Audit firm manuals and audit experts' approaches to internal control evaluation

Abstract

Internal control evaluation is a crucial component of the external audit process. This study investigates what practicing auditors consider to be good methods of internal control evaluation. It then compares these to the current Australian auditing standard (AUS 402). A review of audit methodologies of three of Australia's largest firms, and interviews with five audit experts were conducted. The results demonstrated a shift towards a 'business risk' approach as opposed to the former 'systems based' approach to internal control evaluation. AUS 402 does not always reflect the modern practice, particularly in relation to the significance of individual elements of internal control and may be in need of revision, if professional pronouncements are to be viewed as in line with practice.

Keywords: Auditing, internal control evaluation, firm manuals, audit experts, auditing standards, components of internal control

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Introduction

Internal control evaluation as performed by external auditors constitutes a critical component of the financial statements audit process (Arens *et al.* 2002 p.317). At present it would appear confidence in the auditing profession worldwide is being undermined (Harrington & McCahey, 2002) due to the current spate of corporate collapses[1]. External auditors also assess the internal control structures of their clients when providing assurance services, such as systems reviews, risk assessments and control evaluations (a growing business area for audit firms, as Maijoor (1998) notes).

Whereas the academic journals incorporate many studies of internal control evaluation, there still appear to be gaps in the literature, such as considering whether an optimal way to evaluate controls exists and how do practitioners' views on evaluation compare with professional pronouncements. This study considers such areas. Felix and Niles (1988) reviewed the history of research in the area of internal control evaluation and ten years later in re-visiting the area, Felix (1998 p.1) attributed the interest in internal controls to two factors:

(i) concern about inconsistent views and understanding of internal controls in public companies; and

(ii) political pressure resulting from some alleged notorious audit failures.

[1] As evidenced for example in the United States by *Enron*, *Sunbeam* and *WorldCom*, and in Australia by *HIH*, *Harris Scarfe* and *One-Tel*.

Authors have researched such topics as:

(i) consensus among auditors during internal control evaluation[2]*;*

(ii) the relationship between the strength/weakness of internal controls and the number of errors in the financial statements[3]; and

(iii) the factors auditors consider most significant during internal control evaluation[4].

However, many of the internal control studies conducted have been performed, not to review the actual internal control evaluation process itself, but in order to assess auditor's judgemental processes. Trotman (1998) provides a summary of this audit judgement research. The above indicates considerable research by academics in the internal control area but as mentioned earlier, the focus may not have covered all relevant points of interest. Felix (1998) comments:

Research that contributes to our understanding of the role of internal controls in either the management of the enterprise or external auditing has been sparse. Most research … has been focused on auditor judgements rather than the use of enterprise internal controls in management or in auditing. (p.8).

What Felix is saying is that a lot of research into internal control evaluation has been aimed at assessing auditors' behaviour. In terms of the internal control research that should now be

[2] Trotman and Wood (1991) summarise nine studies in this area**.**

[3] Wright and Wright (1996) summarise 12 studies in this area.

[4] Refer for example to Marden *et al.* (1997), Reimers *et al.* (1993), Wallace and Kreutzfeldt (1995), and Shailer *et al.* (1998).

pursued Kinney (2000), like Felix (1998), notes a need for research which spreads itself across a broad range of auditing, accounting and general business areas:

… there is broad interest in internal control over operating efficiency and effectiveness, information relevance and risk assessment. Finally, there is currently very broad interest in corporate governance and internal control. (p.88).

Further research into one important facet of external auditors' work, namely evaluation of the internal control structures of their clients, is therefore beneficial. The purposes of this study are twofold. First, to expand upon research into one of the areas noted above, namely:

(i) to consider the most important elements/factors[5] affecting internal control evaluation and the order in which they should be assessed.

Recent research, for example Cohen *et al*. (2002) note how the impact of recent corporate governance procedures has led to a change in the audit process, with increased emphasis on the overall internal control environment. The second purpose of the study is:

(ii) to compare practitioners' attitudes in the area to the relevant auditing standard[6].

This is similar to a study by Stringer and Carey (2002) which noted how eight Australian organisations had re-designed their internal control structures to achieve greater accountability. They then considered the implications for relevant auditing standards.

[5] The words *element* and *factor* were deliberately chosen. AUS 402 – see next footnote - defines internal controls as consisting of three *elements* (control environment, information system and control procedures) and some 22 *factors* auditors should consider in assessing the elements.

[6] Australian Auditing Standard, *AUS 402 – Risk Assessments and Internal Controls* (Institute of Chartered Accountants in Australia (ICAA), 2002.

This study differs from previous studies by utilising more direct research techniques. These are first, a review of audit firms' methodologies by reviewing their actual firm manuals and/or training materials and second categorisation analysis, by way of detailed interview, of audit experts' opinions on good internal control evaluation techniques. The majority of previous studies in the area have involved samples of auditors (of varying experience levels) performing laboratory style experiments, usually with the researchers providing the cues to be evaluated. It is hoped the more direct methods of this study will provide results carrying more external validity, for subsequent comparison with current auditing standards. The subsequent comparison of professional pronouncements with firm procedures and experts' opinions adds to the current literature on internal control evaluation.

