a function within local government has increased in profile during the past decade. This is mainly due to increased pressures placed on public sector organisations due to the restrictions on funds and the need to ensure good value for money exists within local government. It could be argued that in the main it is the external auditor that taken the limelight and the credit for ensuring more accountability, but in recent years thanks to reports relating to corporate governance the role and importance of the internal auditor has gradually been coming to the forefront. This is reinforced by the Turnbull report on corporate governance which has helped identify the relevance of having a sound control structure that is complimented by the presence of an internal audit body.

On a more practical base the professional bodies have revamped their professional training programmes, and advanced training programmes have been introduced to meet the changing nature of auditing thereby equipping the auditor with the relevant tools for the work place.

### **Research area**

This research paper focuses on practitioner views and responses to changes in audit approach and audit development resulting from influences placed upon it by both internal and external factors. When designing the questionnaire for the research, a review of textbooks and journals to identify current issues in auditing, prophesies about where auditing is heading and the problems facing the auditor provided the core material. Leading on from this initial review, a pilot study questionnaire on the views of a select number of internal auditors within local government as to how they perceive these changes affect their working methods, their expectations, aspirations, and perceptions provided the practitioner input. This feedback combined with the literature research provided a set of topical issues from which to generate a series of statements and questions.

As Jankowicz (1995) points out 'knowledge does not exist in a vacuum, and your work only has value in relation to other people's. Your work and your findings will be significant only to the extent that they're the same as, or different from other people's work and findings'. While Gill and Johnson (1991) state that what is required is a 'critical review which demonstrates some awareness of the current state of knowledge on the subject, its limitations, and how the proposed research aims to add what is known'. These two statements rang true when the survey results were analysed, as the outcomes were not particularly dramatic or revolutionary, yet they generally confirmed current views and opinions. Articles written by auditing practitioners and academics in professional journals such as *Internal Auditing*, *Public Finance*, *Managerial Auditing*, *Public Money and Management* provided the state of the art thinking in terms of recent and topical issues affecting the auditing profession. 'A number of articles are written from the academic perspective and therefore by their very nature provide the ideal source from which to compare, they also provide a base from which to design questions for the survey.' Nash (1996). Very often prior to undertaking any research, the researcher will have some perceived expectations as to the reasons and possible outcome of the research, a literature review forms a means by which to either confirm or dismiss these preconceived

expectations. As examples, articles written by Ridley (1999) and Lower (1999) provide current thinking on the 'new audit' and the skills auditors should possess in order to face the challenges of the 21st century.

### **Welsh local government auditors**

The involvement of the Welsh local government internal auditors stemmed from two aspects, Wales having just created its own National Assembly made it an entity on its own, and interest shown by the Welsh Chief Auditors Group created a ready made captive audience that would participate in the survey. The research findings provided a base for the preparation of the analysis and also provided a summary for the Chief Auditors Group of key results and issues that they could use as seminar topic and a feedback mechanism for practitioners to learn from each other. Participants in this survey came from a cross-section of auditors working in local government from all the 22 Welsh unitary authorities.

### **Internal audit definitions**

In order to appreciate the role and responsibilities of internal auditing, it is worth noting the changes in definitions to reflect the changing role, responsibilities and activities. By identifying the changing role of internal audit it forms a base for surveying how the internal auditor views these changes in light of practical experiences working in the public sector. Current definitions for internal audit imply that the role of the internal auditor has moved on from that of an appraisal, monitoring and evaluating function, to that of a provider of *assurance, consultancy, assistance and advice*.

In January 2000 the Institute of Internal Auditors published a new definition of internal auditing that reads:

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

The Auditing Practices Board Auditing Guidelines offers the following:

'An independent appraisal function established by the management of an organisation for the review of the internal control system as a service to the organisation. It objectively examines, evaluates and reports on the adequacy of internal control as a contribution to the proper, economic, efficient, and effective use of resources.'

These definitions provided a source of questions such as:

Does the auditor feel that he is actually providing a worthwhile service in terms of being a valued member of the organisation?

Does the auditor contribute to effective management of resources? and

Does the auditor still only undertake the traditional role of evaluating control structures?

As for identifying the expected in terms of the audit, traditional teaching texts, such as Millichamp, Lee, Woolfe, and Manson and Gray provided the audit approach methodology and provided a sound base from which to compare the research findings to the 'expected' audit developments.

### **Questionnaire format**

The questionnaire was primarily made up of statements requiring the respondent to opt for one answer out of five using the Likert format of questionnaire design requiring the respondents to decide between a varying degree of agreement to disagreement.

Respondents were encouraged to put comments alongside the statements if they felt that some of the issues raised required further explanation on their part.

The statements were categorised into six key areas:

- Client and auditor expectations/perceptions
- Training and its application
- Corporate Governance
- Control Risk Self Assessment
- IT use in audit work
- Audit approach - Systems Based Audit Risk Based Audit.

**Summarising the responses**

A summary of the responses according to the majority view was recorded on a template of the questionnaire to identify areas that confirmed or disagreed with the statements. Each topic area of the questionnaire was subdivided into sections in order to ease data review and comparison against the literature review findings. Appendix 1 is a copy of the statements used in the questionnaire along with summarised overall responses categorised according to the most favoured response.

**Analysis of respondents**

In order to aid in the classification and comparison the questionnaire had a section to identify between levels of experience, length of service, and qualifications of the respondents. The survey was designed to give a broad view of internal auditor views on a selection of topics, hence the diversity of the topic areas.

Table 1 below gives a breakdown of the respondents surveyed according to officer designations.

22%	Chief Internal Auditor
4%	Audit Manager
34%	Principal auditor
25%	Senior auditor
5%	Auditor
10%	Trainee

**Table 1: Breakdown according to designation**

In addition to the officer grade an analysis of participant according to professional qualification, number of years experience in audit and age group was also extracted from the survey result.

Table 2 details the profile in terms of qualification, experience in auditing and age group.

average 9.5 years qualified
average 8.5 years experience in internal audit
11% fall in the 20 –29 age group
38% fall in the 30 – 39 age group
34% fall in the 40 –49 age group
17% fall in the 50 + age group

**Table 2: Qualification, experience in internal audit and age profile**

**Synthesis of survey results**

The questionnaire survey confirmed some of the preconceived views that existed prior to the distribution of the questionnaire, in that generally audit may be facing numerous changes, but

basically it still has its strong internal control roots. 'Internal audit should not miss the chance to prove that it can be a dynamic resource, able to give effective challenge and assurance to contribute to continuous improvement while keeping its feet firmly on the ground of internal control.' Clackett (2000).

From the six topics that were considered in the survey, certain key issues from the analysed questionnaire statements emerged that are worth noting. Some fall into the 'agreement with', 'differences to' and 'variations from' the original preconceived views derived from the literature search. It is these research findings and observations that are discussed in this paper.

### **Key issues identified**

From the questionnaire summarised survey of results certain statements reflect more than others the internal audit expectations, attitudes and perceptions. These have been highlighted below with additional remarks added as explanations and interpretations.

The key issues that emerge from this survey are summarised in italics below and commented upon accordingly.

*Internal auditors recognise the fact that the expectations from managers indicate that they are looking for more than a routine audit from the audit sections and look to audit for some level of assurance and advice.*

This reflects the current internal audit definitions and agrees that the audit is becoming more of a service to management in terms of assurances, than merely the regulatory and probity audit of past years and does reflect the fact that audit is responding to the demands of the client.

### **Auditors are unsure as to whether their profile is very high.**

The view from the auditors here is that despite what may be written about the increased profile that corporate governance may have given internal audit, there is still a feeling of uncertainty regarding the profile. This does depend on the individual authority and the relationship between the management and the audit. And it also depends on how the audit is perceived by management. 40% of the respondents were unsure as to whether the audit profile was high or not. One respondent commented that 'hopefully with the increased level of auditor client consultation this will alter'. An issue that could be explored here is whether the lack of profile is due to the low level of marketing undertaken by the audit function within the individual authority and not the audit service itself.

The survey showed that 28% agreed that auditors are not regarded as a nuisance, however 53% disagreed and felt that they were regarded as an inconvenience. This could therefore be interpreted that auditors feel they are either generally accepted and respected or possibly merely tolerated. The responses for this statement were analysed according to seniority and those in agreement represented an equal number of CIA, principal, senior and trainee auditors. For those disagreeing the majority were principal auditors.

There was an agreement that client attitude towards the auditor had improved, and according to a few of the respondents they felt that building a good client relationships was a continuing process especially where audit staff made presentations to departmental managers about the audit task, duties and service. Some felt that the audit effort to enhance a better understanding of audit was paying dividends. 76% of internal auditors agreed that managers could change their view on audit with a change in audit approach. This may be a generalisation, but there is scope here to develop further how an altered audit approach could encourage a changed view of audit by management. This is borne out by Jones, Anne Marie (2000), 'Internal auditors need to be more active in marketing the true value that internal audit can add to a business. We must not underestimate how much influence we can have in an organisation - from its day-to-day working practices to its strategic management direction. But we must work with the organisation to achieve this and be

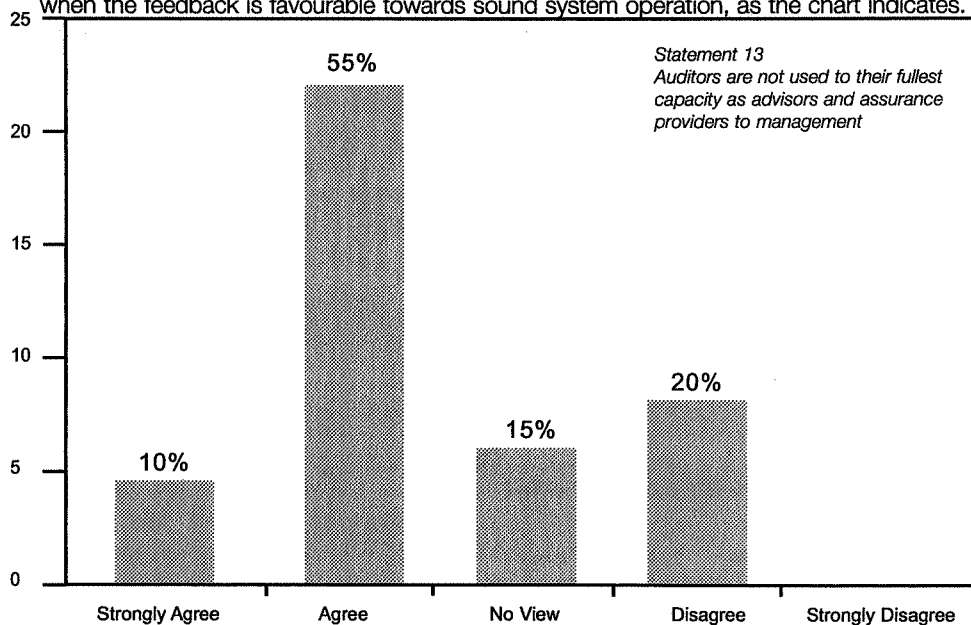
seen to share in the organisation's aim and objectives'.

**Respondents failed to agree whether the audit work meets with client needs.**

There was a 65 / 35 split on whether the audit work undertaken met the client needs as opposed to audit requirements. 'Management do not take advantage of the opportunity to contribute and input to the audit planning process' according to one respondent. Client consultation seems to exist nevertheless, as the overall view disagreed with the 'insufficient consultation' statement. Comments from the participants however indicate that the audit teams, as opposed to the client, normally and largely initiate consultation. There seems to be a conflict of opinion here, on the one hand 'client consultation exists' and on the other hand 'no agreement exists in respect of the audit work meeting with client needs' This is not surprising as the whole issue of client auditor expectation gap is well known. 'If auditors cannot build a working relationship with the executive directors and management, they can never undertake a truly efficient and effective audit'. Fowle M. (1993)

**Auditors could be used to a greater extent as advisors and assurance providers**

There seems to be agreement here with respect to the future role of auditing, corporate governance reports have helped in this respect in identifying the importance of sound internal control. The majority view indicates that audit assurance is important for managers when audit work is undertaken as there is disagreement to the statement that appreciation is only given when the feedback is favourable towards sound system operation, as the chart indicates.



**Figure 1: Local Government Expectations, Perceptions and Attitudes**

Job satisfaction is derived from the audit work, 83% of the respondent's derived satisfaction from their work.

This is a positive response in terms of individual satisfaction, yet conflicts with the earlier response in terms of uncertainty about the audit profile. When employees derive satisfaction from their work it generates a work ethos that filters throughout the department. The opposite of job satisfaction creates an uneasy feeling among the workforce that can lead to poor quality work, job insecurity, negative attitudes and conflict. When staff feel appreciated, feel part of an organisation they become well motivated, willing to learn and eager to progress on the ladder of promotion. All of which should ultimately help increase the internal audit profile.

**Auditors generally consider their work as a valuable contribution to the organisation.**

This statement had 90% agreement in terms of the contribution of audit being valuable to the organisation, not only does it reinforce the job satisfaction statement but also portrays the internal auditors own perception that audit is an important and valuable function within the organisation.

**More in house training is required to keep up to date with current issues**

Both staff and audit managers agreed that there was a need for more staff training. One of the key drawbacks identified was that of financing and resource reallocation. It was generally felt by a number of respondents who added their own comments that the training required was that of a combination of audit theory reinforced by practical on the job training.

One initiative that the Chief Internal Auditors have developed in the South Wales is that of one or two day in house course provision that is shared between a number of authorities. These have also been supported by the NHS Trusts giving an opportunity for shared experiences across sectors and authorities, something that would otherwise perhaps not be given to some auditors. Examples of the issues covered on these of training include Systems Based Audit, Contract Audit and Best Value.

**Audit consultancy training should be undertaken**

In a similar vein to the above statement, recognising that more consultancy training is required means that the client (management) expectations and requirements are taken on board. The merits of undertaking consultancy training can assist the audit function in increasing its profile by offering a valuable service in addition to the services currently provided.

These last two statements in respect of the need for in-house training and consultancy training compliment a previous statement in respect of audit acting as assurance providers. They also support the literature review findings in terms of the changing attitudes towards better training and the continued professional development requirements of the 'new' auditor of the 21st century. 'CPD is a way of optimising career opportunities by demonstrating and maintaining high levels of professional competence through continuous upgrading of skills and knowledge'. Lower, Marian. (2000). Other publications support this aspect of continued professional development or training per se. For example, 'Be part of the new learning age. Your working environment must be a learning environment. Carry out a continuous skills audit of your knowledge and abilities. Plan to improve both. Master a critical understanding of the concepts and principles needed to understand how organisations should be managed and controlled today and tomorrow. This is essential for all the roles you provide as internal auditor'. Ridley, Professor Jeffrey, (2000)

'To ensure that management obtains the maximum benefit from its audit resources, it is essential that all audit staff receive appropriate periodic training. Experience has shown that training will be most beneficial where it is directed at the needs of staff and when it is preceded by a proper appraisal system'. Williams, P. (2000)

'As the pace of change accelerates, internal auditing must visualise and seize new opportunities to meet organisational needs. The new definition is intended to broaden the profession's self image and encourage its full participation in the expanding market for internal audit services'. Krogstad et al (2000).

Internal Audit should play an important role in corporate governance.

This section of the questionnaire required respondents to identify their views on the role of internal audit within the context of corporate governance. As an aside to the actual survey the findings were revealing in terms of the increased presence of audit committees within Welsh Authorities as compared to a previous research exercise where audit committees were not a common feature (Davies and James 1999). The survey indicated that far more authorities now either had an audit committee or were in the process of establishing them as compared to the situation prior to local government reorganisation in Wales in 1996. The Turnbull report recognised



the value of utilising internal audit in the corporate governance issue and the awareness of corporate governance and an indication that there is a willingness to be part of the corporate governance machine can only lead to benefits all round for the organisation. 'If the audit committee agrees internal audit plans then this should contribute to the independence of internal audit and help ensure that members understand the role of internal audit more clearly. The audit committee's approval of the audit plan should also encourage the perception of internal audit as an independent corporate review service. An internal audit service that is seen as helping to achieve the councils objectives as efficiently as possible will be more highly regarded than one that is merely considered to be identifying past mistakes and the occasional fraud'. Wynne. (1998).

The importance of internal audit in corporate governance in the public sector is reinforced by CIPFA's views on looking towards the future of accountants and auditors. 'As well as providing a decision support capability accountants and auditors will continue to play an increasing role in the analysis of risk; establishment and maintenance of effective systems of managerial and organisational control; the enforcement of corporate governance standards and the fulfilling of regulatory roles'. CIPFA (1997)

**Control and Risk Self Assessment is not a concept that has been embraced by managers**

Considering the amount information that has been written about the merits of CRSA, it has not been embraced within the Welsh authorities. According to Kennard, P (1996), Control Self Assessment 'Broadens scope of audit, raises profile of internal audit, demonstrates added value, and expands audit appreciation of business risk'.

