The Demand Attributes of Assurance Services and the Role of Independent Accountants

Aasmund Eilifsen*
Professor
Norwegian School of Economics and Business Administration
Institute of Accounting, Auditing and Law
Hellev. 30
5045 Bergen
Norway
Fax: 47 55959320
Email: aasmund.eilifsen@nhh.no

W. Robert Knechel
Ernst & Young Professor of Accounting
Fisher School of Accounting
University of Florida
PO Box 117166
Gainesville, FL 32611
USA

Philip Wallage
Professor
Faculty of Economics and Econometrics
University of Amsterdam
Roetersstraat 11
The Netherlands - 1018 WB Amsterdam

Bart van Praag
Associate Professor
Faculty of Economics and Econometrics
University of Amsterdam
Roetersstraat 11
The Netherlands - 1018 WB Amsterdam

*Corresponding author

Acknowledgements: The authors wish to thank Anna Noteberg for her assistance with data collection and coding.

The Demand Attributes of Assurance Services and the Role of Independent Accountants

ABSTRACT

Several initiatives and auditors' professional organizations have argued that assurance about the quality of information, processes, or compliance encompasses the future market base for the accounting profession. However, the market for assurance services is in its formative stage and not well understood. Based on data from Dutch Executive Board members this paper reports how desirable attributes of service providers differ across potential providers and affect the demand for assurance services, specifically the attractiveness of independent accountants as assurance service providers.

Keywords: Assurance market, assurance demand, assurance services, assurance providers, independent accountants

The Demand Attributes of Assurance Services and the Role of Independent Accountants

Introduction

For the past decade, the auditing profession has been challenged to cope with extensive changes in the business environment. Increased globalization, advances in technology, growing emphasis on risk management and internal control, failures of corporate governance, and myriad related political forces have combined to place increasing pressure on auditors and firms to provide valuable and relevant services to various stakeholders (Eilifsen, Knechel and Wallage, 2001). While the usefulness of financial statements and related assurance has been increasingly challenged,[1] the auditing profession itself has been confronted with an unfortunate series of perceived failures in corporate governance and the performance of external auditors. Furthermore, the market for traditional audit services has become increasingly saturated and viewed more and more as simply a compliance requirement, rather than a service that provides real economic value to stakeholders. While one can argue about the accuracy of these perceptions,[2] it does highlight that the profession must face up to the changes in the environment that affect the value of assurance services rendered by independent accountants.

A seminal study in 1996 by the Special Committee on Assurance Services of the American Institute of CPAs (AICPA), the so-called Elliott Committee, expounded the arguments for expanding the nature of assurance and auditing services provided by independent accountants. Since then, the growth of such services is clear evidence that market opportunities exist for accountants to expand the range of

assurance services. Most research has focused on the supply side of the market and primarily surveyed the practice and expectations of public accountants as providers of assurance services (Brackney and Helms, 1996; Boritz and Cockburn, 1998; Rankin and Sharp; 2000, Dassen, Schelleman and Gloudemans-Sweelssen; 2001). Up to now, the majority of services delivered have been financial in nature but firms have offered more non-traditional assurance services on a selective basis. One challenge has been to unbundle the new services from the audit, and to clearly understand the needs of potential clients. Surveys indicate that accounting firms expect to continue to expand into non-traditional assurance services.[3] The AICPA and the International Federation of Accountants (IFAC) have each recognized this need and have begun to address problems and opportunities in the area of assurance services. In 2000, IFAC issued an international standard on assurance engagements, ISAE 100 (IFAC/IAPC, 2000). During 2001, IFAC commissioned research from an international consortium of academics on the determination and communication of levels of assurance other than high (IFAC/IAASB, 2002). In 2003 IFAC issued a framework for assurance engagements and a standard on assurance engagements other than audits or reviews of historical financial information to replace ISAE 100 (IFAC/IAASB, 2003a, 2003b). IFAC's regional organization in Europe, Fédération des Experts Comptables Européens (FEE), has taken initiatives to develop frameworks for providing assurance on environmental and sustainability reporting (FEE, 1999, 2002).[4] The AICPA (in conjunction with the Canadian Institute) has gone so far as to develop practice guidance and standards for specific services including WebTrust, SysTrust, and ElderCare.[5]