The remainder of the paper is structured as follows. First, the firm manuals and/or training materials utilised by public accounting firms are scrutinised to review their internal control evaluation methodologies. Second, categorisation analysis of audit experts' opinions on internal control evaluation is conducted, by way of interview. These are two separate steps and from the results of these reviews of practicing auditors' attitudes towards internal control evaluation a composite summary is arrived at. This is then compared to the relevant professional pronouncement in the area. The final section offers some concluding comments.

Audit firm manuals analysis

As mentioned above, the first purpose of this study is to ascertain what elements/factors practicing auditors consider the most important during internal control evaluation, and the order in which these should be assessed. By reviewing the audit firm manuals of public accounting firms we can obtain direct evidence in this area. Studies which have reviewed audit

firms' methodologies, such as Lemon *et al.* (2000), Bell *et al.* (1997), Janell and Wright (1991), Dirsmith and Haskins (1991) and Kinney (1986), note audit firms are not homogeneous in their approach to performing audits, including the internal control evaluation portion thereof. What the most recent two of the above five studies highlight is a shift towards a *business risk* audit approach as opposed to the more traditional *systems-based* approach. The *business risk* approach operates on the premise that considering the business as a whole is more likely to generate insights that are relevant to the ultimate audit opinion, than one which is narrowly focussed on the financial statements alone (Lemon *et al.* 2000 p.10).

Thomas (2000) notes how the Australian audit market is dominated by the "Big 5" (as then, now "Big 4") accounting firms. All were approached and three agreed to provide access to materials (in varying degrees). The researchers were given access to some or all of the following resources, from which a composite picture of their approach to internal control evaluation could be assessed:

(i) permission to view their audit manual (i.e. the relevant sections covering internal control evaluation) at their offices (2 firms);

(ii) permission to view software utilised during the audit process – in so far as it pertained to internal control evaluation (2 firms);

(iii) access to all relevant (i.e. to internal control evaluation) training materials the firm used to train its own staff in their methodology (2 firms);

(iv) completion of a questionnaire by a national training partner/manager, from which other relevant information could be elicited (3 firms);

(v) detailed interviews lasting approximately one hour each with a national training partner/manager at their office (3 firms); and

(vi) reviewing other publicly available firm publications (3 firms).

The three audit firms all employed a *business-risk* approach to their financial statements audits as opposed to the traditional *systems-based* approach, utilising the following criteria as a framework to differentiate between the two approaches:

1. Reviewing risks on a global (financial statements) basis as opposed to on an account-by-account basis.
2. Reviewing risks over all the controls of the organisation as opposed to focussing on financial accounting controls.
3. Greater emphasis on "high-level" monitoring controls (such as management review) as opposed to "low level" procedural controls (such as controls over daily processing of transactions).

Where the three firms varied was in the way their procedures decreed the audit process be performed and documented. The best way to describe the difference is in terms of how *structured* or otherwise they were[7]. Kinney (1986) in his review of audit firm procedures summarised their differing approaches in terms of *structure*.

.. unstructured firms use less structured guidance and leave more considerations to the judgement of the field auditor. (Kinney, 1986 p.75).

Dirsmith and Haskins (1991 p.70) expand upon Kinney's concept of structured and unstructured audit approaches and identified less structured firms in their study as follows:

[7] Structure is therefore briefly reviewed here just to emphasise that there were differences between the firms. But it is important to note the differences did not relate to what items were reviewed or when, but rather to the formal recording mechanisms of the evaluations.

.. integrated test results and consideration of the audit risk model are not formalised for such firms.

The following review demonstrates how the three firms selected vary in terms of how formalised their procedures (and the documentation thereof) are. Hence the three firms are described below as Audit Firm 1 (AF1) Audit Firm 2 (AF2) and Audit Firm 3 (AF3), ranging from most structured (AF1) to least structured (AF3). The approaches of the three firms will first be described. They will then be summarised and evaluated.

Audit Firm 1

AF1's audit approach describes twelve detailed steps in the audit manual, before the actual evidence gathering stage commences. These are:

1. Client acceptance and continuance
2. Mobilisation
3. Assessment of the control environment
4. Information about the business/industry
5. Preliminary analytical procedures
6. Inherent risk and fraud
7. Information about systems and computer environment
8. Documentation and assessment of monitoring controls
9. Develop audit programme in *AF1AuditSoftwarePackage*[8] (AF1ASP)
10. Develop timetable, task plan and budget

[8] This software package – developed in-house - depicts all procedures to be performed at each stage of the audit. For each step it offers a wide range of options from which the user is to select the most appropriate.

11. Engagement leader and team manager sign off planning

12. Communicate plan with client and audit team.

Evidence gathering then begins. This can take one of three paths, depending upon the assessment of internal controls undertaken in the steps above. Table 1 summarises the three approaches.