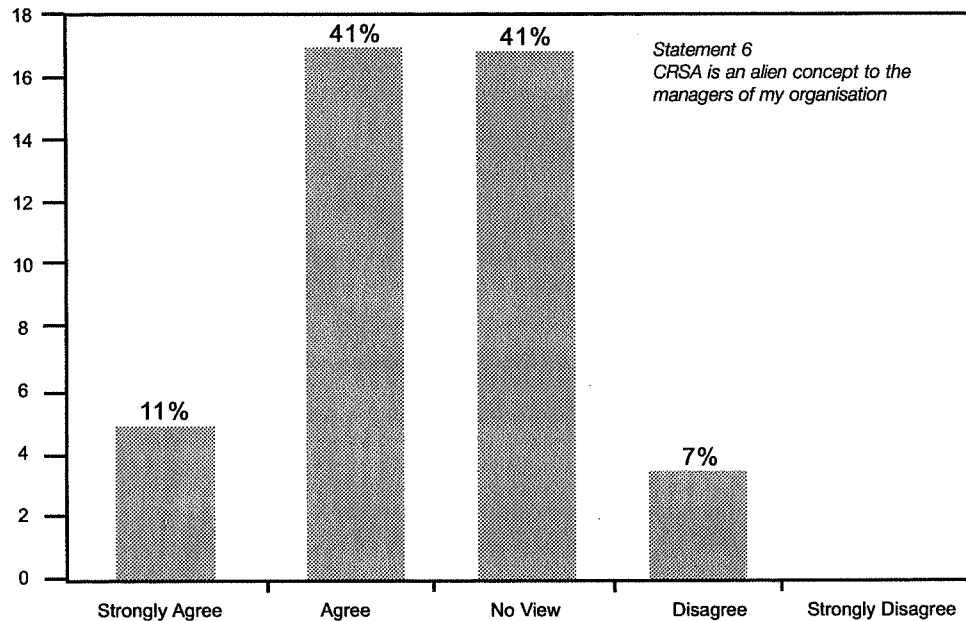
As for the profession, the Audit Commission considers internal audit as having a role to play in self-assessment. 'Internal Audit's role is to provide independent assurance to the management of an organisation on the adequacy and reliability of internal controls in order to promote the effective use of resources. As part of this role, internal audit may be able to contribute to self-assessment'. Audit Commission (1999)

The 1996 CIPFA audit conference survey on the issue of control self assessment revealed that although 76% of respondents declared themselves familiar with the technique, only 7% of organisations had actually implemented it and only 37% were considering doing so. It seems that four years on the situation has not changed a great deal in the Welsh local authorities.

CRSA may be well received in some sectors, but in this instance this does not seem to be the case. Due to the lack of CRSA uptake the use of internal audit as CRSA advisors has therefore not taken place. A number of respondents stated that 'CRSA is an alien concept to managers in my organisation'. The overall agreement was only 51%, while 41% of the respondents had no view at all in respect of the CRSA concept, which merely reinforces the fact that despite the merits claimed of CRSA it has yet to take hold within the Welsh local government arena.

The theory in this instance is not upheld by the practice in this sample. Although according to the comments a number of pilot schemes have been introduced in certain services and it may therefore be too early to assess how acceptable the exercise has been.

There is an agreement that audit should play a role in CRSA and a recognition that it would be beneficial without any detriment to audit activity. While CRSA would not be relevant to all services areas, it would allow audit to assume different and more challenging roles that would give a greater scope for providing 'added value'. However there does seem to be reluctance on the part of management to embrace CRSA or at least it seems to be the case in the eyes of internal audit.



**Figure 2: Local Government Control Risk Self Assessment**

#### **IT recognised as an audit tool**

Whilst the use of IT as an audit tool is recognised, there is a feeling amongst the respondents that there is still considerable opportunity to develop the use of IT within audit, especially in developing and designing specialist audit software.

#### **Conflict exists as to whether audit tasks could be completed with or without the computer.**

The respondents were unclear here as to the agreement towards using the computer for audit work. There were those who felt that audit work could still be undertaken even without the computer, while other relied heavily on their PC to complete their work.

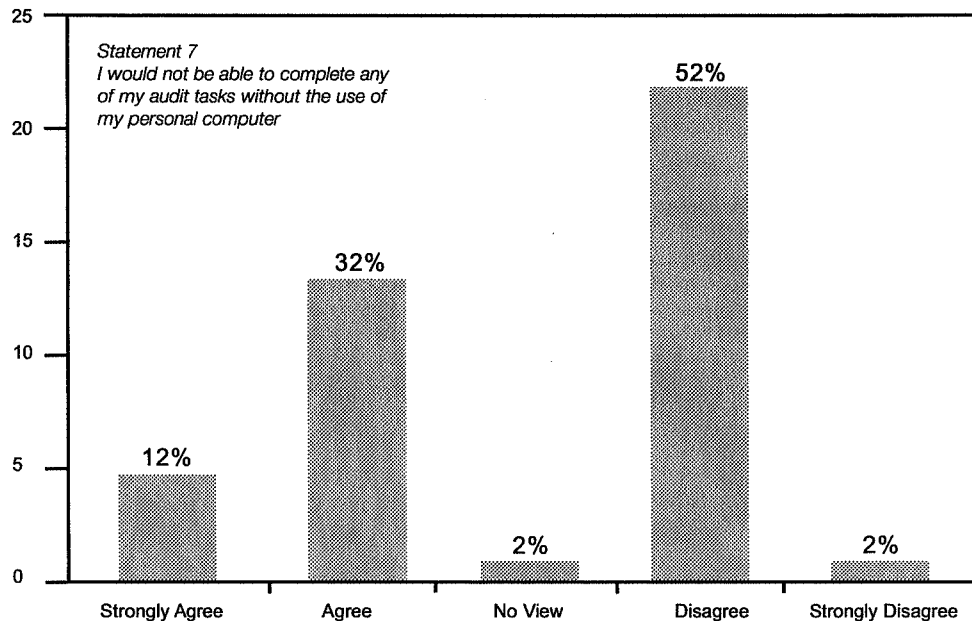
Danielle Stewart of Warren Stewart, London argues that 'an auditor could not comply with the Auditing Practices Board's recently produced draft standard unless the audit was IT-based'. Williams, P. (2000). 'It is a fact however that for many private and public sector organisations, there is now a complete dependence on IT services. One of the most critical issues they now face is how to manage, control and direct IT- especially given the difficulties of finding the right, qualified people.' Thomas, G (2000).

The survey agreed that the use of IT and computer audit software saves a great deal of staff time. However the existence of in-house designed software packages is not a common feature. The agreement to time saving is an obvious one, although it could be interpreted that if there is no comparison based on time efficiency where IT is not available this response is merely based on assumptions. Designing in-house software might reflect a number of issues such as lack of time, skills, knowledge and confidence of auditors in designing their own audit software packages.

#### **IT is a good tool for analytical review.**

'Most auditors would probably consider the use of analytical review is complimentary to testing as opposed to being a substitute', this is based on the informal feedback received during the preliminary interviews undertaken prior to the distribution of the questionnaire. As an aside to the IT in audit this might

be the appropriate place to comment on the need to ensure adequate training exists to ensure that the usefulness of IT is maximised. This is reinforced by the bar chart that indicates that there is agreement to the assumption that lack of IT knowledge is a drawback to effective auditing. However based on this research there is no real correlation between the whether IT knowledge and effective auditing are related.



**Figure 3: Local Government IT in Audit**

**IT recognised as an audit tool and is supported by the majority of respondents; this is endorsed by the disagreement to the statement that IT as an audit tool is overrated.**

There exists a conflict between the agreement and disagreement as to whether audit tasks could be completed with or without the computer. The use of IT is however recognised by some as allowing certain audit tasks to be completed more accurately and quicker than normal exercises. The following bar charts illustrates that auditors still have sufficient confidence in their audit skills to work without the assistance of a computer.

54% disagreed and therefore do not consider the computer an item that they must rely upon to complete their audit tasks.

Audit to act as a consultancy rather than just a checker of controls

Here again the value-added role of the audit is reaffirmed by the recognition that the audit of today and tomorrow is changing to meet user demand.

This reiterates the previous assertions regarding auditors as assurance providers, and is obviously an issue that exists and one that the auditors accept.

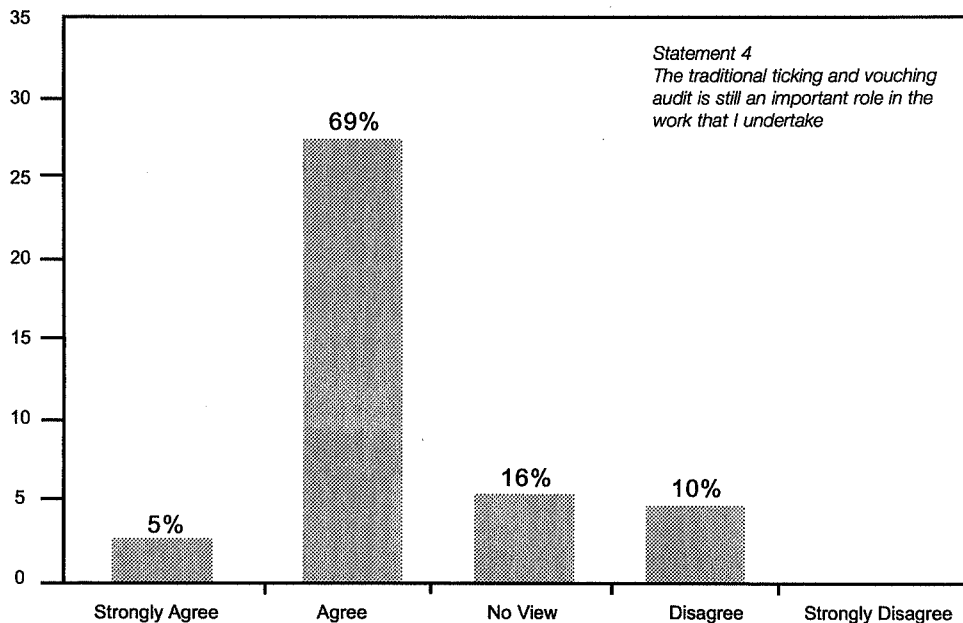
Routine audits are not a waste of time.

Although, surprisingly, 25% of the respondents agreed that routine audits were a waste of time. Routine audits are not regarded as a waste of time because the value of individual audits should be reviewed as part of the audit management planning process. Therefore all audits included in the audit plan should be of value.

'An appraisal function – The internal auditor's job is to appraise the activity of others, not to perform a specific part of data processing. For example, a person who spent his time checking employee expense claims is not performing an internal audit function. But an employee who spent some time reviewing the system for checking employee expense claims may well be performing an internal audit function'. Millichamp (1996) p.493.

#### **Traditional ticking and vouching is still important.**

Audit has evolved due to the development of techniques that have built on past knowledge and experience and as such the audit itself has changes without becoming a 'new' service. For this reason everything learnt in the past is still important although not placed in such a predominant position. The bar chart below confirms the importance of still maintaining the ticking and vouching approach.



**Figure 4: Local Government Audit Approach**

Audit debriefing is an integral part of the audit function.

60% agreed with the debriefing concept, 24% had no opinion and 16% disagreed. Based on the literature review and the increased awareness for communication in the audit team it was surprising that the response to this was only 60% and that 24% had no opinion.

Risk based approach is favoured as an effective audit approach

Recognition of the new age approach to audit as one that has to take on board the realisation that Systems Based Audit is gradually being reinforced with the Risk Based Approach.

SBA plays an important role in audit work

The systems based approach is still regarded as a sound audit approach to undertaking the audit. Local government sector organisations with their bureaucratic control based working methods lend themselves to this approach.

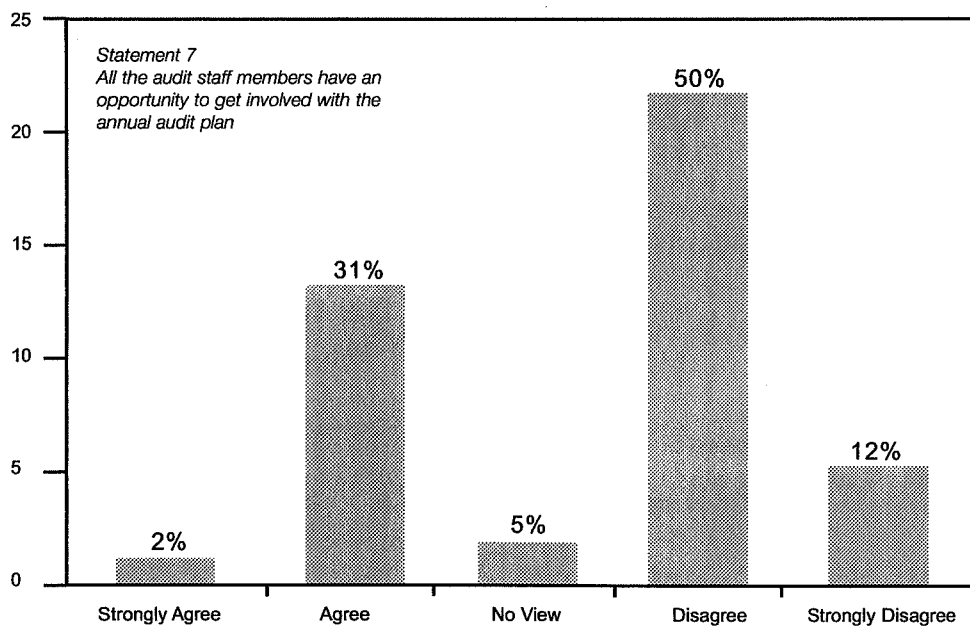
**The annual audit plan should not be the sole responsibility of the Chief Internal Auditor**

The responses seem to indicate here that certain internal auditors feel that they may be able to contribute to the annual audit planning activity. On the other hand there were instances where the Chief Internal Auditor felt that there was scope to include staff in order to generate a sense of ownership to the tasks, it also acts as a learning mechanism for those climbing the ladder of promotion.

The statement asked the respondents to consider whether there was team involvement in the audit planning. The replies indicated a clear disagreement, when read in conjunction with the statement regarding the audit plan being the sole responsibility of the Chief Internal Auditor it seems that audit team members feel that they have a contribution to make towards the annual plan. The bar chart below gives the level of agreement and also indicates who the respondents were in terms of auditor grade.

**Audit reports tend to be proactive.**

64% of the respondents indicated that the audit reports within their organisations were proactive rather than reactive. This might support the initial response where the consultancy and advisory role is now becoming more of a feature of the audit



**Figure 5: Local Government Audit Approach**

**In conclusion, internal audit seems to be having a facelift**

In the public sector an increased emphasis on corporate governance and public reporting has placed the Internal Auditor into a more focused position. Organisations are increasingly looking to their Internal Auditors to give guidance and advice at all levels of management. By being tuned into management philosophy and direction, internal audit can provide a pro-active value added service. An advisory role provides senior management with the added support to decision making issues and problems that ensure the achievement of organisational goals. Bonham (2000) refers to the auditor as 'no longer merely the basic compliance auditor but a business adviser and coach that is to be viewed as a valued service to the organisation'.

The traditional features of audit meant that auditees had no choice in the audit, few treasurers were concerned about setting terms of reference, and so audit set its own work programme. Audit presence was regarded as deterrent, routine audits were carried out with monotonous regularity and with no flair. Audit reports were rarely to the client, merely to the treasurer, while the audit was mainly that of voucher bashing. When a weakness was found it was plugged with another control irrespective of the inflexibility or lack of effectiveness. Audit work finished at five irrespective of the task while there was a lack of accountability in terms of what the audit did. The modern and current approach to audit however takes on board a more proactive approach that is of benefit to management. Corporate agreed strategies, audit plans often agreed with both the client, and audit committee as well as levels of materiality taken into account when undertaking the audit work. The Chief Internal Auditor is now reporting in his/her own right to the client and in some authorities the Audit Committee. The introduction of Systems based and Risk based audit with scientific testing as well as computer software packages for Computer assisted audit techniques. Internal audit is now becoming accountable for its work to management. By means of agreed performance indicators along with all the other services. This has helped assure an internal audit that displays flexibility in terms of working hours, with clock-watching becoming a thing of past. Audit advice and involvement in system design and implementation is leading to a more proactive approach and drawing on audit expertise. Audit no longer regarded as the dumping ground for ineffective staff; career and promotion prospects now attached to the audit department.

The findings of the survey on the expectations, perceptions and attitudes of public sector internal audit department go some of the way to illustrate these changes in audit activity.