Since the market for assurance services is in its formative stages and is evolving rapidly, there is limited understanding of the nature and extent of the demand and supply of assurance services. It is not clear what characterizes a desirable assurance service provider. For example, to what extent is the emerging assurance market the natural domain of independent accountants? To what extent can the demand for assurance services be met by accountants applying their measurement and verification skills in new areas? Are auditors able to maintain the expected quality of assurance services being delivered without undermining the credibility of the profession? Insights into these and related questions are important to develop efficient assurance markets and for determining the appropriate role of the auditing profession in such markets.

The purpose of this paper is to examine the attributes of service providers that may affect the value of assurance services. We examine how such attributes differ across potential providers of assurance services and how they impact the likelihood that specific services will be obtained from independent accountants. In the next section we discuss the nature of assurance services in more detail, as well as the attributes of service providers that may affect the demand for assurance services. In the second section we describe our research method and expectations. The third section presents the results of our survey, followed by a summary and conclusions.

An Overview of Assurance Services

The Nature of Assurance Services

Assurance services are defined by the AICPA as "independent professional services that improve the quality of information, or its context, for decision makers".

While this definition emphasizes the value of information itself, the reference to the *context* of information suggests that assurance can pertain to other dimensions of information than just its accuracy. For example, assurance can address the way information is produced, aggregated, reported or even used. This provides an extremely broad arena in which to consider the role and nature of assurance provided by independent accountants. The Elliott Committee Report specifically identified a number of assurance service opportunities by considering the needs of customers and whether they are currently served by accountants. Figure 1 illustrates the range of assurance services considered in the report as of 1996. The services are classified based on whether an existing need is serviced by accountants and whether that need exists for current clients or an expanded set of clients. Until the 1990's, assurance services were generally limited to quadrant I, reflecting a traditional view of auditing. Quadrant II illustrates services that could be provided to existing clients while quadrant III illustrates services that client's may obtain from non-accountants. Finally, quadrant IV, arguably the area with the most growth potential, suggests future services that may be made available by accountants.

- - - - - - - - - - - - - - - - - - -
Insert Table 1 about here
- - - - - - - - - - - - - - - - - - -

The potential demand for assurance services has also been recognized by IFAC, which issues standards on assurance engagements. IFAC describes an assurance engagement as "an engagement in which a practitioner expresses a conclusion designed to enhance the degree of confidence of the intended users other

than the responsible party about the outcome of the evaluation or measurement of a subject matter that is the responsibility against criteria" (IFAC/IAASB, 2003a). While generally more narrow than the AICPA definition, this definition encompasses a very broad range of potential services and is more specific in describing the elements of an assurance engagement, which include the following:

- A three party relationship (a practitioner, a responsible party, and the intended user)
- A subject matter
- Suitable criteria
- Evidence
- An assurance report

Furthermore, IFAC suggests areas in which accountants may be able to expand assurance services:

1. Information and data, e.g., forecasts and non-financial information including environmental and social reports.
2. Systems and process performance, e.g., efficiency, quality, risk management, and ISO certification.
3. Stakeholder behaviour, e.g., ethics and integrity of individuals, governance, enforcement of codes of conduct and legal compliance.

While effectively defining assurance services, the various professional pronouncements have been less helpful in answering the questions of how to create demand for these services and how to convince potential clients that independent accountants are the logical and effective purveyors of such services. New services will not be successful unless demand exists and potential fee levels justify the costs of providing the services. Based on a demand-side analysis, Knechel (2001) identified eleven assurance services that could be provided as an increment to a traditional financial statement audit. The set of service opportunities was derived based on the five phases of effective risk management:

1. Identifying risks.
2. Responding to risks.
3. Designing information systems to monitor risk.
4. Measuring performance related to risks.
5. Reacting to changes in risk conditions.