<table>
<tr><th colspan="3">Table 1 – Audit Firm 1. Evidence Gathering</th></tr>
<tr><th>No Controls Reliance</th><th>Some Controls Reliance</th><th>High Controls Reliance</th></tr>
<tr><td rowspan="2">Tests of Details

Analytical Review</td><td>Control Environment Testing</td><td rowspan="2">Control Environment Testing</td></tr>
<tr><td>Monitoring Controls Testing</td></tr>
<tr><td rowspan="3"></td><td>Tests of Details</td><td>Controls Monitoring (Application & General) Testing</td></tr>
<tr><td rowspan="2">Analytical Review</td><td>Tests of Details</td></tr>
<tr><td></td><td></td></tr>
</table>

From the point of view of internal control evaluation (prior to testing controls) steps 3 to 8 are the critical stages. Step 3 involves an assessment of the *control environment* (management integrity, organisational structure, etc). For each particular element to be assessed the AF1ASP offers a pop-up list of factors to be evaluated and detailed questions to be answered in assessing the strength or weakness of each element. Steps 4 to 8 then identify the risky "transaction streams" and "key activities" of the business. The former may cut across several "traditional" transaction cycles.

The controls within each “transaction stream” and within the *control environment* (assessed at step 3) are then categorised as follows:

(i) monitoring controls – regular management activities that are effective in identifying potential mis-statements, for example reviewing reports;

(ii) key computer general controls – computer controls that satisfy the objectives of completeness, accuracy, validity and restricted access;

(iii) other computer general controls – computer controls to satisfy other internal control objectives;

(iv) computer application controls – computer controls over the inputting, processing and output of data for specific applications; and

(v) manual application controls – manual controls over the inputting, processing and output of data for specific applications.

AF1’s staff assess each of these controls using a pop-up menu of questions from AF1ASP package. They then summarise in narrative note form (unreliable, partly reliable or very reliable) whether or not controls in the “transaction stream” or “key activity” are to be relied upon. This then fits into the overall audit plan and either strategy one, two or three, as depicted in Table 1 above will be adopted depending upon the degree of control reliance.

It is interesting to note the emphasis on monitoring controls, i.e. controls the client adopts to satisfy itself that the internal control structure it has put in place is operating as efficiently and effectively as planned. (These are the “high-level” controls in the context of *business risk* auditing). They are assessed at steps 3 and 8 and the subsequent audit approach is heavily reliant upon their assessment.

Audit Firm 2

AF2's audit approach is described as the *Business Audit* process. As this name suggests, from the outset, the emphasis is on a more overall view of the entity being audited, rather than a transaction cycle approach. There are 10 steps in the audit process as follows:

1. Assess business risk management process
2. Perform business analysis
3. Consider materiality
4. Identify, source and prioritize risks
5. Document specifically identified risks
6. Identify, evaluate and test risk controls
7. Determine control deficiencies and residual audit risk
8. Evidence gathering (one of two types, dependent upon the evaluation of internal controls (steps 4 to 7) and the analysis of the steps the client has taken to reduce perceived risks):

    (i) analysis of client's actions and process improvements: and then
    (ii) AF2's risk reduction procedures i.e. analytical review and testing of account balances and transactions.

9. Review reporting period requirements, and
10. Review local professional standards.

From the point of view of internal control evaluation steps 4 to 7, in the pre-evidence gathering phase, are the critical stages. For each particular element to be assessed, AF2 just like AF1 has a firm specific software package to consult (referred to from hereon as AF2ASP).

However, unlike AF1, AF2's staff did not have to use the templates offered at each stage of evaluation by AF2ASP. Once they document the final decision – again by way of narrative note memo, no numeric scale - this is all the documentation that is required.

Like AF1, controls are assessed on a "transaction stream" basis. AF2 refers to these as "business information frameworks" (BIFs). Having identified the significant BIFs, the controls operating within each BIF are then identified and assessed. Controls are described at two levels, firstly as to the *source of error* they are trying to prevent and then as to their *function*. At the first level they are either:

(a) Business risk controls – controls over internal and external threats to information integrity, (for example external fraud, internal collusion, override etc.); or
(b) Information and information processing controls – controls over internal processing threats to information integrity (for example mechanical accuracy checks, file balancing etc.).

Each individual control element is then described as to its function. Controls are either *pervasive* – to ensure appropriate segregation of duties and information integrity – or they are *monitoring* – testing the effective operation of risk controls and the results of other control processes.

Having assessed the significant BIFs, the risks associated with them and the controls to protect them, a summary matrix and memo conclude on the strength/weakness of controls in each area. The summary matrix is as follows:

		Likelihood of Error	
		Low	**High**
Significance of Error	**Low**	1	3
	High	2	4

So, for example if the audit area is assessed in box number 1, very little evidence gathering is now needed, whereas if an area is assessed in box number 4, significant evidence gathering procedures will now be performed. (Note: the numbers are illustrative, AF2 audit staff do not use a numeric scale, they simply mark a point on the matrix).

The summary memo, called a "business risk control document" ultimately concludes in narrative note form (again no numeric scales), that having assessed the controls in the area, residual audit risk is acceptable or unacceptable. The quantity and type of additional testing now required for account balances in that area is then documented.

Again just like AF1, it is interesting to note the emphasis on monitoring controls, i.e. assessing how the client reviews its own internal controls, and other "high-level" controls.

Audit Firm 3

AF3's audit approach was reasonably similar to AF2's but less structured as regards the documentation of the internal control recording and evaluation processes. The audit firm manual is referred to as the Complete Audit Services Manual (CASM) supported by additional "assisting booklets" referred to as "Audit Industry Guides". These are industry specific

guidance booklets, of which there are some 40, covering the various business sectors AF3's audit clients are involved in.