#### **Changed perceptions**

As a result, the audit image has certainly increased during the past 10 years: This can be verified by the review undertaken by CIPFA during the 1980's in 'The View of the client towards Internal Audit', The response came up with four positive points by management regarding internal audit.

Most managers accept that internal audit provides a positive contribution to the department  
Most managers consider that internal audit understands the real issues confronting them and their departments.

Most managers are happy to discuss technical issues with their internal auditors and have confidence in internal auditor's ability to do this.

There is an increasing need for internal auditors as communications and information technology moves into the twenty-first century.

#### **Minimum audit service to advisor and assurance providers**

There has been a progression from the traditional minimum audit service as required by statute to the more corporate approach of business assurance provider. This concept of business advisor and assurance providers falls in line with what current publications and the results of the survey indicate. The change in audit can be summarised under two headings that of 'barriers' and 'enablers', attached as Appendix 2. The barriers to sound audit provision include a lack of management involvement, poor skills levels, failure of staff to understand the organisational goals, poor communication and a lack of capacity and ability to change. The enablers on the other hand include positive aspects of motivation; team approach, quality audit work and high performance, focused approach and a leading edge in terms of audit methodology and techniques.

The results of the questionnaire survey indicate how the face of internal audit has changed, mainly in terms of the auditor attitudes and perceptions, thereby overcoming some of the barriers and embracing the enablers. The internal auditor has also recognised that these changes have affected both the work environment and the audit perceptions from both the auditor and the management.

There are still, however, a number of hurdles that the auditor will need to overcome if the audit function is to match that of the textbook internal audit function. The classic case of theory and practice not being truly compatible.

One aspect is certain, the audit of the last century is definitely changing, and it could soon be the case that the audit of the 1990's could quickly come to be viewed as quaint and old-fashioned.

#### **The 'new' style auditor**

From the key issues that were identified, a key point arises from the survey, and that is the need to invest in training for the auditor of the 21st century. If the 'new' auditor is to cope with the concepts of assurance, corporate governance and information technology more funds need to be invested into continued professional development, by means of in-house training, academic and professional courses. The internal auditor needs to feel confident that he/she has the know-how, skills and confidence to meet the expectations of management and audit managers. This enhances the stature of the internal auditor in the eyes of those who are being audited or in receipt of audit advice and consultation.

Recognition for more in house training to keep up to date with current audit issues and more emphasis should be placed on training for audit consultancy, indicates that both the Chief Officers and lower grade auditors acknowledge that audit is a dynamic and forward thinking profession. This should also bode well for in-house training programmes to be established that will become an aspect of auditor expectation in that they will form part of normal audit training.

It was a surprising revelation that CRSA (Control and Risk Self Assessment) was not a common feature. To discover that the statement 'CRSA is an alien concept to the managers of my organisation' was a disappointment. There might be a case here for audit departments to reconsider the CRSA usefulness and enlighten management of its benefits.

The lack of IT and computer software knowledge is a drawback to effective auditing in the department is linked to the training aspect of auditors. IT is an ever changing environment and keeping up to date with IT developments cannot be left entirely to hand-on practical experience, there is a need to ensure a cascading of information and appropriate training to keep abreast of events.

Finally 'I consider my work as an auditor as valuable contribution to the organisation' must be a very positive message at the future of the internal auditor in the 21st century.

## The Changing Face Of Internal Audit

### Appendix 1

#### Summary of replies from local government internal auditors

A number of factors have influenced and developed the role and working methods of Internal audit within the public sector in the past twenty years. This questionnaire aims to establish what the internal auditor perceives the current role and responsibility of internal audit to be in the 21st century.

This is an entirely anonymous research and the views of individual respondents will not be taken out of context but will form a part of the overall picture.

#### A. Background information

Please tick the appropriate box where applicable

##### 1. Type of organisation

<i>Local Government</i>	<i>x 42 replies</i>
<i>Health</i>	
<i>Education</i>	
<i>Other please specify</i>	

##### 2. Number of years qualified as an accountant / auditor

<i>total</i>	<i>407</i>
--------------	------------

##### 3. Number of years working as an auditor in/ as

<i>Private sector</i>	<i>44</i>
<i>Public sector</i>	<i>473</i>
<i>Internal auditor</i>	<i>361</i>
<i>External auditor</i>	<i>10</i>

##### 4. Age group

<i>20 -29</i>	<i>5</i>
<i>30 -39</i>	<i>16</i>
<i>40 -49</i>	<i>14</i>
<i>50 +</i>	<i>7</i>

##### 5. Status / designation in current employment (Principal, senior, junior, trainee etc)

<i>Chief Internal Auditor</i>	<i>9</i>
<i>Audit Manager</i>	<i>2</i>
<i>Principal auditor</i>	<i>15</i>
<i>Senior auditor</i>	<i>10</i>
<i>Auditor</i>	<i>2</i>
<i>Trainee</i>	<i>4</i>

##### 6. I have noticed the change in audit approach from when I started work in audit.

<i>agree</i>	<i>37</i>
<i>disagree</i>	<i>5</i>



**B. Expectations, perceptions and attitudes**

1. The audit client (department, cost centre) expects more from the audit than just a management letter / report of problems & issues encountered during the audit.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | X            |                         |                 |                          |
2. Managers of departments/ cost centres audited expect the auditors to act as advisers.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | X            |                         |                 |                          |
3. Staff at the department / cost centre being audited tend to regard the auditors as a nuisance and hindrance to their normal working day.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              |                         | X               |                          |
4. Since commencing my audit career I have noticed the client attitude to audit change for the better.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | X            |                         |                 |                          |
5. Since commencing my audit career I have noticed the client attitude to audit change for the worse.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              |                         | X               |                          |
6. Audit is viewed within the organisation as:
- *merely a legal requirement*
  - *a waste of resources*
  - *a valued commodity*
  - *a deterrent for fraud* X
  - *a necessity* X
  - *an advisory function* X
- (please mark as many as points as you consider relevant)
7. All audit staff are aware of the importance of 'customer care' in terms of the way that the audit staff approach the client staff during routine audits.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | X            |                         |                 |                          |
8. My organisations audit department has a high profile due to the 'marketing' that it has undertaken in respect of the services it offers to 'clients'.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              | X                       |                 |                          |
9. A change in the audit approach could change the views that some managers have of auditors.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | X            |                         |                 |                          |



**D. Corporate Governance**

1. I am aware of the Cadbury Report on Corporate Governance and the recent Turnbull Report.
- |     |  |   |  |  |
|-----|--|---|--|--|
| Yes |  | x |  |  |
| No  |  |   |  |  |
2. I think that internal audit should play an important role in corporate governance of an organisation.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | x            |                         |                 |                          |
3. I am aware of the existence of an Audit Committee within my organisation.
- |     |  |     |  |  |
|-----|--|-----|--|--|
| Yes |  | 75% |  |  |
| No  |  | 25% |  |  |
4. The existence the Audit Committee within my organisation does not affect my work as a member of the internal audit section.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              |                         | x               |                          |
5. The Chief Internal Auditor spends a great deal of time dealing with Audit Committee meetings.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              |                         | x               |                          |

**E. Control Risk Self Assessment**

1. CRSA (Control Risk Self-Assessment) is a concept that the managers have embraced within my employing organisation.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              |                         | x               |                          |
2. Departmental / cost centre managers are receptive the concept of CRSA and rely on audit to give advice.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              |                         | x               |                          |
3. Audit should encourage managers to embrace CRSA.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              |                         | x               |                          |
4. If management embrace CRSA it could make the audit function redundant.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | x            |                         |                 |                          |
5. My audit department has been involved with introducing the concept of CRSA.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       |              | x                       | x               |                          |
6. CRSA is an alien concept to the managers of my organisation.
- |                       |              |                         |                 |                          |
|-----------------------|--------------|-------------------------|-----------------|--------------------------|
| <i>Strongly Agree</i> | <i>Agree</i> | <i>No specific view</i> | <i>Disagree</i> | <i>Strongly disagree</i> |
|                       | x            |                         |                 |                          |





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**Theme 3: The developing role of the internal auditor in corporate governance.**

**Paper 2**

Davies, M. & James, L., (2002), 'Auditing The Third Way: A Review of the Developing Role of Public Sector Audit and Inspection', *The Journal of Finance and Management in Public Services*, 2(2), pp. 15–26. (40%)



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# Auditing The Third Way: A Review of the Developing Role of Public Sector Audit and Inspection

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### **Abstract**

This paper presents a picture of current issues pertaining to audit in the public sector. It explores the outcomes of the political ideology termed the 'Third Way' on the role and nature of public sector audit. It initially considers the Third Way and its core philosophies and policies and the implications of these for working relationships within the public sector. It identifies that within its strategy for the implementation of the Third Way that the UK Government has specified a key role for audit in ensuring both performance measurement and accountability. Finally, it explores the challenges that these roles present for the public sector auditor and suggests some potential ways forward including areas for further research.

### **Introduction**

Since the General Election of 1997 the New Labour Government has followed an approach to the management of the public sector which has been christened the 'Third Way'. It embodies a political ideology which is beyond the old left of the 1950s and the new right ideals of the 1980s. It is many things to many people but Milliband (1999) describes it as follows:

- Growing interdependence resulting in a return to collective solutions to problems but with a new role for the state as a facilitator and enabler.
- Low paid jobs are better than no jobs but that there should be a minimum wage and those on low wages who support families should be assisted.
- The development of civil rights and responsibilities.
- Social inequalities can be countered through public policy.
- Globalisation demands the reform of international institutions to meet the demands of a more interconnected world.

Critically for those operating in the public sector a core theme of the Third Way is the need to promote democracy that embraces openness and accountability as well as modernising public services. Modernisation includes a new focus on outcomes for the citizen as compared to the input-focused management of the 1980s that focused on the service provider. As Jones and Stewart (1999) state, "Ends are more important than means, which makes structures and processes less important."

It leads to a redefinition of the relationship between central government and other sections of the public sector as follows:

- Defining rigorous and challenging national standards.
- Encouraging the development of continuous improvement through performance frameworks.
- Consultation with the public and collection of stakeholders' opinions.
- Incentives for those public sector organisations which achieve continuous improvement.
- Penalties and 'zero tolerance' of failure, the potential for the withdrawal of service delivery privileges.

These ideals have been embodied in legislation requiring the public sector to recognise to drive for the continuous improvement of the delivery of public services. For example, the Local Government Act 1999 introduced the requirement for local authorities in England and Wales to pursue best value and introduced a new dimension to the inspection of local authority services, where a review of the authorities best value plan and the continuous improvement of services fell upon the Audit Commission's Best Value Inspectorate.

A further challenge within the modernisation agenda is 'joined up' service provision and an emphasis on e-government. The former refers to the aim of central government for the public sector to present a seamless face to its customers, breaking down traditional departmental and

organisational boundaries and encouraging co-operation between entities which have been perceived as secretive and guarded. This again emphasises the core theme of the Third Way for public services to meet the needs of the public and not of the public service providers.

The modernisation agenda addresses all aspects of local government, including the move away from the traditional committee system to one of cabinet style governance with an option for elected mayors. For those working in the public sector this means potentially substantial changes in the relationships between officers and members.

In Wales and Scotland the introduction of devolved government in the form of the National Assembly for Wales and the Scottish Parliament means that the modernisation agenda is being implemented against the backdrop of a new and unique form of devolved government. This presents the opportunity to develop a tailored approach to modernisation in these regions which recognises the differing structures and cultures of their public sectors.

### **The Role of Audit in the Third Way**

Whilst there is still academic debate over the extent, nature, practice and concept of public audit (Power 1994, Lovell 1996 and 1998, Evans 1998), the UK Government sees a central role for both internal and external auditors in the implementation of the Third Way.

Both sets of auditors have a key role to play in the development and monitoring of the performance frameworks and plans and ensuring that public accountability and value for money are maintained. The role of the external auditor is prescribed in the Best Value (Local Government Act 1999) legislation in terms of the audit of performance plans and their achievement. However, this role is not a static one and continues to develop.

An example of a regional, tailored approach of a changing role for auditors and inspectors is the Wales Programme for Improvement. This has been developed by the Welsh Assembly Government in conjunction with the Welsh Local Government Association and representatives of public sector auditors and inspectors in Wales and is an approach to best value which recognises the specific structure and nature of local government in Wales. One of the key elements of the Wales Programme for Improvement is the publication of a 'Regulatory Plan'. The purpose of the plan is to present a clear picture of the level of regulatory activity which a local authority can expect in the forthcoming year and to ensure that the level of audit and inspection is 'both proportionate and manageable from the point of view of the authority's own capacity to manage change.' (Wales Programme for Improvement: Guidance for Local Authorities, National Assembly for Wales, 2002, p.21)

In this context, the Audit Commission's lead Manager for Wales, Andrew Wood has stated, 'I am keen to develop a far more integrated approach to audit and inspection...(to) demonstrate our commitment to a more collaborative and inclusive approach to the audit and inspection'. (Wood, 2001)

Auditors, by operating in new governance frameworks both within local government and the new regional government systems, may also become more directly accountable to the public as they take up a high profile position in the implementation of the Third Way. This commitment to open government could mean auditors finding themselves closer to the public as well as the service deliverers whom they audit. Also they may find that the development of tailored approaches will be required. The Audit Commission's second annual statement on Best Value, 'Changing Gear', states that 'both audit and inspection need to be reshaped to provide challenge and external review that is more focused on the needs of different councils'. (Brown, 2001)

There is growing recognition that public sector auditors need a modernised, joined-up approach to a modernised, joined-up public sector. The Public Audit Forum was created in 1997 following a recommendation of the White Paper, *The Governance of Public Bodies: A Progress Report*. Its membership includes representatives from the four 'public audit' bodies, the National Audit Office (NAO), the Audit Commission (AC), the Northern Ireland Audit Office (NAIO) and the Accounts Commission for Scotland. However, it also includes as members of its Consultative Forum key representatives from the audit process and members of the accountancy profession.

The Forum has published what it sees as the implications for public audit of the Better Government agenda. It has described the auditor's challenge as the need for auditors to recognise that public sector managers are being encouraged to be far more innovative and imitate their private sector equivalents by becoming risk takers. However the public sector audit process is historically averse to this concept. The issue that different parts of the public sector in the joined up system of government come under different audit regimes complicates this (Evans and Thornton, 1997).

In response to the challenge the Public Audit Forum has identified the following issues:

- The need for new forms of accountability;
- The readiness of auditors, as well as managers, to embrace change;
- The challenge of assessing value for money where more than one body is involved;
- The importance of performance measurement;
- The need for financial discipline and to ensure the legality of expenditure;
- The importance of co-operative working between auditors.

On the basis of these proposals Martin Evans of the Audit Commission concludes,

"Far from being a problem, public audit can play an important role in the development of high quality, more efficient and effective, and more accountable public services." (Evans, 1999)

Each of these issues is now considered against the backdrop of the Third Way.

#### **The need for new forms of accountability**

The ending of the traditional committee system in local government and the potential need for the co-ordination of effort between internal and external auditors and inspectors means that new forms of accountability within the local government structure will need to be established. This would seem to be a classic role for an audit committee and indeed the Audit Commission (1996) identified many benefits and potential improvements in governance through the operation of an audit committee.

However, evidence collected by Davies and James (1999a) suggested that while internal auditors felt that many benefits could be obtained by the establishment of an audit committee, in practice few authorities in Wales had taken the step and continued to deal with audit issues through the traditional committee structure. On going research by Davies and James (1999b) on the role of audit committees in local government revealed that the establishment of audit committees is rising up the governance agenda but that the role and scope of these committees still varies considerably.

It is interesting to follow the developments in local authorities as they begin to experiment with the cabinet style of governance. The statutory establishment of the scrutiny committee has taken precedence over the establishment of an audit committee, which some local authorities consider to be adequate, others however have taken on board the merits of an audit committee and have established one in its own right.

In its policy statement 'Freedom and Responsibility in Local Government' (Welsh Assembly Government, p.37, 2002) the Welsh Assembly Government notes that Guidance on Executive

Arrangements urges local authorities to set up audit committees which do not contain members of the Executive and Board but which contain independent non-councillors. This is in a similar vein to the Cadbury recommendation for audit committee membership of non executive members. The policy statement also states that the Welsh Assembly Government will work with local government to explore ways of making audit committees as effective as possible.

Davies and James (1999a) also identified that trends for 'down-sizing' within local government, under pressures to achieve value for money, had meant that in many cases the Chief Financial Officer had been downgraded to a second and sometimes even a third tier post. The resultant effect being a loss of position and status for the internal audit function. This may have serious implications for the role which internal audit can play in the preparation and monitoring of performance plans.