Accountants have the potential to offer services in all of these areas but, historically, have focused primarily on the aspects related to external reporting of financial results. Table 2 highlights how assurance services might expand beyond the financial statements to include assessment of business risks, evaluation of responses to risks, and verification of performance.

- -
Insert Table 2 about here
- -

Knechel (2001) also noted that there are at least four limitations to expanding the market for assurance services including obtaining market permission from potential clients (is anyone willing to pay?), maintaining independence, developing necessary expertise, and complying with existing regulations. Carcello, Messier and Ricchiute (1998) also considered limitations on an accountant's ability to offer assurance services, focusing on potential market barriers including demand, litigation, communication, independence, and measurement. In short, in order for accountants to be successful at introducing new assurance services, they must be able to meet certain market tests, often in the face of competition from other professional service firms.

The Attributes of Assurance Service Providers

Prior research has examined attributes that are important for increasing the quality and value of an audit. Two previous studies used a similar survey methodology to have respondents rate the importance of a large number of quality

attributes, which were then reduced to a small set of general categories using statistical analysis. In the first paper, Carcello, Hermanson and McGrath (1992) surveyed audit partners, financial statement preparers and sophisticated users concerning 40 attributes that might affect the perceived quality of an audit. In general, they were able to reduce the most significant attributes to four groups: (1) experience with the client, (2) overall industry experience, (3) responsiveness to client needs, and (4) compliance with professional standards. Attributes that were not considered important included costs and fees, absence of non-audit services, size of office, and certification of lower level staff. A similar study was conducted by Warming-Rasmussen and Jensen (1998) using 30 attributes. They were able to reduce the attributes to six dimensions of audit quality: (1) personal credibility, (2) independence, (3) openness of reporting, (4) industry expertise, (5) loyalty to minority shareholders, and (6) professional scepticism.

The purpose of this paper is broader than the previous studies of audit quality, i.e., we examine the attributes that make a potential provider of assurance services attractive to a consumer of such services and assess to what extent independent accountants possess those attributes. Warming-Rasmussen and Jensen (1998) noted that many external parties have difficulty distinguishing between attributes of a service and attributes of a provider. Consequently, our first step was to interview representatives from various professions that are potential providers of assurance services (e.g., accountants, attorneys, consultants, etc.). These individuals were asked to identify the attributes that they felt were the most important/appropriate for selecting a provider of assurance services. These discussions resulted in a list of 26

attributes, many of which overlap with attributes used in prior studies and/or are discussed in the professional literature on assurance services. The complete list is presented in Appendix A. The 26 attributes are less inclusive than prior studies because we omitted attributes that were unique to an audit (e.g., loyalty to minority interests, firm participates in a peer review process) or deemed to be overly specific given the broad range of services we wish to consider (e.g., structure of the engagement team).

Our next step was to reduce this list to a manageable number for a broad based survey by conducting a pilot test that asked respondents to rate the 26 attributes. From this pilot testing we were able to reduce our list to a total of seven attributes for further study. These include desirable qualities for accountants that are identified in various professional standards (confidentiality, expertise, independence, objectivity, and integrity), as well as market parameters (e.g., professional reputation and costliness)[6]

- Confidentiality: This attribute refers to the extent to which a service provider maintains confidentiality in the conduct and reporting of a service. Accountants have a high standard of confidentiality embedded in their professional standards.

- Expertise: This attribute refers to the extent to which a service provider is perceived to be an expert on the context and performance of the service. Accountants may be perceived as an expert in accounting issues but may also be perceived as being expert in verification procedures. Expansion of assurance services by accountants may depend more on process knowledge (verification) than context expertise (accounting).

- Professional reputation: The overall professional reputation of a service provider can be expected to have an impact on the demand for services. The more positive image maintained by a profession, the more likely that they will be looked on as an appropriate provider of

assurance services. Furthermore, some professions may be more frequently associated with some services due to tradition and culture.