AF3's audit process is not even referred to as an audit, but rather a "Business Measurement Process". This highlights the emphasis towards a *business-risk* based audit approach as opposed to a traditional *transaction cycle* approach. Essentially the main steps are:

1. Identify the business process
2. Identify the information systems
3. Identify controls embedded in the business process
4. Evaluate the risk management process
5. Evaluate the strategic management process (see below)
6. Devise evidence gathering procedures including tests of transactions, balances and analytical review techniques.
7. Evaluate evidence gathered and reporting requirements
8. Report to client and debrief.

The approach is somewhat similar to that of AF2. First, risks to the business are classified as "business risks" (internal and external threats to information integrity) and then "information/information processing risks" (internal processing threats to information integrity). The controls over these risks are then identified and evaluated. AF3 refers to the "business risks" as *risk management* processes and to the "information risks" as *strategic management* processes. Again the controls are reviewed, not on a transaction cycle basis but rather on a "strategic system" basis (the *strategic system* equates with the *transaction stream*

of AF1 and the *BIF* of AF2). Having identified the strategic systems the controls within those systems are documented. Controls are described at two levels:

(a) high level controls (these equate roughly to the pervasive and monitoring controls of AF2), and
(b) lower level controls (these equate roughly to the information/information processing controls of AF2).

Like AF1 and AF2, AF3 has firm specific software (from hereon referred to as AF3ASP) to assist in the control evaluation process. The approach appears less structured than either of the other two firms in that first, like AF2, use of the templates is not mandatory. Second, unlike AF2 there is no standard sign off memo at the end of each internal control area evaluated. Audit staff members have to write a memo, summarising whether or not controls are to be relied upon, wholly or in part, but there is no standard format.

Again it is interesting to note the strong emphasis on monitoring controls. Once the "high level" controls are identified they are tested and relied upon if satisfactory. It re-emphasises the audit approach of stressing the importance of management's methods to ensure its internal control structures are operating as designed.

Summary and evaluation of audit firms' internal control evaluation procedures

The review of the internal control evaluation policies of three of Australia's "Big 5" audit firms revealed many similarities. Whereas the sample size is small, three out of five, it was

considered the quality of the research data obtained by this direct review method enabled valid conclusions to be drawn.

First, in relation to the first stated purpose of the study noted in the introductory section of this paper, it is interesting to note the strong emphasis on “high level” monitoring controls. The traditional view from the audit profession has always been that it is management’s responsibility to ensure the organisation has adequate internal controls in place (refer for example *AUS 402.15* (ICAA). The audit approaches outlined above all place a lot of importance on this point. In terms of *AUS 402*, the approaches highlight the critical importance of the first internal control element, *control environment* factors (which include the monitoring controls such as effective internal audit and audit committee functions).

Second, all three adopt a *business-risk based* approach to financial statements audits as opposed to the traditional *systems-based* approach. In part this is due to the more complex computerised accounting and information systems that dominate the modern business environment. The increased use of more advanced IT environments such as EDI, networking and shared data-bases means the traditional separation of business functions such as purchasing/production/warehousing and selling is not always relevant. As these are now often interfaced, it makes sense to look at risks to a business on a broad scale and evaluate internal controls accordingly.

A third similarity between the three audit firm approaches lies in their methods of recording internal control assessments. All three firms relied on narrative notation as the ultimate recording of the internal control evaluation in any particular area. The narrative terminology

was not always standardised, signalling a less structured approach than was evident in some firms reviewed in previous studies.

One final similarity relates to the use of information technology by external auditors. All three firms had developed their own audit software packages and were using them at all stages of the audit. Audit software is not just for analytical review type procedures. It is being used more and more in judgemental type areas such as internal control evaluation procedures. This was also noted in a study by Castner et al. (2000).

The firms only tended to differ in terms of how structured their approaches were. The major difference here being whether or not members of the firm were to fill out all decision aides (templates etc.) at each step or could use their own discretion. A limitation of the review was, as noted, the exact same resources were not forthcoming from all three firms. However the researchers considered sufficient alternate materials were provided to build a composite picture of the internal control evaluation approach in all three cases.

Introduction to categorisation analysis

Categorisation analysis, as utilised in this study, is the process whereby the researchers review (by way of structured interview) the internal control evaluation processes preferred by individual audit experts. The objective is to extract (by continuous questioning and subsequent prompting) sufficient evidence to satisfy the first purpose of the study, outlined in the introductory section.

As mentioned there, the terms *elements* and *factors* were intentionally selected, as they were extracted directly from the relevant auditing standard (*AUS 402*) on internal control evaluation. It was anticipated therefore the experts would be familiar with this terminology. From the perspective of categorisation analysis, the *elements* may be regarded as categories of evaluation and the factors may be regarded as sub-categories.

Cognitive psychology literature (such as Taylor and Crocker, 1981) suggests that professional people utilise *schema-based* information in the enactment of much of their behaviour. A *schema* is described as a logical way of organising data in the memory. Choo (1989) applied the concept to auditors and how they store their knowledge. He noted how several situations encountered in auditing are predictable, conventional, frequently encountered and rule-driven, for example the normal way one goes about testing internal controls. By examining the schema (or knowledge categorisations) auditors utilise in their daily work, insight can be gained into the factors they consider most important in performing these specific steps in the overall audit process.