The Audit Commission (1998) has also expressed concern over the erosion of the status attached to the director of finance and thus it may be inferred internal audit. The creation of audit committees may be a way of improving the position of internal audit within the governance framework. In addition, the Turnbull Report (1999) firmly established the importance of internal control review as an integral part of corporate governance, which elevated the role of the internal auditor. The Turnbull Guidance IIA (UK) (1999) identified 'a greater emphasis on objective assurance obtained from internal audit'. The impending adoption of the Turnbull recommendations by local authorities may serve to further raise the profile of internal audit. However, internal auditors will need to demonstrate that they have the skills to actively participate and make valid contributions to organisational effectiveness.

Internal audit seems to be embracing these changes. Davies (2001) recognised the changing face of internal audit in that 'there has been a progression from the traditional minimum audit service as required by statute to the more corporate approach of business assurance provider'.

#### **The readiness of auditors, as well as, managers to embrace change**

The management of change in the public sector in the UK has become an area of disagreement between the UK Government and other parts of the public sector. The Prime Minister declared his frustrations at the refusal of the public sector to change. Inevitably this raised a storm of criticism centred on the argument that the public sector has done nothing but change and change substantially since 1979.

This led to the Deputy Prime Minister stating that, "The public sector makes a better life for everyone" and that partnership between central and local government was essential to achieve this (Pinder, 1999). In reality, parts of the public sector has managed change well as evidence from Pettigrew et al. (1992) provides plentiful examples of successful change management in the National Health Service.

Likewise, Farnham and Horton (1995) identify a major cultural shift in the public sector away from traditional public service values to a culture dominated by markets and managerialism. They present an excellent assessment of the public sector changes which have occurred since 1979. Both Farnham and Horton and Keen and Murphy (1996) suggest that these changes may well be a twin-edged sword. For example, Keen and Murphy quote Grey and Jenkins (1993) positive arguments in terms of promoting better performance and greater accountability whilst identifying Hood's (1991) counter argument that it has increased middle-level bureaucratisation at the expense of the front line.

Despite strong academic arguments against the wholesale application of private sector type markets and management practices in the public sector (Ranson and Stewart, 1988, 1989), the public sector, driven by a demanding policy agenda, has had little choice but to change. However, given the complexities of

individuals, organisations and change, it is impossible to draw broad generalisations or develop 'models' for the successful implementation of change or even identify generic evaluation criteria.

However, there is little doubt that the implementation of the Third Way will lead to more change. In the financial sphere, the Audit Commission (1999) identified that the existing planning and financial systems within local government are inadequate to support full-blown Best Value. The study identifies the systems to be short-term based, incremental and lacking in public consultation.

As part of the implementation of the Wales Programme for Improvement, the Welsh Assembly Government has also noted that it will be important for the financial and performance management systems of local authorities to be integrated and seamless. 'The systems for managing an authority's performance and finance play an integral part in the approach to corporate risk assessment. Scrutiny committees and audit committees will have a key role to play in this process.' (Freedom and Responsibility in Local Government, Welsh Assembly Government, 2002, p.62)

The reform of these systems will present interesting challenges for the public sector auditor who could play a vital part in ensuring their robust design and implementation. The Public Audit Forum consultation paper, 'Propriety and audit in the public sector' (May 2000), provides guidance aimed primarily at external auditors and senior management, however, Wynn (2000) considers it to be useful guidance for internal auditors as it provides discussion on basic concepts including accountability, governance and internal control. This could be interpreted as generating an increase in the consultancy function of internal audit if it becomes more involved with governance and accountability as the way forward then it will need to be carefully managed within organisations as so as to ensure their continued independence.

#### **The challenge of assessing value for money where more than one body is involved**

The 'hollowing out' of the state (Rhodes, 1994) has meant that increasingly in the public sector reliance is placed on the delivery of services by what have been termed 'networks' (Rhodes, 1996, Hoggett, 1996, Kickert, 1995, Taylor, 1997). These are networks of service providers delivering services at 'arms length' from central government but in many cases not outside its direction.

The former Department of the Environment, Transport and the Regions' Local Government Research Programme into cross cutting issues (DETR, 1999) recognised that there are long standing blockages to effective integrated working. The long standing tension within central-local government relations, the impact of new contract forms of service delivery and the role of professionalism in maintaining vertical working, to name but a few.

The above study identified that a major difficulty for the successful operation of multi-agency teams was that there was no definitive definition of the problem or the desired outcomes. There was little agreement about cause and effect and therefore which measures might be the most effective. These can lead to major difficulties in terms of the evaluation of service delivery.

As Eilbeck and Bingham (1999) identify performance measurement in this sense may become public sector audit's own 'wicked issue'. This may not be an easy nettle to grasp given the difficulties identified below in terms of co-operation amongst auditors.

#### **The importance of performance measurement**

The role of the auditor in assessing performance came to the fore with the publication of the Citizen's Charter in 1991. The Local Government Act 1992 provided a statutory basis for the Audit Commission to audit and publish information to facilitate the comparison of local authorities against each other and over time.

Reservations were expressed with regard to the usefulness of the charter itself (Pollitt, 1994) and at the wisdom of handing over the design and collection of the information to external auditors (Bowerman, 1995). Arguably, this early data was limited and whilst intended to measure value for money focused in the main on economy and efficiency, the traditional strength of professionals trained in the area of accountancy. However, the bias towards results orientated government has led towards a focus on outcomes and the rise of effectiveness as the most prominent 'e'. Power (1995) identifies that it is in this domain that traditional auditors from financial background feel most exposed.

The Quinquennial Financial Management and Policy Review of the Audit Commission (DETR, 1998) identifies this skills gap as one which the Audit Commission must urgently address. It recognises that this will present a particular challenge within tight resource constraints and at the same time maintaining the independence of the Commission.

Inspectorates in some areas of the public services, such as education and social services, are well established and the Audit Commission is starting to build relationships with these organisations in recognition that auditing outcomes extends beyond its traditional skill base. Although Travers (1998) identifies that some of these working relationships are more successful than others. Travers identifies that clashes of cultures exist between the evidence based method of working of the Audit Commission and the judgmental based method of inspectorates, particularly OFSTED in England. Travers also identifies that there is a difference in the independence status of inspectorates and the Audit Commission. The Commission is financially independent and has a reputation for critical reporting of government activities while inspectorates on the other hand generally look to sponsoring departments for guidance about priorities.

Eilbeck and Bingham (1999) identify that there is a role for the Public Audit Forum in defining and developing working practices. This should include the development of training programmes to ensure skills are developed beyond the traditional areas of financial accountability. There will be an important role for organisations such as the Wales Inspectorate Forum and its regional equivalents in the sharing and development of best practice.

Particular care will need to be taken for the development of services in the joined-up domain because as Williamson (1999) identifies there is a real danger that the targets set for individual service providers will work against them carrying out joint projects. Public auditors will need to pay particular attention to the coherence of performance measurement in these areas and could have a vital role to play in identifying any such dysfunctions.

#### **The need for financial discipline and to ensure the legality of expenditure**

This sounds like firm ground for auditors, the traditional function of traditional public sector audit. However, with the introduction of so much change and new resource allocation functions associated with the introduction of regional government in parts of the UK, this is a complex issue.

Auditors will be treading new ground and untested waters. New structures for partnerships, joint committees and boards present complex issues of governance and financial accountability.

#### **The importance of co-operative working between auditors**

Bowerman (1994) identified several areas where the work of the NAO and the Audit Commission interfaced. Both examined value for money in the National Health Service and both had an interest in local services largely funded by central government.

She concluded that co-operation between the NAO and the AC was not close in all the areas in which they interfaced. It was identified that activities were co-ordinated to the extent that the organisations ensured that they did not simultaneously examine the same aspect of a topic but

that there was no active planning to ensure rounded coverage of topics across the whole of the public sector.

Travers (1998) when commenting on the Sharman Report felt that it did nothing to tackle perceived overload of audit and inspection in the public sector. Although the concept of working together was recognised, the Sharman Report does not provide any practical advice on how to achieve this co-operative working relationship.

A number of recent developments however offer potential ways forward. As previously noted, in the Wales Programme for Improvement a Regulatory Plan will be produced which will take account of the level of audit and inspection in any one year for an individual authority with the aim of maintaining it at a level manageable for that authority. In a letter to Local Government Chronicle (LGC, 1/3/02, p.9) Sandy Blair, Director of the Welsh Local Government Association suggests that in Wales this results in 'no ironic over-layer of inspection here.'

Also in the announcement of the creation of the Commission for Healthcare Audit and Inspection (CHAI) and the Commission for Social Care Inspection (in England) in the 2002 Budget introduces wide ranging changes to the structure of inspection in these areas intended to bring greater co-ordination (Ward, 2002, p.21). CHAI brings together the work of the Commission for Health improvement with the Audit Commission's value for money work in the health service. CHAI will also be responsible for the inspection of private hospitals, taking over this work from the National Care Standards Commission which will be abolished. The Commission for Social Care Inspection will take on the balance of work from the National Care Standards Commission and the Social Service Inspectorate.

In terms of the creation of a single public sector audit body, Bowerman (1994, p.60) concluded that the benefits of competition, for example, innovations in methodology outweighed the potential benefits of merging to form one public sector audit body, particularly as the "area where an integrated approach is required is relatively small."

This was supported by the DETR's Quinquennial Financial Management and Policy Review of the Audit Commission (1998) which recommended no major changes to the Commission's role and remit. The review, however, did recognise that the area identified by Bowerman had still not been resolved and recommended 'a further attempt should be made to define and demonstrate more clearly the respective responsibilities of the NAO and the Audit Commission in relation to the NHS in particular' (Para. 10.15). As noted above the work of the Audit Commission in relation to health service value for money studies will now be moved to CHAI.

Travers (1998) also identified that each of the organisations was determined to maintain its independence and that the working relationship between the Audit Commission and the National Audit Office has never been anything other than 'a slightly tense professional relationship'. This is because of the different histories and accountabilities of the organisations and in some instances the competition for audited bodies.

In the regions the debate has moved on, the National Assembly for Wales has approved proposals for an 'Audit (Wales) Bill' which will create a single audit body for Wales (LGC, 5/4/02, p.4, LGC, 12/4/02, p.11).

The creation of the Public Audit Forum is in itself an attempt to co-ordinate and standardise audit effort across the public sector, including providing strategic focus on cross-cutting issues. This is the first step towards addressing the concerns raised by Bowerman and also arguably concerns which have increased in importance with the advent of services delivered by hollowed-out networks



of public service providers. Co-operation amongst auditors is no longer just desirable, it is essential to ensure that the networks are accountable for their service delivery.

But co-operation is essential not only to ensure the above but also to ensure that audit overload does not occur. Classic work by Day and Klein (1990) in the area of social services identified the concept of 'inspectorial overload'. This is supported by Travers (1998) who argues that few of the inspectors take into account the financial costs and stress of their 'victims' when assessing the costs and benefits of their own activities. The kind of co-operation identified by Bowerman (1994) may prevent four sets of auditors turning up at the same time to audit the same aspect of service delivery but it does not, in theory, prevent them from turning up on consecutive weeks to do just that.

Limited numbers of joint reports to date from the public audit bodies suggests that whilst there may now be a willingness to co-operate, practice lags some way behind.

Evidence from the Healthcare Financial Management Association (1998) also suggests that co-operation between internal and external auditors could be improved. This was cited as one reason for the failure of the National Health Service to successfully combat rising levels of fraud. Another interesting aspect of this evidence is that there is a greater preponderance of private sector audit firms providing an internal audit function in the health service than elsewhere in the public sector. It would also seem that the audit interface between both public sector based and private sector based auditors needs developing. It is difficult to see how this will develop in the short term given the post-Enron lack of confidence in the private sector audit regime.

Likewise Levy (1994) identified that there seemed to be little contact and no joint activities between the European Court of Auditors and the National Audit Office. Whilst it must be recognised that both organisations have moved on since the research was conducted. The increased level of public service funding by the European Union in the UK, and the increase of fraud within the European member states in relation to EU funds has led to the roles of both auditors moving towards a more effective working relationship.

### **Conclusions**

There are no easy answers to any of the above issues. Changing attitudes and cultures takes time. Whilst individual agencies may have clear strategies arguably there may be a lack of strategic audit focus across the public sector.

Clearly, the creation of the Public Audit Forum is a step in the right direction and it will have an important role to play in the development of a joined up approach to public sector audit, its publications are designed to provide a service as guidance to auditors and management. A priority should be the sharing of best practice and the development of a common approach and understanding. It is important that its discussions and policies are turned into action.

As noted above, the changing of cultures and working practices is never easy but initiatives such as joint training programmes and work exchanges might assist in the creation of an organisation wide commitment to joined up audit.

Any initiatives in the audit domain should be extended beyond the four organisations of the Public Audit Forum into private sector firms and internal audit functions within public sector service providers. Obviously, it will be important to maintain independence for the traditional external audit function of final accounts audit but it should be possible to maintain independence and still benefit from the cross fertilisation of ideas and opportunities which the above joint initiatives present. This is an area where at an organisational level the audit committee structure can help develop

co-operation, planning and dissemination of experiences between auditors and inspectors. The Wales Inspectorate Forum and its equivalents can replicate this at a national level.

It is arguably now an opportune time to move on from the Sharman Report and capitalise upon the growing recognition of the opportunities for a co-operative working approach for public sector auditors and inspectors.

Training will be essential to develop skills in the evaluation of effectiveness; the above initiatives will need to include specialists from outside the traditional audit sphere. Davies (2001) research results from interviewing internal auditors found that 'Both staff and audit managers agreed that there was a need for more staff training. One of the key drawbacks identified was that of financing and resource reallocation'. This skills gap is not limited to auditors as it is also a key issue for the membership of audit committees and is worthy of further research and consideration.

The public sector, including its auditors, has shown itself to be capable of managing change, the concept of joined up audit is achievable, it just needs perseverance. This area of joined-up audit and the challenge of change is a platform for further research where the progress and impact of these developments can be reviewed and monitored both in terms of the public sector and its auditors. However an important aspect that must not be lost sight of during this period of change and development is the traditional audit role of financial accountability and legality of expenditure.

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**Theme 3: The developing role of the internal auditor in corporate governance.**

**Paper 3**

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# Effective working relationships between audit committees and internal audit—the cornerstone of corporate governance in local authorities, a Welsh perspective

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**Abstract** This research looks at the working relationship between audit committees and the internal audit function within Welsh local government. The focus is primarily on the working relationship from the perspective of the head of internal audit, also known as the Chief Audit Executive or Chief Internal Auditor [Head of internal audit will be used synonymously with that of Chief Audit Executive and Chief Internal Auditor]. Is it a marriage of convenience or a working relationship where the two can capitalise on what they both bring to the corporate governance arena? Reluctance by local government in Wales to embrace the merits of audit committees in the late 1990s means that local government is playing catch up with other public sector organisations. This in turn affects the recognition of the benefits of an effective audit committee capable of working with the internal audit function to promote sound corporate governance. Published guidelines by the UK public sector accountancy body in 2005 on the implementation of audit committees within local government made those organisations yet to establish an audit committee to rethink the situation, and were encouraged by the seemingly positive benefits of audit committees. Wales was no exception, and the 22 local authorities considered embracing the concept of audit committees. Consequently, this placed the internal audit function and head of internal audit under the spotlight in terms of the expectations of the audit committee members. Audit committees roles and responsibilities mean that they should assist councils and officers to ensure they undertake their responsibilities with probity and effectiveness, especially in respect of financial control. It is imperative that committee chairs and internal audit can function as a working team in order to be effective. Audit Committees have a role to assess the performance of the internal audit function, appoint heads of internal audit, support and promote the audit function within the organisation. It is therefore important that the heads of internal audit have confidence and respect for the audit committee and its chair in terms of the skill and knowledge it has of the audit role in relation to the financial and non-financial aspects of the organisation. Laura Spira (2003) comments on how very little research has been undertaken in relation to the audit committee activities, within the private sector, consequently very little is known about what they actually do, let alone how effective they

are in undertaking their role. In a similar vein, the same is true of the public sector audit committee activities, especially when they have tended to adopt the private sector audit committee as a blue print to their own audit committee development.

**Keywords** Audit committees - Internal audit - Corporate governance - Public sector - Local government in Wales

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## 1 Introduction

This article discusses research undertaken into the working relationship between audit committees and the internal audit function in the public sector and specifically within Welsh local government. The reorganisation of local authority boundaries and the move from a two tier to that of unitary authorities within Wales in 1996 left a number of authorities reluctant to introduce yet another tier of committees within what was already an overloaded cul-de-sac of indecision. The adoption of audit committees in local government was not really conducive because of the unique constitutional, operating and legal environment within which they existed. The local government reaction was sceptical towards the introduction of audit committees, Weekes (1996) refers to John Whiteoak, Chairman of the Chartered Institute of Public Finance and Accountancy's working group on Corporate Governance, having a view that issues of internal control, performance review and audit resources could be adequately dealt with by the existing committee system within Councils. Research results from a survey undertaken in 1996 amongst Welsh public sector bodies indicated that the internal audit anticipated that the presence of an audit committee would enable a higher profile for internal audit, clearer reporting lines, additional assurances that internal audit reports would be acted upon and that there would be independent monitoring of audit performance (Davies and James 1998). The take up of audit committees in local government within Wales was very slow at that time, especially as the reorganisation from dual to unitary structure was in its infancy for Welsh local government. By 2001 the state of play was altering, CIPFA/SOLACE published a framework that was referenced as a keystone for community governance that looked at local government aspects of corporate governance, CIPFA/SOLACE (2001). Research undertaken by Davies (2001) identified the changing face of internal audit as a result of new roles for internal audit in terms of risk management, a more consultative and assurance implied more interaction with the audit committee, which indicated a greater audit committee presence (Davies 2001, p. 78). It was inevitable that the torrent of reports, guidelines and updated corporate governance codes would eventually convince local government of the merits of having audit committees. Local authorities in Wales by 2005 were more or less fully operational in terms of establishing audit committees in one way or another, fully operational meaning that some held regular meetings, others met once a year, while some were de facto audit committees in that they comprised the same members as the Finance and Performance Scrutiny Committee (these committees being the

recommended committees as outlined within the Modernising of local government initiatives of 1999 by the Labour government). In one authority, the “audit committee” is an Audit Panel comprising wholly of independent consultants that goes beyond the CIPFA<sup>1</sup> guidance (2005b, p. 2) that recommends that the Audit Committee membership should in an ideal situation be separate from the scrutiny functions (of the scrutiny committee), as a measure to reinforce independence.

The implementation and establishment of the audit committee has in turn placed the internal audit function and head of internal audit under the spotlight in relation to the expectations from the audit committee and the governing body as a whole. The reason for this is attributable to a certain extent by the vast amount of literature and guidelines on the role and responsibilities attached to their counterpart the private sector audit committee. Based on the results obtained from a questionnaire designed to survey the views of Heads of Internal Audit, this article considers the issues affecting the working relationship between the audit committee and the internal audit function (as perceived by the respondents). This is as an opportunity to see whether the state of play fits into the theoretical expectations and assumptions that audit committees and internal audit form the cornerstone of corporate governance.

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## 2 Background to the audit committee

Before the audit committee’s working relationship with internal audit within the Welsh local government sector is reviewed, it is worth considering the background to the audit committee and its role and responsibility within the private sector. In 1992, the Cadbury report on corporate governance recommended the establishment of an audit committee as an important feature within the code of best practice for corporate governance. The audit committee framework that currently exists in the UK stems from the Smith report (2003), commissioned by the Financial Reporting Council to update the roles and responsibilities of the audit committee structure first mentioned within the Cadbury report 1992. The Smith report gives guidance to company boards in making suitable arrangements for the audit committees and to assist directors serving on audit committees in carrying out their duties. The report recommends that listed companies must have an audit committee of at least three non-executive directors, to apply the financial reporting and internal control principles and for maintaining an appropriate relationship with the company’s auditors. The report’s incorporation into the Financial Reporting Council’s (FRC) Combined Code on Corporate Governance 2003 gave a blueprint of how the audit committee should approach its review of the internal audit, and what to expect from the audit function. Appendix A (1) outlines the recommendations of the code relating to the audit committees.

The Smith report, the Combined Code, subsequent guidelines, recommendations and various supporting documentation generated a wealth of research into the working approach of audit committees and their review of internal audit. The general guidance publication by PricewaterhouseCoopers, *In Control—Views of Audit Committee Chairmen on the effectiveness of Internal Audit* (2005) recognises the demands placed on Internal Audit. Where there exists a disparity in terms of what is expected of internal audit, “a ‘back to basics’ approach in deploying internal audit, while an alternative approach argues that focus should be on control over the biggest risk to the organisation”. From the audit committee chairperson’s perspective, one is quoted as saying “It’s the Head of Internal Audit’s responsibility to make the Audit Committee Chairman aware of everything that he needs to



know” (PWC 2005). This is but one perspective, as a number of Audit Committee chairs regularly comment on the working relationship that exists with the internal audit function within the organisation. The role of the audit committee has definitely evolved and,

While the audit committee’s basic function—oversight of the financial reporting process—has not changed over the years, their responsibilities have been increasing to include risk management, control, compliance and special investigations. (Soltani 2007, p. 102)

This may partly explain why there is a greater expectation from the internal audit function in being able to provide information in order for the audit committee to fulfil its emerging and changed responsibilities. The Institute of Internal Auditors (UK and Ireland) published a position statement on the audit committee and internal audit in 2000 (IIA 2000) that provide a blue print of expectations. Further down the line, the official IIA magazine *Internal Audit and Business Risk* published a series of interviews with audit committee chairmen in 2007 that gave an insight into their views on their role and responsibilities as well as that of the internal audit function. It is inevitable that whenever opinions are gathered there is an expectation that compliance with recommended practice is confirmed as being present. On the other hand, the process of assessing internal audit performance and review of the effectiveness of heads of internal audit by the audit committee does provide a means by which internal audit effectiveness can be highlighted and even questioned.

The FRCs *Corporate Governance Combined Code* of 2003 describes the Audit Committee as being the key to good corporate governance. The code requires the audit committee to be responsible for a range of audit related matters and in particular the organisation’s relationship with its auditors. As part of its responsibilities, it will also review the internal control procedures, review financial statements and have a key role regarding any whistle blowing procedures. These areas fall under the remit of the internal audit function, which indirectly therefore means that an effective working relationship between the two is key to sound corporate governance. Gray and Manson (2000) reinforce this in terms of accessibility to information, where “the audit committee should have clear rights to seek information and make decisions to carry out prescribed duties” (p. 537).

From an international perspective, the importance of a working relationship between the audit committee and internal audit is reinforced by the Sarbanes Oxley Act of 2002 relating to corporate governance legislation in the US where “audit committees must make informed choices about the quality of work it receives from the auditors” (Rittenberg et al. 2008, p. 41). By taking a broader overview of corporate governance Collier and Zaman (2005) analyse corporate governance codes in 20 countries in Europe. The audit committee structure appears to be following the Anglo-Saxon model of independence and financial knowledge of its members. “However, consistent with the literature on the convergence of European corporate governance systems, at an operational level there is limited consistency in the recommended structure and role of audit committees” (p. 756). The difficulties and resistance within local government in Wales towards audit committees is therefore in good company.

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### 3 Audit committees in Welsh local government

Following on from the audit committee framework within the private sector, the presence of the audit committee and the resulting operational relationship it has with internal audit is a

relative new phenomenon within local government in Wales, which means that both parties are developing and experiencing a learning curve as they grow. There is no doubt that the corporate governance codes were written with the private sector in mind, but the importance of sound governance is considered just as relevant in the public sector, with some adjustments to the circumstances prevailing within the public sector. Corrin (1993); cited in Spira (2003, p. 181) refers to the Cadbury 1992 report as “a script for a ‘soap’”. Where “the non-executive director is cast as saint, the auditor is a tarnished guardian angel, and the executive director is a villain”. The public sector equivalent was probably not the case where the “non-executive director” in the local government context was invariably an elected council member from the opposing political party and the external auditor possessing truly independent features due to its appointment process via the Audit Commission.<sup>2</sup> The internal auditor in the “soap” possibly playing more of a long standing support role, thanks to its legal requirement standing via Sect. 151 of the Local government act of 1972.

In an attempt to keep abreast of governance developments in the 1990s, CIPFA (1994), published a discussion paper *Corporate Governance in the Public Sector* describing the potential merits of applying private sector theories on corporate governance to the public sector. The key differences between the two sectors can on a basic platform be distinguished in terms of the profit driven wealth maximisation of the private sector to that of the service orientated resource limited function of the public sector. Nevertheless, the concept of internal control and risk management is applicable to both, hence the relevance of an audit committee function. From this discussion paper in 1994, CIPFA (1995) published a report in 1995 confirming the applicability of certain aspects of the code to the public sector, *Corporate Governance—a Framework for Public Sector Bodies*; it concluded that Cadbury principles were equally relevant to the public sector, but required adaptation in practice to reflect the differences that existed within the two sectors. One of the key features of corporate governance deemed acceptable was the establishment of an audit committee, which in many areas of the public sector was embraced without any controversy. Compared to other public sector bodies such as Health Trusts and Executive Agencies of central government, local government was a reluctant participator, regarding the structure within local authorities sufficiently supported by numerous other committees.

committees in local government ..were already consuming a massive amount of councillor’s and officer’s time. Committees which meet monthly have 20 or 25 councillors as members are not uncommon in local government ...their agenda will fill to fit the time available and committees will lose the sight of the big issue. (Vevers 1996a, b, p. 2)

As part of the increasing awareness of the potential benefits of establishing audit committees, the Audit Commission (1996) published *Called to Account—the role of Audit Committees in local government*, again identifying the merits of this overseeing body. The Audit Commission saw the need for a committee to deal with internal control, audit performance, the integration of internal and external audit, as well as raising the profile of internal control and the focusing of audit resources (Harbord 2003). The National Assembly for Wales (NAW) a devolved government body from Westminster for Wales, recommended that “As a matter of good practice and as part of their corporate governance arrangements, local authorities are encouraged to establish audit committees” (NAW 2000, s 3.22).

In 2005, CIPFA published *Audit Committee Practical guidance for Local Authorities*, by now the concept of audit committee acceptability within local government had actually taken hold, even though only 50% had only taken up the concept in 2005, this was till a huge step

forward. Local authorities not only in Wales, but also in England had been reluctant to acknowledge the worth of audit committees, possibly due to the bureaucratic nature of local government and the overlap with the modernising of local government's concept of creating a cabinet style of management incorporating scrutiny and executive committees. Other objections to their introduction into local government included the fear that issues discussed within the audit committee could be used politically; a perception that audit committees were in their very nature private sector initiatives, and not therefore appropriate in local government. The Public Accounts Committee model from Central government where opposition party members sat on the committee was not always feasible in local government situations where an opposition councillor was not always available to chair the audit committee, small or divided oppositions or hung councils meant that there was no "real" opposition party. Recruitment onto an audit committee is not always easy, particularly for small councils. "Identifying sufficient members with appropriate skills and experience can be difficult, especially as many such members could already be serving on other committees and thus may not be eligible for membership" (Clackett 2005, p. 3). Eiliesen et al. (2006) reinforces this refers to the importance of independence of audit committee members,

The members of the audit committee may be required to be independent, 'Independent' ordinarily means as not receiving other than for service on the audit committee, any consultancy, advisory or other compensatory fee and not being affiliated with the company. (p. 140)

Whilst these may be applicable for the private sector, the issues of "fees" and "not being affiliated" is difficult to comprehend when the individuals concerned are elected members who have remuneration for their services and are affiliated by their political involvement. The composition of the audit committee and the manner, in which they exercise their governance and oversight responsibilities, is a major consideration (Cosserat 2004, p. 216).

Despite these issues of skills and independence, corporate governance was perceived as being strong in local government where the board is effectively made up of elected councillors and executive officers supported by a host of committees creating a high level of bureaucratic structures it did not encourage the introduction of another committee (Harbord 2003). CIPFA recognised therefore that some authorities could chose to adopt different models other than those recommended in the audit committee guidance.

Ultimately authorities should have the freedom to make their own judgements about appropriate governance arrangements and to justify their decisions through the relevant accountability channels. (Clackett 2005, p. 3)

The *Audit Committee Principles in Local Government—Position Statement* by the Audit Panel at CIPFA (2005a) outlined the role of audit committees in local government (p. 12), and it emphasised the importance of audit committees being in place in all principal local authorities. The document outlines four key areas on the audit committee covering (1) a statement of purpose, (2) core functions, (3) features, and (4) structure and administration. Appendix A (2) is a summary of the key issues from the Position Statement.

The Audit Panel in its position statement hailed the audit committee as a "key component of corporate governance", providing a source of assurance on the organisation's management of risk, maintenance of an effective control environment, and reporting on financial and non-financial performance. The Audit Panel statement also recognised that issues that had previously acted as a barrier to the introduction of audit committees should be taken into consideration and it stated the "the way in which an audit committee is organised will vary

depending upon the specific political and management arrangements in place in any local authority” (p. 18).

A feature in achieving the “key component of corporate governance” according to CIPFA (2005a) is the reliance placed on internal audit within an organisation. It has placed greater pressures on the internal audit function and head of internal audit in terms of the changing role and responsibilities that the internal audit function has within the organisation. Definitions for internal audit imply that the role of the internal auditor has moved on from that of an appraisal, monitoring and evaluating function, to that of a provider of assurance, consultancy, assistance and advice. This begs the question as to whether in meeting these new requirements and expectations does the head of internal audit feel that he/she is providing a worthwhile service in terms of being a valued member of the organisation. Can the head of internal audit state that he/she contributes to the effective management of resources or is the audit role still only that of undertaking the traditional role of evaluating control structures in order to report to the audit committee?

In the public sector an increased emphasis on corporate governance and public reporting has placed the internal auditor into a more focused position. Organisations are increasingly looking to their internal auditors to give guidance and advice at all levels of management. By being tuned into management philosophy and direction, internal audit can provide a pro-active value added service. An advisory role provides senior management with the added support to solve problems and ensure the achievement of the entities goals. (Davies 2001, p. 88)

Research undertaken in the US in the early 1990s into how audit committees and internal audit can work together identified that a close and effective working relationship between the audit committee and the internal auditor will be beneficial not only to the organisation that they serve, but also to society as a whole (Rezaee and Lander 1993). Other studies have also indicated that a strong working relationship between the internal audit and audit committee can be beneficial to both parties especially in establishing their “cornerstone” of corporate governance and strengthening their respective functions (Goodwin and Yeo 2001). This “reciprocal” arrangement is borne out by Turley and Zaman (2004), where audit committees can be champions of the audit function, while the internal audit can be useful to the audit committee in helping it meet its responsibilities. A study by Raghunandan examined the association between audit committee composition and the committee’s interaction with internal auditing. The results from the study emphasised that where the composition of the audit committees was made up of solely independent non-executive directors with at least one member having either accounting or finance background they were more likely to (1) have longer meetings with the chief internal auditor; (2) promote private dialogue between them and chief internal auditor; and (3) be capable of reviewing internal audit recommendations and the outcomes of internal audit activities (Raghunandan et al. 2001).

An Institute of Internal Auditor’s research project conducted in 2005 highlighted how the role of the head of audit is changing, one head of internal audit was quoted as saying “you must be able to help achieve practical solutions that benefits the organisations and to express ideas in simple language” (Baker 2006a). IIA President Alex Richmond stated in an interview with the IIA magazine, “it cannot be good enough anymore to go to the audit committee and just give them a summary of an audit report’s recommendations” (Baker 2006b). Stein and Crawford consider that “internal auditors are actively embracing a role in the implementation of risk management ... their process and skills and seniority leave them poised to be a major facilitator of risk management” (Stein and Crawford 2005, pp. 43–56).

There is a definite shift in the workload of the head of internal audit as they are very much the source of information to the audit committee especially when "Audit committees provide the board with assurance about the quality and reliability of both the financial and non-financial information it receives. They must also satisfy themselves that the key business risks within an organisation are adequately managed through a sound framework of internal controls" (IIA (Institute of Internal Auditors) 2003). This means a two-way flow of activities, where the "Audit committees should work to improve communication with management as well as look to internal audit activity for insight to support what management tells them" (Bromilow and Berlin 2006). Research into "The changing face of internal audit" by Davies (2001, p. 90), identified that to a certain extent the Audit Committees are expected to impact on audit work, while the Chief Internal Auditor does spend time attending these meetings the amount of time does not seem to be an issue. The background to the audit committee framework and the changes facing the heads of audit provides a basis from which this research paper develops into a survey in to the working relationship between the audit committee and internal audit.

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## 4 Research methodology and findings

This research evolved as a result of an invitation to present an overview of the CIPFA (2005a, b) *Audit Committee Principles in Local Government* to the Welsh Chief Auditors Group at one of their monthly all Wales meetings. The post presentation discussion fired an interest to delve into discovering the intricacies of the working relationship between the audit committee and the head of internal audit (HIA).<sup>3</sup> The discussion post presentation focused on the issues that were of concern to the individual heads of internal audit; these concerns were to provide some of the questions/statements that were to find their way eventually into the questionnaire. The issues discussed provided a general feel to the areas linked to effective communication, and effective working practices.