Evidence exists of auditors categorising their knowledge in various ways for certain audit functions. Frederick *et al.* (1994) and Nelson *et al.* (1995) note how auditors categorise financial statement errors across two dimensions, transaction cycle and audit objective. In the area of internal controls, Frederick (1991) noted how auditors stored elements of an internal control structure either schematically (in time sequence) or taxonomically (by control type). Bonner *et al.* (1997) noted the importance of task categorisation as part of audit training.

The categorisation analysis techniques utilised in this study are similar to those employed by Cocks *et al*. (2000). Audit experts (five) were interviewed in order to extract from them, their

ideal models of internal control evaluation and the most important elements and factors therein. Audit practitioners will of course be influenced by their current employers' procedures. But for the purposes of this categorisation analysis they were asked to consider internal control evaluation procedures as experienced individuals and not as agents of their firm.

Audit experts selected

Five audit experts were contacted to see if they would participate in the analysis. Criteria for selection were, length and breadth of audit experience. Years of work as an auditor, was taken as a guide to length of audit experience. So the individuals were approached only after the researchers had ascertained they had at least 15 years audit work experience each. Factors such as working as an auditor overseas, number of audit firms worked for and reviewing the files of other audit firms were chosen as evidence of breadth of audit experience.

Table 2 – Summary of Audit Expert (AE)s' Experience

	AE 1	**AE 2**	**AE 3**	**AE 4**	**AE 5**	**Average**
Years of Audit Work	19	20	17	18	15	18
Number of Audit Firms Worked For	3	1	3	3	2	2.5
Countries Worked in as an Auditor, for > 3 months	4	5	3	2	2	3
Number of Reviews of Other Audit Firms' Files	>10	>10	>10	>10	1	10
Current Position: Partner (P), Associate (A) Senior Manager (SM)	A	P	SM	P	P	N/a
Audit Firm Type	2nd tier	Big 5	Big 5	Big 5	2 Pnr	N/a
Gender	M	M	F	M	M	N/a

Hence partners and senior managers at public accounting firms were approached. Two partners from two different "Big 5" audit firms and one senior manager from one of those

firms agreed to participate. In order to broaden the range of experts chosen, it was decided the final two subjects should be selected from outside the "Big 5" (as then) audit environment. Hence the last two audit experts chosen were an associate from one of the biggest second-tier audit firms in Australia and an audit partner in a small two-partner (2 Pnr) practice. Table 2 summarises all the above factors for the five participants and so helps justify referring to them as audit experts. Each audit expert was then interviewed at his/her office. Interviews lasted from 30 minutes (shortest) to one hour (longest).

Categorisation analysis of internal control evaluation

At the commencement of the interviews it was re-emphasised to participants that it was their *personal* opinion that was sought. They were not to answer in accordance with their current firms' procedures, unless of course they were the ones they concurred with as being the optimum they had encountered. Hence this step is a separate experiment from the firm manual review previously undertaken.

Appendix 1 provides an abridged form of the categorisation analysis instrument the interviewers used during their discussions. First, demographic details were ascertained. The next page contained six related questions and a prepared list of three internal control *elements,* and some 22 *factors* that comprise those *elements,* as per Australian Auditing Standard *AUS 402 – Risk Assessments and Internal Controls*. Having asked each question, the interviewer simply had to tick – in order – the responses given. The only items that had to be written down were any elements/factors given by the experts that the auditing standard did not appear to cover. For each question, when respondents stopped listing elements/factors, they were asked again for any more. Finally they were shown the list and those items listed in the standard,

which they appeared to have omitted, were discussed. If they considered them significant the interviewer then ticked those, in the "Prompt" column (therefore allowing him to subsequently identify the order in which all items were listed and discussed). A separate "Note" column was kept at the side in which the interviewer could insert a number, and then on a separate page record any significant remarks made by a respondent at that point in the conversation.

The first question, as per Appendix 1 was "What in your opinion are the most important *elements* of an internal control structure, during evaluation?" When the experts gave their response – the first element they stated - they were then asked as to the individual *factors* they considered needed assessing, in order to evaluate the above element (Q1A). When this discussion was complete they were then asked what was the next most important element (Q2). They were then asked as to the individual factors they considered needed assessing, in order to evaluate this element (Q2A). This process was then repeated for Q3 and Q3A.

All five experts, nominated one major sub-section of the *control environment* element of internal control structure, as the most important. This will be referred to as "management quality". The experts did not use the term *control environment* but rather, phrases like "tone at the top" (AE1) "management attitude" (AE4), "management integrity" (AE5) and simply "management" (AEs 2 and 3). These can all be described as major factors of the *control environment* element, as the subsequent question revealed. When asked question 1A – list the individual factors you consider, in evaluating the reliability of the above element (your answer to question 1) – all respondents essentially listed the 7 factors which comprise the *control environment* as per AUS 402.19(a) to (g). These are summarised at Table 3.