As a direct result of this presentation an invitation to present a similar paper at an internal audit seminar arranged by one of the regions of CIPFA as part of an internal audit continuing professional development programme opened up the debate to local government internal auditors as a whole, with senior and manager level audit staff participating. During the seminar, it became obvious that a number of concerns and expectations surrounded the establishment of audit committees within local government. In addition to these focus group sessions, a selection of County Council internal audit reports were accessed via the web in order to obtain material relating to the audit committee remit, input and feedback. One local authority audit report stated that "The most that the Internal Audit service can provide to the governing body is a reasonable assurance that there are no major weaknesses in the whole system of internal control ...while ...assurance can never be absolute", Gwynedd CC (2006). A number of authorities mentioned matters such as "rights of access" by officers of the organisation to the audit committee, surprisingly one authority does not include the HIA amongst the officers that has a right of access to the Audit Committee.

As a consequence of this initial meeting with the heads of internal audit, the emphasis of this research focuses very much on the internal audit viewpoint when assessing the audit committee and internal audit relationship, and more specifically the opinions of the heads of internal audit on the marriage between the two parties. The objective is to gather opinions of the heads of internal audit, audit team members and audit committee chairs to identify areas that could be used either as an example good practice or as items for debate amongst the

heads of internal audit within Wales. These opinions will focus on whether the audit committees recognise the importance of having the appropriate skills and understanding to be able to access, utilise and review the performance of both the head of internal audit and the internal audit function as part of the corporate governance process. An additional feature will be that of discovering whether the role and responsibilities of the audit committee are reflected in a sound working relationship between the component parts that together form the cornerstone of corporate governance within local government.

As the survey is based on qualitative rather than quantitative responses a questionnaire containing direct questions for identifying the existence of an audit committee and its membership and statements for agreement or disagreement formed the remainder of the document. The objective was to gather the opinions of the heads of internal audit on the working relationship that existed between them and the Audit Committee. A similar survey was prepared for the chairperson of the Audit Committee with similar or complementing statements. Due to the small response from the audit chairs, the focus of this article is on the responses from the heads of internal audit. The Likert<sup>4</sup> approach of providing a statement with five options of strongly agree to strongly disagree was used for nine sections of the questionnaire. By utilising previous links with the Welsh Chief Auditor's Group it was possible to distribute this questionnaire electronically to the heads of internal audit with a request that they forward a similar, but bespoke, questionnaire to the relevant Audit Committee Chairs. The electronic questionnaires to the heads of internal audit within the 22 local government authorities in Wales could either be returned electronically or via a hard copy format by freepost. Heads of internal audit from eight authorities participated in the survey, along with four Audit Committee chairpersons. In addition, a focus group meeting with 18 of the heads of internal audit provided a valuable source of opinions linked to issues identified within the questionnaire. The views of audit managers and senior auditors were obtained during an internal audit seminar organised by one of the regional bodies of CIPFA. A presentation on the framework for audit committees was used as an introduction to the seminar where delegates were encouraged to ask questions and add observations. These responses provided a more general audit group opinion. The findings from all three sources provide the backdrop considered relevant to the objective of confirming whether a working relationship exists between the audit committee and internal audit within Welsh local government.

The intention of the questionnaire was to reflect both the issues identified at the focus group and the seminar as well as the CIPFA guidance on Audit Committees published in 2005. The questionnaire comprised of nine sections with 70 statement style questions. Questions such as From this total 67 of the statements required answers that followed the Likert scale approach of strongly agree to strongly disagree on a five-point scale. The Likert scale also referred to as the summative scale operates on a psychometric response. The questionnaire requires the respondents to specify the level of agreement to a statement. Overall, the responses of the heads of internal audit fell into the central tendency bias whereby the extreme responses of strongly agree or strongly disagree tended to be avoided by the majority.

A similar, although not identical questionnaire was distributed via the head's of internal audit to the Audit Committee chairperson. The response rate was much lower for the Audit Committee chairs, only 4 out of a possible 22, but it was not considered a problem as the emphasis of this research was to obtain the views of the heads of internal audit and where possible internal auditors (via the seminar) as compared to that of the Audit Committee chairs. This is an area for further research at another point in time. The feedback in terms of comments was however very revealing and there was an obvious support for the head of audit from those audit committee chairpersons who did reply.

## 5 The questionnaire

The questionnaire covered the following nine areas and as previously stated was addressed primarily to the head of internal audit. The selection of the nine areas was derived mainly from the objective of the research in terms of identifying whether a working relationship existed between the audit committee and the internal audit function. In order to do this it was necessary to establish the status of both parties as well as extracting views of the head of internal audit. The following summarises the different section with illustrative questions.

- A. The Audit Committee status within the local authority. What is the nature of the audit committee is it independent of the scrutiny functions? Does the committee have the knowledge and skills level to meet the expectations of corporate governance?
- B. The core functions of the Audit Committee. Does the audit committee review summary reports from the internal audit? Does the audit committee promote the value of the internal audit process?
- C. The Audit Committee responsibilities. Has the increased level of audit committee responsibilities led to extra work for the head of internal audit?
- D. The effectiveness of the Audit Committee. Has the audit committee become more effective due to its increased understanding of audit matters?
- E. The Head of Internal Audit's role in improving the effectiveness of the Audit Committee. Is it the role of internal audit to encourage audit committee members to gain knowledge of finance issues? Is it the role of head of internal audit to ensure that the audit committee members know their role and responsibilities?
- F. The Head of Internal Audit views on the relationship with the Audit Committee. Does the head of internal audit have unrestricted access to the chair of the audit committee?
- G. The Audit Committee chairperson. Does the chairperson have an understanding of the expectations placed on the audit committee by the governing body?
- H. The Internal Audit within the organisation. Is the internal audit function within the organisation multifunctional or is it shaped by its capabilities?
- I. "Value added" internal audit. How is value added measured?

The statements used within the questionnaire reflected the views gathered from the focus group and the seminar including the issues identified within the *Audit Committee Principles in Local Government—Position Statement* (2005a) published by the Audit Panel at CIPFA. These include the *Core Functions, Features, Structure and Administration* of the Audit Committee.

The summarised survey with all the questions is attached as Appendix B, listing only the questions/statements directed to the heads of internal audit. The complete questionnaire distributed included the option boxes after each question for each respondent to indicate their agreement or otherwise. The scoring analysis based on 5 representing the strongly agree down to 1 for strongly disagree is provided on Appendix C. There was a tendency to avoid using the extreme response category and used what Likert described as the *central tendency bias*. Hence the high number of responses in the 4 score, the strongly agree category (highest score in this survey) was predictably used in cases where there was a reference to the internal audit function which heads of audit may have wanted to portray in a favourable light

which Likert referred to as the *social desirability bias*. For the purpose of this survey, the term *Head of Internal Audit* is interchangeable with *Chief Internal Auditor* and *Audit Manager* to accommodate the different titles used by the various local authorities.

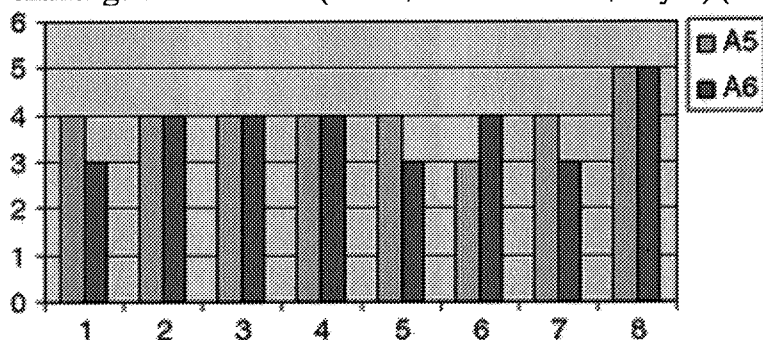
## 6 Comments on the analysis and responses

It is not the intention within this article to analyse each question in detail, but to extract within each area identified above issues that may warrant explanation or reflect a consensus. The analysis of the responses in terms of score ranking as outlined in Appendix C seems to indicate a tendency towards the *central tendency bias*, however there were very few “no opinion” answers, i.e. the central or middle option, which means that there were varying degrees of agreement. The observations derived from the survey will focus on the sections a whole as compared to dealing with each individual question, thereby concentrating on the areas where differences in practices are highlighted. The tables are numbered according to the question(s) that they represent. A full list of the questions is provided in Appendix C.

### 6.1 The audit committee status within the local authority

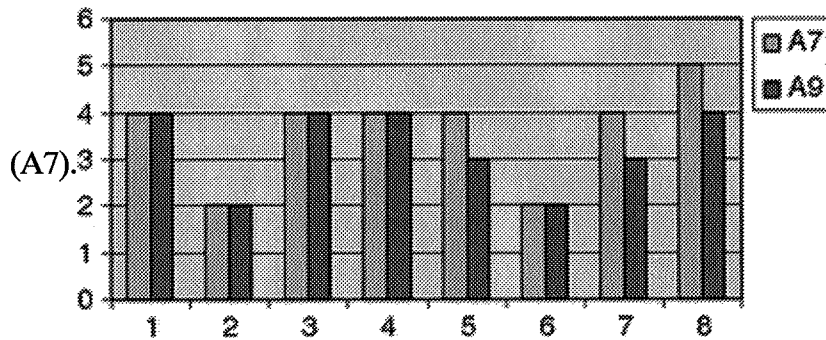
Two of the authorities surveyed stated that their audit committee was not truly independent of the scrutiny and executive committees.<sup>5</sup> One provided an explanation that, “the Audit Committee comprised of the same members as those of the Finance and Performance Scrutiny Committee. The main role of the Audit Committee is to approve the statement of accounts. All issues relating to Internal Audit including the Head of Internal Audit’s annual report are issued to the Finance and Performance Scrutiny Committee. The questionnaire was completed on the basis that the Finance and Performance Scrutiny Committee serves as a *de facto* Audit Committee”.

Generally, audit committee chairmen were regarded as being unbiased and able to give equal treatment to the audit, executive and management (A5), as well as having the ability to challenge the executive (leader/chief executive/mayor) (A6).



Two heads of internal audit considered that the chairperson of the audit committee within their organisation lacked the depth of skills and interest in audit and risk management (A9), that the committee itself was not balanced, objective, or independent of mind, and in turn it lacked the knowledge to meet the expectations and requirements of corporate governance





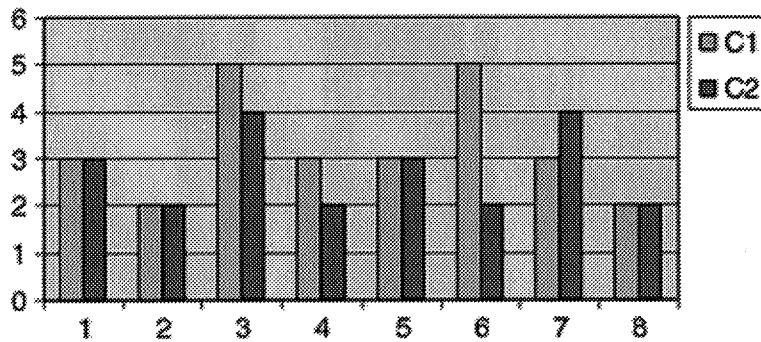
The political nature of local government may be relevant here, along with the difficulties of recruitment onto the audit committee. Membership of an audit committee does not come across as the most attractive committee to enhance member status with the electorate. As for the audit committee meetings, all of the authorities invited the head of internal audit to attend the meetings, but there were various combinations in respect of the chief executive, finance director and external auditor. The attendance at the audit committee meetings by the heads of internal audit does indicate the existence of a relationship between the two parties. Thus, providing an opportunity for direct communication, but the skills, interest and balanced approach to the audit committee is inevitably going to impact on their relationship and ultimately the effectiveness of this working arrangement.

## 6.2 The core functions of the audit committee

All but one of the respondents agreed with statements relating to the core functions of the audit committee. The one head of internal audit that was not of the same view identified the core function within the organisation as only approving the internal audit plan, ensuring an effective working relationship between the internal and external auditor, and promoting the value of internal audit. There was no review of the summary audit reports, risk management or fraud/corruption arrangements. This authority reflects what Davies and James (1998) identified in their survey of internal auditor's concerns about the lack of take up of audit committees in Welsh authorities. "What local government in Wales needs to consider carefully, is the potentially worrying feeling amongst internal auditors that their contribution to corporate governance could be lost in a complex, unfocused reporting system. Coupled with the lack of a focal point for independent audit effectiveness review, report and follow-up may result in a failure to achieve a higher standard of corporate governance" (Davies and James 1998). Those failing to provide a full range of functions fail therefore to meet with the CIPFA position statement 2005. The statement states; "The purpose of an Audit Committee is to provide independent assurance of the adequacy of the risk management framework and the associated control environment, independent scrutiny of the authority's financial and non-financial performance to the extent that it affects the authority's exposure to risk and weakens the control environment, and to oversee the financial reporting process".

## 6.3 The audit committee responsibilities

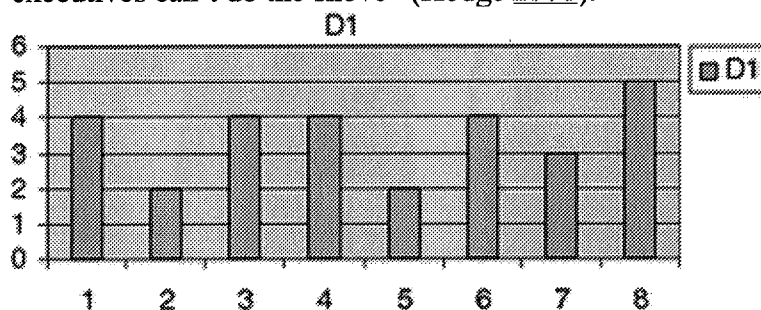
The responses to the questions within this section proved one with the most diverse answers, there were agreements and disagreements on all bar one of the statements indicating the different working arrangements and commitment by the committee members in each authority. There was no real consensus about the increased audit committee responsibilities leading to the delegation of tasks to the head of internal audit (C1); or whether increased responsibilities meant a bigger time commitment from members (C2).



There was an agreement about the increased responsibilities leading to a recognisable increased importance of the audit committee, while only one authority thought that the audit committee was becoming a “supervisory board” as the second tier of corporate governance. In contrast, the response from the audit committee chairs thought that they were becoming “supervisory boards” due to their increased work load and increased importance.

## 6.4 The effectiveness of the audit committee

An acknowledgement that an increased understanding of auditing and accounting matters helping audit committee perform more effectively was not unexpected, what was disturbing was the negative response from two authorities disagreeing that the effectiveness had increased due to increased understanding of audit and accounting matters (D1). This begs the question, are the audit committees ineffective due to their lack of understanding or are they unwilling to increase their understanding of the audit and accounting matters. Council members sitting on audit committees need to be able to exercise their responsibilities and not fall into the non-executive trap in the private sector of “when push comes to shove, non-executives can’t do the shove” (Hodge 2006).



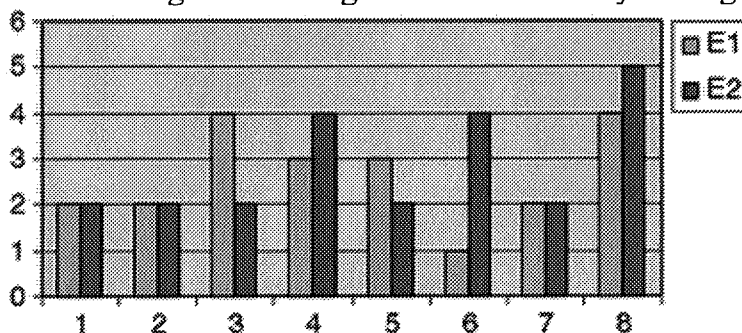
The dominance of certain members of the audit committee influenced the effectiveness of the audit committee in two authorities, while the audit committee chairs did not think that any dominant member could influence the audit committee, obviously personalities play an important factor here as it does in any committee situation. In terms of its role in monitoring audit performance only one head of internal audit agreed that the audit committee’s effectiveness was measured in this way. There was a 50/50 split in terms of “agreement” and “no opinion” when it came to the statement that audit committees enable clearer reporting line within the organisation. While 75% (six out of the eight respondents) agreed that their audit committees provided assurances that the internal audit reports and recommendations were implemented. This reflects the discussions held during the CIPFA (2005a, b) conference on the Audit Committees when there was an opportunity for practitioners to comment on the process that existed within their organisation. Mike Barnes chaired the conference and quoted one delegate in Audit Viewpoint saying that “the audit committee had contributed significantly to getting key audit findings adopted” (Barnes 2005). The remaining

two authorities disagreed with the statement that is perhaps the most revealing in terms of doubting the effectiveness of the audit committee.

As a confirmation of the effective role of the audit committee, one authority provided a copy of its audit committee self-assessment prepared using the checklists produced by both CIPFA and PWC. Comments forthcoming from the self-assessment recognised the need for further training beyond that given at the induction sessions in order to maintain a knowledge level that is commensurate with developments within the sector in order to be more effective in their role. Interestingly the feedback from the chairs of the audit committees all indicated that this questionnaire had highlighted to them that there was definitely a need to review the training provided to new members on the audit committee. To this end therefore the survey has provided food for thought.

## 6.5 The head of internal audit's role in improving the effectiveness of the audit committee

This section of the questionnaire attempted to gain an insight into how the heads of internal audit viewed their changing role and the role they played in improving the effectiveness of the audit committee. Only one considered the role as that of encouraging the audit committee members to gain knowledge of finance issues by visiting relevant departments (E1).



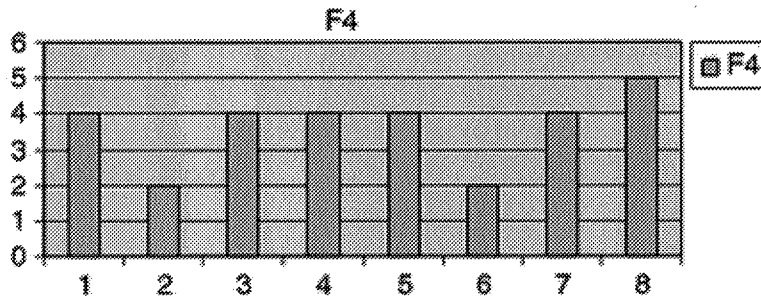
This was also discussed during the focus group along with the idea that audit committee members should take a more active role in particular audit projects, in order to allow them greater insight and understanding of the working practices of the internal audit function. This was not acceptable to the focus group, but interestingly when asked about taking a greater role in particular projects the audit committee chairs had contradictory opinions. On the one hand auditors may think it was encroaching on their “patch” while enthusiastic audit committee members may see it as an opportunity to obtain greater understanding. There is a fine line between gaining understanding and being seen as interfering. The audit committee chairs who responded to the survey realised however, that in order for the audit committee to be more effective there was a need for it to improve its knowledge of financial reporting, risk, internal control and compliance procedures.

Two heads of internal audit agreed that only “high-risk areas” need to be considered at the audit committee meetings (E2). There is a danger here that if the internal audit looks to the audit committee to support their recommendations, and where not all recommendations focus on the risk areas, the support from the audit committee may not be forthcoming. Interestingly, the notion that it is the role of the head of audit to ensure that the audit committees know their role and responsibilities was accepted by 50% of the respondents, which indicates that the heads of internal audit consider it they have a strong duty in terms of corporate governance matters in some authorities. In the same way, there was no real

consensus either way regarding the view that it was the role of the head of internal audit to review the skill and commitment of the chairperson and members of the audit committee, or as to who should lead the discussion at the meetings. A clear indication of how individual in nature the audit committee operate within the authorities surveyed, and that irrespective of guidelines they function in a different manner depending possibly on the culture, personalities involved, expectations and degree of commitment by the committees and internal audit function. From the perspective of the audit committee chairs they relied heavily on the head of internal audit to provide information relating to risk management and internal control.

## 6.6 The head of internal audit views on the relationship with the audit committee

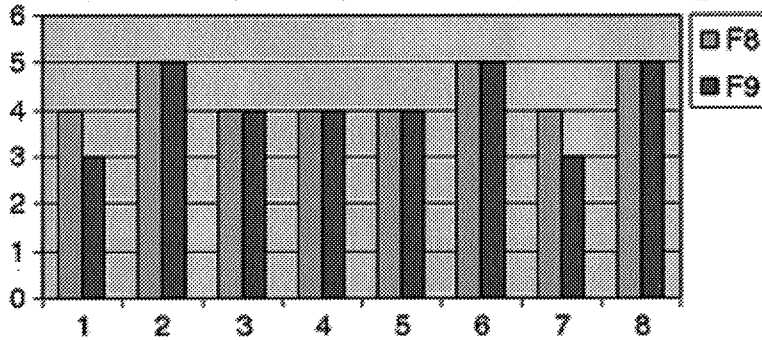
When asked whether the audit committee had the ability and expertise to assess the performance of the internal audit, two heads of internal audit disagreed with the statement and even the audit committee chairs were uncertain about this (F4).



Yet, according to all the literature relating to the role of the audit committee, reviewing the performance of the internal audit function is a key to their existence, (revised Turnbull [2005](#)). This lack of ability and expertise is mirrored in other surveys, Piper ([2006](#)) refers to the Grant Thornton research, the Richard Thornburgh investigation into the WorldCom debacle and the PWC survey on views of audit committees. Piper ([2006](#)) states that despite all the history behind audit committee expectations of internal audit, “it might come as something of a surprise, then, to find that audit committees are still unclear about what they expect from their internal audit functions”. Given the relatively “young” age of the local authority audit committee it is no wonder that there are uncertainties about the assessment of performance when there is not a clear understanding of what to expect. The mixed reaction to the next statement, “*It is difficult for the Audit Committee to distinguish between good and merely adequate when assessing performance of Internal Audit*” is therefore not a surprise. The reaction from the audit committee chairs however was that they were clear about the audit committee’s expectations from the internal audit function. Is this a positive confident response or merely a desire not to admit a weakness?

Audit committee assessment of internal audit performance was an issue debated at the focus group, some heads of audit thought that there was an argument for the audit committee to consider reviewing the performance of other departmental heads as part of their overall review. Some commented on the difficulties encountered when some departmental heads were reluctant to implement audit recommendations, leaving the head of audit to explain to the audit committee the reasons for their refusal or reluctance. They strongly advocated the attendance of these offending departmental heads or managers at audit committee meetings in order for them to be accountable and to explain their reasons, similar in a way to counsel calling upon witnesses in a court case to provide evidence. Failure in implementing the audit recommendations would not then reflect badly on the audit function.

Accessibility and unrestricted access to the audit committee chairs is going to be a major factor if the head of internal audit is going to be able to raise issues relating to the adequacy and reliability of the authority's internal controls. This statement had a positive response, indicating a good working relationship between the two bodies (F8). Whilst there was unrestricted access this did not always mean private meetings were arranged between the head of internal audit and the audit committee, implying that these were more open audit committee access, as compared to the option of having one on one meetings (F9).



To a certain extent this meets with the Smith guidance incorporated in the Combined Code on Corporate Governance (2003), that the head of internal audit has direct access to the board chairman and to the audit committee. This is reiterated in the guidance written for government departments and Executive Agencies, "The Head of Internal Audit should have free access to the Chairs of the Audit Committee in order to raise any such concerns" (HM Treasury 2007).

Freedom from operational responsibility impairing on independence and objectivity was not a feature applicable to all the heads of internal audit sadly, while insufficient skills, resources, qualifications, and experience within the audit function existed within one authority. This is not the ideal circumstances from which to promote an effective internal audit function. The internal audit function needs to support the corporate governance role within the authority. Does this mean that the audit function here is unable to be "an effective internal audit function (that) provides an objective appraisal of all the organisation's governance process. To do this it must have the power and authority to look at the key risks, to report and to drive improvements" (IIA (Institute of Internal Auditors) 2003). The Cadbury recommendations rest on the linked assumptions that audit committees ... will improve auditor independence and thus act to improve corporate reporting and thence the standards of corporate reporting (Spira 2003). Surely this also implies that the audit committee should support the head of internal audit and the internal audit function in attaining a level of independence and objectivity as well as having the right mix of skills, resources, qualifications and experience as of right. It is inevitable that the working relationship to some extent will be dictated by these factors as will the amount of time the head of internal audit has to spend dealing with corporate governance issues.

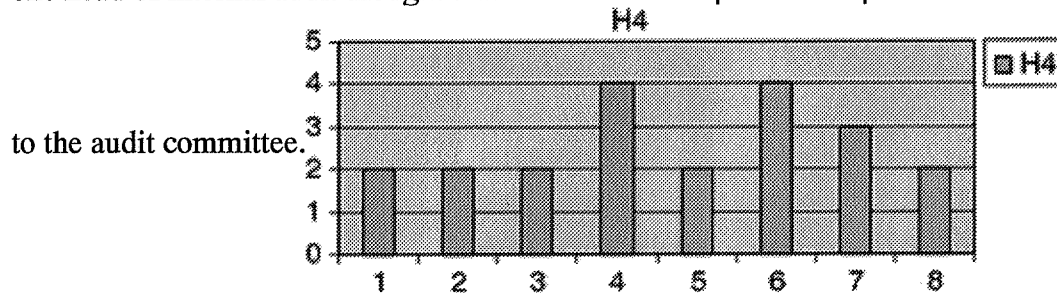
## 6.7 The audit committee chairperson

There was a lack of agreement between the Heads of internal audit about whether their audit committee chairperson is aware of the expectation placed on the audit committee by the governing body. Presumably, this perception stems from the audit committee meetings and the reaction, and input from the chair. Does this reflect a negative attitude driven by the fact that "there is an almost lack of desire to accept an audit committee chair—arguably the most exposed non-executive role" (Ernst and Young survey cited Hodge 2006). Heads of internal audit did not consider that the audit committee chairs relied on them for information and

guidance, however, the audit chairs themselves strongly agreed that they relied heavily on the head of internal audit. Mixed reactions, from differing authorities, or perhaps a failure by the heads of internal audit to appreciate or accept that the body charged with the role of reviewing their performance also relied on their input. On the other hand, it may be a failure by the audit committee chair to feedback to the head of internal audit an appreciation of the work undertaken. Communication may be the key to these differences, an issue reflected in the private sector “Audit committee chairs should make sure that their own committee is up to scratch in expertise and skills ... the chair should make sure that the communication channels between audit committee and internal audit are transparent and effective”. Findings of Moody’s Investor Services as cited in Piper (2007).

## 6.8 The internal audit within the organisation

“At basic level, Internal Audit must be doing what it has been tasked with ...” (Barma 2006, p. 30). The internal audit remit can be dictated by the cultural limitations of the organisation, or it can be enhanced by forward thinking and expectations from those charged with governance. Two heads of internal audit indicated their internal audit function was shaped by its capabilities (H4), which could limit the role of internal audit if they were expected to provide the audit committee with assurances on risk management and internal controls, that could lie outside their capabilities. “Internal auditors recognise the fact that the expectations from managers indicate that they are looking for more than a routine audit from the audit sections and look to audit for some level of assurance and advice”(Davies 2001, p. 81). Only one head of internal audit thought that there was undue pressure to provide additional services



## 6.9 “Value added” internal audit

“Internal Audit is potentially one of the most influential and valued services available to the board” (IIA (Institute of Internal Auditors) 2003). There was a general agreement for the statements within this section of the questionnaire, defining and measuring “value added” being problematic, which by inference implies that those charged with measuring the worth of a department or section in terms of added value are likely to encounter difficulties. “The unique position of head of internal audit in an organisation makes it difficult for anyone within the organisation to properly assess their department’s performance” (Barma 2006, p. 32).

While value added may be difficult to quantify and assess, attaining a valuable status or reputation within an organisation may take a long time to achieve. All the respondents agreed however that if a high level of mismanagement and fraud was encountered within the authority, effectiveness of internal audit, the audit committee and ultimately corporate governance would be questioned and any added value and sound reputation could easily disappear.

## 7 Conclusions

The working relationship between the audit committee and internal audit will inevitably depend on individual personalities, authority governance processes and the willingness by all parties involved taking on board the published guidance on audit committee roles and responsibilities. In addition when this is reflected in the public sector arena of local government there is always the political issue to consider. The differences encountered amongst the eight respondents imply that there is a long way to go before the achievement of a standardised approach to the work of the audit committee, let alone an agreed view on their effectiveness. In terms of this survey, the issues identified include a need for increased knowledge and understanding of the audit and accounting aspects of the authority. While an acknowledgement of the procedures for assessing performance is essential if the audit committee is to work effectively. Communication between the audit committee members and the head of internal audit is important for any working relationship. In the IIA press release commenting on the PWC audit committee survey Murdie (2006) likens it to that of providing marriage guidance between audit committees and internal audit. "We recommend that all heads of internal audit and audit committee chairs make a new year's resolution to have lunch to kick off the process of getting to know their needs and expectations. And both should remember, as with any successful marriage, there are times when you just have to work at it".

In return for the co-operation of the Welsh Chief Auditor's Group in hosting focus groups a follow-up presentation on the findings of the survey generated renewed interest in the research. The findings were used as a platform for some heads of audit to reconsider the composition of the audit committee and its role and responsibilities. The survey reinforced what the heads of internal audit already knew in terms of the requirements, challenges and opportunities associated with working with the audit committee, many of the respondents were interested in obtaining how things worked within other authorities. The follow-up presentation to the Welsh Chief Auditor's Group acted as a conduit for the dissemination of views and situations.

There is hope that the same can be said of the audit committee and internal audit in the public sector as the PWC report on the private sector audit committees concluded, in that "Audit Committees and internal audit have been doing things to improve themselves and get up-to-date ... they are now thinking about the next stage. Both sides have ideas about what needs to be done and what should be done" Jennifer Matheson, the person responsible for the PWC report *In Control, Views of Audit Committee Chairmen on the effectiveness of Internal Audit*. (Piper 2006).

In terms of the internal audit function in Welsh local government it has for a long time been considered the Cinderella function by management, the presence of the audit committee and the whole aspect of corporate governance within local government may very well see the arrival of her prince charming. Internal audit needs to make the most of the opportunity to excel in terms of its role as an important contributor to what is very much in the forefront of all organisations, namely corporate governance.

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## 8 Further research



This is an area that can accommodate future research as the role and responsibilities of both the internal audit and audit committee evolve. The survey did not capitalise on the opportunity to capture the views of audit committee chairs, especially when the feedback on those who did complete the survey as very positive and inclusive. Further research could follow the path of individual interviews or focus group meetings as compared to the electronic questionnaire approach. In terms of the views of the heads of internal audit there is scope to expand this questionnaire into other areas of the public sector within Wales, while a similar exercise encompassing England and Scotland would provide a wider base of responses that could be analysed using statistical packages to facilitate easier comparison.

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## **9 Limitations of the study**

Clearly, a study of only 8 local authorities can only serve as an indication of the working relationship between audit committees and internal audit within local government in Wales, although the number did represent 36% of the total population. The issues identified however do contribute to the ongoing debate in relation to audit committee and internal audit as the cornerstone of corporate governance.

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## **Appendix A (1)**

### **FRC Corporate Governance Combined Code 2003**

#### **The Audit Committee recommendations**

This committee is key to good corporate governance. It has responsibility for a range of audit related matters and in particular the company's relationship with its auditors. The Audit Committee should be responsible for:

- overseeing the work of Internal and External Audit and reviewing the scope and results of audits;
- appointing and dismissing the Head of Internal Audit;
- recommending the appointment (and dismissal) of the External Auditors;
- ensuring the independence of the Auditors.

The committee will also usually review the company's internal control procedures, review financial statements and have a key role in regard to any whistle blowing procedures.

The independence of the Audit Committee is key. The Code recommends that it should consist of at least three non-executive directors and that a majority of these should be independent.

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## **Appendix A (2)**



## Audit Committee principles in local government

Brief overview of the Position statement (CIPFA *2005a, b*)

The way in which an Audit Committee is organised will vary depending upon the specific political and management arrangements in place in any local authority. CIPFA does not prescribe a particular model but there are features that should be common to all.

### A statement of purpose

Audit Committee is to provide independent assurance of the adequacy of the risk management framework and the associated control environment, independent scrutiny of the authority's financial and non-financial performance.

### Core functions

- Approve (but not direct) internal audit's strategy, plan and performance.
- Review summary internal audit reports and issues arising, and seek assurance that necessary action has been taken.
- Consider the reports of external audit and inspection agencies.
- Consider effectiveness of the risk management arrangements, the control environment and associated anti fraud and anti-corruption arrangements. Seek assurances that action is being taken.
- Be satisfied that the authority's assurance statements properly reflect the risk environment and remedial actions required.
- Ensure an effective relationships between external and internal audit, and that the value of the audit is promoted.
- Review the financial statements, external auditor's opinion and reports to members, and monitor management action in response to the issues raised by external audit.

### Features

- Strong chairmanship—displaying a depth of skills and interest.
- Unbiased attitudes—treating auditors, the executive and management equally.
- The ability to challenge the Executive when required
- A membership that is balanced, objective, independent of mind, and knowledgeable.

### Structure and administration

- Be independent of the Executive and Scrutiny functions.
- Have clear reporting lines and rights of access to other committee/functions.
- Meet regularly—at least four times a year with a quorum.
- Meet separately with the external auditor at least once a year.
- Include as attendees, the Finance Officer, Chief Executive, Head of Internal Audit and External Auditor and Relationship Manager. The committee should have the right to

- call any other officers or agencies of the council as required.
- Be properly trained to fulfil their role.