Again varying terminologies were used. Table 3 lists specific answers experts gave to this question. The seven *control environment* factor headings listed, are as per the auditing standard. The examples (in bold) beneath each heading are in terminology the experts used to explain the factors they considered most important. They are slotted in underneath each heading because, as a review of AUS 402.19 demonstrates, they are also mentioned there using slightly different terminology, or else as part of the discussion of those factors. In this manner, all comments by the experts (in their varying terminologies) can be assigned to one of the seven headings from the standard.

Table 3 – Audit Expert (AE)s' Factors Used in Evaluating the Control Environment

(1) – (7) = Factors as per *AUS 402*	**AE 1**	**AE 2**	**AE 3**	**AE 4**	**AE 5**
(1) Management's Philosophy and Operating Style:					
Assessment of risk	2	1	1	1	
Monitoring controls	2	1	1	1	
Budget variance reviews	2	1	1	1	
Management culture	1				1
(2) The Organisational Structure:					
Organisational chart	2	2	2	1	
Chain of command	2	2	2	1	
Experience of managers	3	2	2	1	1
(3) The Assignment of Authority and Responsibilities:	4				3
Delegation of responsibilities				2	
Local budget reviews		2	1	1	
(4)Internal Audit:	4	3	3		N/a
Acted upon or not				2	
(5) The Use of Information Technology	4	4	3	3	2
(6) Human Resources	4	4	3	3	3
(7) The audit committee	4		3	2	N/a
Active or Passive		3			

The numbers used in the body of the table denote the order in which the respondents listed the factors. Hence a group of "1"s implies the respondent listed all those factors together and considered them linked. When a respondent stopped (s)he was prompted – are there any other factors you consider relevant? They then gave their next list of factors, numbered "2"s. This continued ("3"s, etc.) until they could answer no more. The respondents were then permitted

to look at the page (as per Appendix 1). With the interviewer, they reviewed the list of factors they had stated as relevant and the ones from the standard they had not listed. They were then asked if they considered the factors they had not listed, were applicable. In all cases they said yes, they had just omitted them or thought they had mentioned them (but the interviewer had not recorded them due to a difference of interpretation).

There was just one exception to this listing of all factors to be considered in evaluating this element. As mentioned above, AE5 was an audit partner in a small two-partner practice. This practice had only one public company audit client, the remainder being small proprietary companies. Hence in his environment, he said factors such as audit committees and internal audit departments were not relevant (therefore listed as N/a in Table 3).

Reviewing the order in which the factors were listed raises an interesting point. Even though all participants agreed that all factors were equally important and would be considered (apart from the exception noted above) it is noteworthy the factors all 5 raised first and the ones they had to be prompted to list. The priority emphasis is very much on two factors that will be referred to as:

(i) “management quality” (factors such as management’s length of experience, how well they organise the entity under their command, etc.); and

(ii) “high level monitoring” controls (control policies such as monitoring critical controls, analysing variances, reviewing local budgets etc.).

All experts appeared to place great emphasis first, on the quality of management and second, on how they controlled the entity.

The majority of each interview concentrated predominantly on this first element (category) of internal control and the factors (sub-categories) used to evaluate it. Having exhausted discussion on the *control environment* element and its component factors (questions 1 and 1A) each expert was then asked what was the next most important element of an internal control structure to evaluate (question 2). The factors they would use to assess this were then discussed (question 2A). The interview then proceeded to the next element and the factors used to assess that (questions 3 and 3A).

However, as a prelude to the results of these discussions, it is beneficial to summarise the elements (categories) of internal control structure they considered important and how they ranked them (purpose (i) as noted in the introduction). Table 4 therefore summarises the experts' responses to questions 1/2/3 as per Appendix 1.

Table 4 – Ranking of Importance of Internal Control Elements

	AE1	**AE2**	**AE3**	**AE4**	**AE5**
Control Environment (CE)	1	1	1	1	1
Information System (IS)	2	N/i	2	2	1 or 2
Control Procedures (CP)	3	N/i	3 or N/i	3	3

(N/i = not important)

When asked what was the second most important element of an internal control structure (question 2) the results were interesting. Three experts nominated the accounting and information system (IS) as the next most important element (AE1, AE3, AE4). AE2 did not

consider this element significant and AE5 considered it so significant it should possibly be ranked as importantly as the first element.

Considering the three experts who concurred on this issue, when asked if they would definitely rank it second and not the equal of CE, two gave a firm yes and one a qualified yes[9]. As AE4 summarised:

A good CE will prevent a poor IS from doing damage but a good IS will not guarantee zero damage unless CE is working. (interviewer's notes).

AE2 did not even consider IS to be a part of the internal control structure. He considered IS to be purely a "process" not a control. Hence, in his opinion CE was the only element that mattered in evaluating an internal control structure, not IS and certainly not CPs which again, he considered, just procedures. He also mentioned how the factor *Use Of Information Technology*, used in assessment of the CE element, effectively covered what he needed to know about IS. Hence this could be construed as simply a classification problem, i.e. that portion of IS which AE2 considered critical, was assessed as a CE *factor* rather than as a separate *element* of internal control in its own IS category. But he was very opposed to the broader view of IS being treated as an element of internal control. AE5 on the other hand considered IS to be a critical element of internal control to evaluate. He would rank it as just as important, or else just marginally less significant than CE (hence the "1 or 2" rating in the table). This may be due to the differing audit environments AE5 worked in, as noted earlier.

[9] Similar to AE5 in the subsequent discussion, AE3 considered there were occasions – usually smaller audit entities – where IS is so important to the entity that (s)he considered it a critical factor of the CE rather than a separate element of the overall internal control structure.

As regards the factors experts considered in assessing the IS element of internal control (question 2A), there was unanimous agreement. All experts listed factors such as hardware and software utilised (were they reputable? etc.) general CIS controls, and CIS application controls over inputting, processing and output (using definitions as per Australian Auditing Standard *AUS 104 – Glossary of Terms*, (ICAA, 2002). Particular emphasis was again placed on "exception" reports and follow-up of "variance" or "mis-match" reports. All four respondents who commented upon IS listed all sub-categories of IS the researchers had on their list (Appendix 1) without prompting.

When asked what they considered the third most important element of internal control structure evaluation (question 3), the experts' responses again provided some interesting comments. Three experts nominated *control procedures* over specific entity objectives (CP) – such as procedures in a specific transaction cycle or pertaining to a particular account balance - as the next most important element, but two experts were loath to rank it as a separate element. As regards the two dissenters AE2, as mentioned previously, considered CPs irrelevant. AE3 also considered CPs to be irrelevant most of the time (but conceded they could be relevant on rare occasions – hence the "3 or N/i" ranking in Table 4). She argued that even if CPs were not working, a good CE – especially monitoring controls - will ensure the inefficient CPs are detected and amended appropriately, so why bother even considering CPs.

As regards the *factors* the three experts (who nominated this *element* as relevant) considered in assessing the CP element of internal control (question 3A), again there was unanimous agreement. They all listed items such as documentation, physical controls, independent checks etc (as listed on Appendix 1). After questioning, they reviewed the list of *factors* they had

stated as relevant and the ones from AUS 402 they had not listed. They were then asked if they considered important the items they had not listed. In all cases they said yes, they had just omitted them or thought they had mentioned them.

The experts were then asked, were there any elements of internal control structure, or any factors which they use in evaluating an element, they considered important in internal control evaluation that were not listed in the categorisation analysis instrument shown to them (Appendix 1). They all answered no.

The far more interesting questions, of whether there were elements and/or factors of elements listed as per the Standard, which they did **not** consider important, has been addressed above. Once an element was considered significant no individual factors, which made up the element, were identified as irrelevant. But as to the relevance of the three elements of internal control structure, refer again to Table 4.

Summary and evaluation of audit expert's categorisation analysis

The results of the categorisation analysis can be summarised by referring back to the stated purposes of the study listed earlier. As regards the first purpose, an investigation of the importance of the internal control elements/factors, there was unanimous consensus among audit experts that *control environment* factors comprise the most important element of an internal control structure to evaluate. The two most important factors (sub-categories) in assessing the control environment can be referred to as "management quality" and "high level monitoring controls". Four of five audit experts then consider the *information system* as an

element (category) of internal control structure critical enough to be evaluated. Factors used to evaluate this element are as per the current auditing standard. Three of five audit experts then consider *control procedures* – over specific entity objectives – as an important element of internal control structure to be reviewed. Here again, the factors to be used in evaluating this element are as per the current auditing standard.

As regards the order in which elements/factors should be evaluated, audit experts consider the order to be used in evaluating the above elements is: first the control environment, second the information system and third (as applicable, as some did not consider it should be reviewed) control procedures.

Relevant auditing standard on internal control evaluation

The above two separate experiments, a review of audit firm procedures and categorisation analysis of audit experts provide a composite body of evidence as to how practicing auditors perform internal control evaluations. The results of both experiments reveal consensus on the major points of internal control evaluation. Audit experts appeared to concur with the procedures of the "Big 5" audit firms as regards internal control evaluation (refer to the previous summary of audit firm manuals review). Efforts should concentrate on control environment factors, particularly management quality and high level monitoring controls. The results of these evaluations would then appear to drive the rest of the internal control evaluation procedure.

Let us now examine the second stated purpose of this study, as noted in the introduction, and consider whether or not the approach of audit practitioners is reflected in the professional pronouncements emanating from their profession, namely auditing standard *AUS 402*. When the results of the above categorisation analysis and review of audit firm manuals are compared to the applicable auditing standard, some interesting findings emerge.

First, consider *AUS 402*'s division of internal control structure evaluation into the three elements; control environment, information systems and control procedures. Is there a ranking of importance? Referring back to the interviews of audit experts the preferred audit approach was to concentrate on *control environment* factors. This appeared to mirror the preferred audit approach of audit firms as per the review of audit manuals, above. However the standard does not provide guidance as to the order in which the three elements should be evaluated. Consider the following (at paragraph 16):

The division of the internal control structure into the three elements identified in AUS 402.10 ***facilitates discussion*** *of its nature and how it* ***might*** *be considered during an audit*. (emphasis added).

The standard subsequently recognises the importance of the *control environment* and how it may affect assessment of the other two elements when it states:

A weak or ineffective control environment can undermine the internal control structure to the extent the auditor is likely to place little, if any reliance on control procedures. (AUS 402.17).