## Appendix B

### Audit Committees and Internal Audit—is it a marriage of convenience or a working relationship?

Research Questionnaire, summarised to give questions only, original had boxes for responses, with 5 options, strongly agree to strongly disagree, appeared after every question in the survey.

Strongly agree	Agree	No opinion	Disagree	Strongly disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

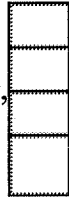
#### Section A: the Audit Committee within my organisation

- A1 The Audit Committee within my organisation is independent of the Executive and Scrutiny functions.
- A2 The Audit Committee within my organisation has clear reporting lines and rights of access to other committee/functions.
- A3 The Audit Committee within my organisation meets regularly—at least four times a year with a quorum.
- A4 The Audit Committee within my organisation has a strong chairperson who displays a depth of skills and interest in audit and risk management.
- A5 The Audit Committee within my organisation has unbiased attitudes, able to give equal treatment to auditors, the executive and management.
- A6 The Audit Committee within my organisation is able to challenge the Executive (leader/chief executive/mayor) when required.
- A7 The Audit Committee within my organisation has a membership that is balanced, objective, independent of mind and knowledgeable.
- A8 The Audit Committee within my organisation seeks periodic updates from managers on the implementation of internal audit recommendations.
- A9 The Audit Committee within my organisation has the knowledge and skills level to meet the expectations and requirements of corporate governance codes.
- A10 The Audit Committee within my organisation has in addition to its members, the following as regular attendees:

(Please tick the appropriate individuals).

Finance Officer,

Chief Executive Officer,



Head of Internal Audit and

External Audit

## **Section B: core functions of the Audit Committee**

- B1 A core function of the Audit Committee is to approve (but not direct) Internal Audit strategy, plan and performance.
- B2 A core function of the Audit Committee is to review summary IA reports.
- B3 A core function of the Audit Committee is to consider the effectiveness of risk management, the control environment and anti-fraud/corruption arrangements.
- B4 A core function of the Audit Committee is to ensure that assurance statements, properly reflect the risk environment and any actions required to improve it.
- B5 A core function of the Audit Committee is to ensure that an effective relationship exists between External Audit and Internal Audit.
- B6 A core function of the Audit Committee is to promote the value of the audit process.

## **Section C: increased Audit Committee responsibilities**

- C1 Increased Audit Committee responsibilities have led to the delegation of tasks to the finance director and the auditors almost entirely.
- C2 Increased Audit Committee responsibilities have led to extra work that requires a bigger time commitment from members.
- C3 Increased Audit Committee responsibilities have led to the increased importance of the audit committee.
- C4 Increased Audit Committee responsibilities have resulted in audit committees becoming "supervisory boards" as the second tier of corporate governance.

## **Section D: the effectiveness of the Audit Committee**

- D1 The effectiveness of the Audit Committee has increased due to its increased understanding of the auditing or accounting matters.
- D2 Dominant board members influence the effectiveness of the Audit Committee.
- D3 The effectiveness of the Audit Committee is influenced by its ability to promote the presence of internal controls.
- D4 The effectiveness of the Audit Committee is complimented by the presence of focused audit resources.
- D5 The effectiveness of the Audit Committee is measured in terms of how it monitors audit performance.
- D6 An effective Audit Committee can help increase the profile of the Head of Internal

Audit and the Internal Audit within the organisation.

- D7 An effective Audit Committee enables clearer reporting lines within the organisation.
- D8 An effective Audit Committee provides assurances that Internal Audit reports and recommendations are implemented.
- D9 An effective Audit Committee adds credibility to the independent monitoring of audit performance.

### **Section E: the Head of Internal Audit's role in improving the effectiveness of the Audit Committee**

- E1 The Head of Internal Audit's role involves encouraging Audit Committee members to gain knowledge of finance issues by visiting the relevant departments.
- E2 The Head of Internal Audit's role is to allocate time at Audit Committee meetings to consider only the high-risk areas.
- E3 The Head of Internal Audit's role is to define the Audit Committee relationship with the Internal Audit and the External Audit.
- E4 The Head of Internal Audit's role is to ensure that feedback and suggestions on how to improve the working practices of the Audit Committee are identified and discussed.
- E5 The Head of Internal Audit's role is to ensure the Audit Committee members know their role and responsibilities.
- E6 The Head of Internal Audit's role is to explain the audit reports to the Audit Committee and improve the agenda briefing papers.
- E7 The Head of Internal Audit's role is to review skills and commitment of the chairperson and members of the Audit Committee.
- E8 The Head of Internal Audit's role is to identify in advance of the Audit Committee meetings individuals who can lead the discussion.

### **Section F: the Head of Internal Audit views on the relationship with the Audit Committee**

- F1 The Head of Internal Audit believes the Audit Committee is aware of the internal audit role and responsibilities.
- F2 The Head of Internal Audit is free from any operational responsibility that might impair on independence and objectivity.
- F3 The Head of Internal Audit considers that there are sufficient skills, resources, qualifications and experiences in place within the audit function.
- F4 The Head of Internal Audit believes that the Audit Committee as the ability and expertise to assess the internal audit performance.
- F5 The Head of Internal Audit believes the internal audit team is measured in the light of the head of internal audit relationship with the Audit Committee.
- F6 The Head of Internal Audit believes that performance assessment by the Audit Committee should not necessarily be restricted to Head of Internal Audit, but other heads of departments.
- F7 It is difficult for the Audit Committee to distinguish between good, and merely

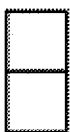
adequate when assessing performance of Internal Audit.

- F8 The Head of Internal Audit is able to raise concerns it has with the Audit Committee on any significant issues relating to the adequacy and reliability of the organisation's internal controls.
- F9 The Head of Internal Audit has unrestricted access to the chair of Audit Committee.
- F10 The Head of Internal Audit has meetings in private with the Audit Committee chairperson on relevant audit, control and corporate governance matters.
- F11 The Head of Internal Audit may believe that there is undue pressure to provide additional services to the Audit Committee.

## **Section G: the Audit Committee chairperson**

- G1 The Audit Committee chairperson is aware of the expectations placed on Audit Committees by the governing body.
- G2 The Audit Committee chairperson requests meetings with the Head of Internal Audit on a regular basis in between audit committee meetings.
- G3 The Audit Committee chairperson is clear about its expectations from the Internal Audit function.
- G4 The Audit Committee chairperson relies heavily on the Head of Internal Audit.
- G5 The Audit Committee chairperson views all Internal Audit reports in a positive manner.
- G6 The Audit Committee chairperson considers the Internal Audit work as important to the issues on the AC agenda.
- G7 The Audit Committee chairperson is comfortable with assessing the performance of Head of Internal Audit.
- G8 The Audit Committee chairperson is comfortable with assessing the performance of Internal Audit.

## **Section H: the Internal Audit within the organisation**



- H1 The Internal Audit presence within the organisation is continuous.
- H2 The Internal Audit presence within the organisation is periodic.
- H3 The Internal Audit function within the organisation is multi-functional, dealing with financial and non-financial aspects.
- H4 The Internal Audit function within the organisation is shaped by its capabilities.
- H5 The Internal Audit function within the organisation is shaped by the needs of the organisation.
- H6 The Internal Audit function within the organisation is dictated by the cultural limitations within the organisation.
- H7 The Internal Audit annual audit plan was modified due to deficiencies in internal control.
- H8 The Internal Audit annual audit plan was modified due to requests from

management.

H9 The Internal Audit function within the organisation feels that its reports could be “lost” in a series of complicated reporting structures.

H10 The Internal Audit function undertakes a performance self-assessment.

## Section I: “Value added” Internal Audit

I1 When assessing performance, numbers of audits, time taken to complete an audit, and staff turnover are merely raw materials, while activity is only relevant when a comparison is possible. They can be misleading in isolation.

I2 Defining “Value Added” Internal Audit is difficult as it can have different meanings to different groups and classes of people.

I3 Measuring “Value Added” Internal Audit is difficult as it can have different meanings to different groups and classes of people.

I4 If a high level of mismanagement and fraud is encountered within the organisation, it will question the effectiveness of internal audit, the Audit Committee and ultimately corporate governance?

Thank you for your assistance in completing this questionnaire.

Please feel free to add any comments in relation to the above statements.

OPTIONAL, please add your name and employing authority.

## Appendix C

<b>Audit Committees and the Internal Audit within local government—a working relationship</b>		
Analysis of responses according to ranking		
The Audit Committee within my organisation		
A1	The Audit Committee within my organisation is independent of the executive and scrutiny functions.	3.8
A2	The Audit Committee within my organisation has clear reporting lines and rights of access to other committee/functions.	4
A3	The Audit Committee within my organisation meets regularly—at least four times a year with a quorum.	4.4
A4	The Audit Committee within my organisation has a strong chairperson who displays a depth of skills and interest in audit and risk management.	3.6
A5	Audit Committee within my organisation has unbiased attitudes, able to give equal treatment to auditors, the executive and management.	4
A6	The Audit Committee within my organisation is able to challenge the executive (leader/chief executive/mayor) when required.	3.8
A7	The Audit Committee within my organisation has a membership that is balanced,	3.6

	objective, independent of mind and knowledgeable.	
A8	The Audit Committee within my organisation seeks periodic updates from managers on the implementation of internal audit recommendations.	3.6
A9	The Audit Committee within my organisation has the knowledge and skills level to meet the expectations and requirements of corporate governance codes.	3.3
	Core functions of the Audit Committee	
B1	A core function of the Audit Committee is to approve (but not direct) internal audit strategy, plan and performance.	4.5
B2	A core function of the Audit Committee is to review summary IA reports.	3.9
B3	A core function of the Audit Committee is to consider the effectiveness of risk management, the control environment and anti-fraud/corruption arrangements.	4.1
B4	A core function of the Audit Committee is to ensure that assurance statements, properly reflect the risk environment and any actions required to improve it.	4.0
B5	A core function of the Audit Committee is to ensure that an effective relationship exists between external audit and internal audit	3.6
B6	A core function of the Audit Committee is to promote the value of the audit process.	4
	Increased Audit Committee responsibilities	
C1	Increased Audit Committee responsibilities have led to the delegation of tasks to the finance director and the auditors almost entirely.	3.3
C2	Increased Audit Committee responsibilities have led to extra work that requires a bigger time commitment from members.	2.8
C3	Increased Audit Committee responsibilities have led to the increased importance of the audit committee.	3.9
C4	Increased Audit Committee responsibilities have resulted in audit committees becoming "supervisory boards" as the second tier of corporate governance.	3
	The effectiveness of the Audit Committee.	
D1	The effectiveness of the Audit Committee has increased due to its increased understanding of the auditing or accounting matters.	3.5
D2	Dominant board members influence the effectiveness of the Audit Committee.	2.5
D3	The effectiveness of the Audit Committee is influenced by its ability to promote the presence of internal controls.	4.0
D4	The effectiveness of the Audit Committee is complimented by the presence of focused audit resources.	4.1
D5	The effectiveness of the Audit Committee is measured in terms of how it monitors audit performance.	3
D6	An effective Audit Committee can help increase the profile of the Head of Internal Audit and the internal audit within the organisation.	4.4
D7	An effective Audit Committee enables clearer reporting lines within the organisation.	3.6
D8	An effective Audit Committee provides assurances that internal audit reports and recommendations are implemented.	3.9
D9	An effective Audit Committee adds credibility to the independent monitoring of	4.4

	audit performance.	
	The Head of Internal Audit's role in improving the effectiveness of the Audit Committee	
E1	The Head of Internal Audit's role involves encouraging Audit Committee members to gain knowledge of finance issues by visiting the relevant departments.	2.6
E2	The Head of Internal Audit's role is to allocate time at Audit Committee meetings to consider only the high-risk areas.	2.9
E3	The Head of Internal Audit's role is to define the Audit Committee relationship with the Internal Audit and the External Audit.	3.5
E4	The Head of Internal Audit's role is to ensure that feedback and suggestions on how to improve the working practices of the Audit Committee are identified and discussed.	3.6
E5	The Head of Internal Audit's role is to ensure the Audit Committee members know their role and responsibilities.	3.1
E6	The Head of Internal Audit's role is to explain the audit reports to the Audit Committee and improve the agenda briefing papers.	4
E7	The Head of Internal Audit's role is to review skills and commitment of the chairperson and members of the Audit Committee.	2.6
E8	The Head of Internal Audit's role is to identify in advance of the Audit Committee meetings individuals who can lead the discussion.	2.8
	The Head of Internal Audit views on the relationship with the Audit Committee	
F1	The Head of Internal Audit believes the audit committee is aware of the internal audit role and responsibilities.	4.1
F2	The Head of Internal Audit is free from any operational responsibility that might impair on independence and objectivity.	3.9
F3	The Head of Internal Audit considers that there are sufficient skills, resources, qualifications and experiences in place within the audit function.	3.9
F4	The Head of Internal Audit believes that the Audit Committee has the ability and expertise to assess the internal audit performance.	3.6
F5	The Head of Internal Audit believes the internal audit team is measured in the light of the head of internal audit relationship with the Audit Committee.	2.8
F6	The Head of Internal Audit believes that performance assessment by the Audit Committee should not necessarily be restricted to Head of Internal Audit, but other heads of departments.	3.5
F7	It is difficult for the Audit Committee to distinguish between good, and merely adequate when assessing performance of Internal Audit.	2.8
F8	The Head of Internal Audit is able to raise concerns it has with the Audit Committee on any significant issues relating to the adequacy and reliability of the organisation's internal controls.	4.4
F9	The Head of Internal Audit has unrestricted access to the chair of Audit Committee.	4.1
F10	The Head of Internal Audit has meetings in private with the Audit Committee chairperson on relevant audit, control and corporate governance matters.	3.1
F11	The Head of Internal Audit may believe that there is undue pressure to provide	2.3



	additional services to the Audit Committee	
	The Audit Committee chairperson	
G1	The Audit Committee chairperson is aware of the expectations placed on Audit Committees by the governing body.	3.4
G2	The Audit Committee chairperson requests meetings with the Head of Internal Audit on a regular basis in between Audit Committee meetings.	2.6
G3	The Audit Committee chairperson is clear about its expectations from the Internal Audit function.	3.5
G4	The Audit Committee chairperson relies heavily on the Head of Internal Audit.	2.9
G5	The Audit Committee chairperson views all internal audit reports in a positive manner.	3.5
G6	The Audit Committee chairperson considers the Internal audit work as important to the issues on the AC agenda.	3.9
G7	The Audit Committee chairperson is comfortable with assessing the performance of Head of Internal Audit.	3.6
G8	The Audit Committee chairperson is comfortable with assessing the performance of Internal audit.	3.8
	The Internal Audit function within the organisation	
H3	The Internal Audit function within the organisation is multi functional, dealing with financial and non-financial aspects.	4.5
H4	The Internal Audit function within the organisation is shaped by its capabilities.	2.6
H5	The Internal Audit function within the organisation is shaped by the needs of the organisation.	3.6
H6	The Internal Audit function within the organisation is dictated by the cultural limitations within the organisation.	2.5
H7	The Internal Audit annual audit plan was modified due to deficiencies in internal control.	3.3
H8	The Internal Audit annual audit plan was modified due to requests from management.	4.1
H9	The Internal Audit function within the organisation feels that its reports could be "lost" in a series of complicated reporting structures.	1.8
H10	The Internal Audit function undertakes a performance self-assessment.	3.9
	"Value added" Internal Audit	
I1	When assessing performance, numbers of audits, time taken to complete an audit, and staff turnover are merely raw materials, while activity is only relevant when a comparison is possible. They can be misleading in isolation.	3.6
I2	Defining "Value Added" internal audit is difficult as it can have different meanings to different groups and classes of people.	3.8
I3	Measuring "Value Added" internal audit is difficult as it can have different meanings to different groups and classes of people.	3.9
I4	If a high level of mismanagement and fraud is encountered within the organisation, it will question the effectiveness of internal audit, the Audit Committee and ultimately corporate governance.	4.1

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## Footnotes

<sup>1</sup> CIPFA, Chartered Institute of public Finance and Accountancy, the public sector accountancy body.

<sup>2</sup> Audit Commission—the body responsible for the external audit of local government in England and Wales. Since 2005, the Wales Audit Office has taken over this responsibility within Wales.

<sup>3</sup> HIA is used interchangeably with Chief Internal Auditor, Audit Manager or Chief Audit Executive.

<sup>4</sup> Likert scale, named after Rensis Likert, who in 1932 published a report describing how respondents are required to agree with a statement normally on a five-point scale.

<sup>5</sup> Scrutiny and executive committees roles are outlined in the NAW guidance 2002.