However it then subsequently says strong *control procedures* can have an effect on the *control environment*.

When the control environment is weak, the auditor will often assess control risk as high for all assertions except those where strong and independent control procedures mitigate the effect of the weak control environment. (AUS 402.35).

The view of the audit experts is the above would be extremely unlikely to occur. If CE is weak they would rarely rely on CPs. The audit firm manuals review supports the opinions of the audit experts. CE factors are critical and affect subsequent internal control evaluation. Hence there appears to be a difference between the current auditing standard on internal control evaluation and the opinions held by some audit experts and audit firms as to exactly how critical an element *control environment* is in internal control evaluation. The practitioners appear to rank it far more significantly and insist it be evaluated first.

Second, consider the three elements and the factors that make them up. The audit experts have raised some queries as to the validity of these. One expert (AE2) only considered the element CE to be relevant. Two experts (AE2 and AE3) considered the CP element to be irrelevant for a great proportion of audits if not all the time. Two experts (AE2 and AE5) raised the concept of an overlap between evaluating the IS *element* and evaluating the "use of information technology" *factor* during assessment of the CE element. Indeed the standard itself seems to consider the categories a little artificial on occasions. Consider the following:

The auditor's primary interest, however, is not in classifying aspects of the entity's operations into any particular category, but in understanding how the internal control structure operates and its contribution towards control risk. (AUS 402.16)

Similarly the review of audit firm manuals noted how these firms reviewed controls on a "strategic system" basis rather than on a "transaction cycle-by-cycle" basis, rendering the review of specific control procedures (such as authorisation of individual transactions in a particular account balance) less significant than reviewing "high level" controls. Hence, the dissection of internal control structures into three elements – as per AUS 402 – and the categorisation of factors which combine to make up those elements, may be in need of review. Problems such as the computer environment factors overlap and the continuing relevance of control procedures factors in a changing business environment appear to exist.

An overall conclusion would be that the apparent shift to *business risk* auditing may necessitate a review of some of the concepts outlined in the current auditing standard *AUS 402*, particularly the ranking of the importance of the component elements of internal control structure and also the categorisation of some factors which comprise elements.

Summary and conclusion

This study utilises two direct research methods, namely reviewing audit firm documentation and interviewing audit experts, to gain an understanding of how practicing auditors evaluate internal control structures. The results indicate a shift in audit approaches from more traditional cycle-by-cycle evaluations to a more overall risk evaluation strategy. Practicing

auditors consider the *control environment* to be the most significant element of internal control and the first element to be evaluated. Subsequent internal control evaluation appears driven by the results of this first phase.

The study then compares practicing auditors attitudes towards internal control evaluation with guidance provided in the relevant auditing standard, *AUS 402*. The standard does not currently appear to emphasise the critical importance of the *control environment* element of the internal control structure, as it does not say in which order the elements are to be evaluated, whereas the consensus view of practitioners adopts an ordered approach. Also unanimous consensus does not appear to exist among practitioners as to the component elements and factors of internal control as listed in the auditing standard. Therefore it would appear as if future research into internal control evaluation would do well to concentrate on areas such as identifying the most important elements/factors auditors use in the evaluation process, the order in which they are assessed and their inter-actions. The results of this study tend to suggest one element is considered significantly more important than the others. Also within that element some factors may be considered more significant. Future research could aim to ascertain if this is in fact the case.

The limitations of this study should be noted in reviewing the conclusions. First, it should be re-emphasised that the sample of audit experts for the categorisation analysis, although high in quality, may not be large enough in quantity (five) to merit drawing conclusions about auditors as an overall group. Obtaining high quality respondents was a stated aim of this paper, rather than the more traditional style of large sample sizes of varying quality respondents. Second, whereas the researchers have no reason to doubt the validity of the responses provided by

auditors, used in both the firm manual review and categorisation analysis, the possibility exists that the respondents may have provided answers which were not totally representative of the real situation for whatever reason (to protect confidentiality etc). The potential for this type of invalid response to permeate the results must be recognised.

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Appendix 1 – Categorisation Analysis Instrument (abridged)

Importance of Internal Control Structure Evaluation. Factors Used in Assessment.

Q.1/2/3 What, in your opinion, is the most important (Q2 and 3, next most important) element of internal control structure to evaluate.	**1st Res**	**Prompt**	**Note**
Control Environment (CE)			
Information System (IS)			
Control Procedures (CP)			
Q.1A/2A/3A. List the individual factors you would assess in evaluating the reliability of the above element.			
Individual Items of CE			
Managements philosophy and operating style			
Organisational structure			
Assignment of authority and responsibilities			
Internal audit			
Use of information technology			
Human resources			
Audit committee			
Individual Items of IS			
Database contents			
Data input			
Data processing			
Data output			
Inclusion in financial report			
Individual Items of CP			
Reconciliations: reporting/reviewing/approving			
Checking arithmetical accuracy			
Controlling computer operations (ex changing programmes and accessing files			
Control A/Cs and T/B: maintenance and review			
Adequate documentation			
Compare internal data with external sources			
Compare physical counts with accounting records (stock, cash etc.)			
Physical controls over assets			
Physical controls over books and records			
Comparing results with budget			