- Independence: Independence is the absence of interest in the subject matter that may impair the service providers' judgment. In many situations, the value of assurance services may depend on the real and perceived independence of the provider. To the extent that a provider is considered to be independent, i.e., lacking in financial, familial or other connections to the client, the more perceived value for the service.

- Objectivity: The value of assurance services can be expected to depend on the objectivity of the service provider, i.e., whether conclusions are affected by personal bias. Historically, accountants have been well respected for their objectivity in viewing financial reporting.

- Integrity: Personal and professional integrity and honesty may also be perceived to be different across potential providers of assurance services and may influence the demand for assurance services. It is likely that some professions are viewed as having more integrity than others.

- Costliness: Since all professionals charge fees for their services, the demand for assurance services is expected to vary according to the level and perceived fairness of the fees associated with a service.

In general, we expect that there will be a positive relationship between the first six attributes and the demand for assurance services; we expect a negative relationship for the seventh attribute. However, it might be expected that these attributes would vary in significance depending on the service being considered and the provider of the service. For example, confidentiality may not be equally relevant for an engagement to assess process effectiveness as it is for an audit of financial statements. Furthermore, different potential providers of assurance services may be perceived as being more or less able to satisfy those attributes, e.g., for some services the confidentiality attributes of lawyers may be extremely important, while for other services the technical expertise of consultants may be more important.

In order to examine the seven attributes in more detail, we next identified different types of assurance services available from independent accountants and determined the set of assurance providers that might offer those services. We consider three broad categories of assurance services as derived from IFAC: (1) assurance as to the quality of information being reported, (2) assurance as to the effectiveness of a process, and (3) assurance as to compliance with legal or other mandates within in an organization. We identified two services within each category, one considered to be established and one that could be expected to become more common in the future. The services addressed in this study are identified in Table 3. Inclusion of the financial statement audit provides an anchor against which other services can be compared.

- - - - - - - - - - - - - - - - - -
Insert Table 3 about here
- - - - - - - - - - - - - - - - - -

Most of the services identified in Table 3 could be provided by professionals other than independent accountants, except for the audit of financial statements for which a legal monopoly is granted to accountants. To determine which professional would be favoured for providing a service, we considered seven categories of service provider:[7]

- Accountant: Accounting, auditing and/or tax expert.
- Attorney or lawyer: A legal expert.
- Engineering consultant: Scientific, engineering or design expert.
- Management consultant: Business advisor.
- Technology consultant: Information technology and systems expert.
- Independent non-government organization: Nongovernmental “watch dog”.
- Corporate employee: Personnel currently employed by the organization.

Our expectations are that certain professions will be more frequently associated with specific services. Furthermore, we expect that the nature of the demand attributes of the service provider selected will vary across the services.

The Dutch assurance market and regulation of assurance services

No prior examination of the supply side of the Dutch market for assurance services has been performed. Based upon interviews held with representatives of the potential service providers, we concluded that each service provider could provide at least one of the six services included in the survey. However, provision of two of the six services is regulated: (1) the audit of financial statements by accountants and (2) the ISO certification.

Auditing of financial statements in The Netherlands is strictly regulated. The Dutch accounting profession is heavily influenced by the international professional developments as the Dutch economy is relatively open (Wallage, 1993). Since the 1980's, Dutch accountants have to comply with auditing standards that are very similar to the International Standards on Auditing (ISA) of IFAC. Furthermore, the Dutch code of professional conduct is conceptual and equal to IFAC's Code of Ethics. This means that the auditor should be independent of the audit client financially and a well as in other relationships. The most important restriction is that the auditor should not do any consultancy work that will be in conflict with auditing of the financial statements (e.g., performing major bookkeeping assistance to the audit client) or take part in any decision-making for the audit client. The big 4 firms, medium sized audit firms and small audit firms operate in of the Dutch audit market.

About 90% of the companies listed at the Amsterdam Stock Exchange are audited by the big 4 audit firms.

The ISO assurance professionals, normally engineering consultants, perform audits in accordance with the international ISO guidance-lines. As opposed to the audit of financial statements, the ISO assurance firm, not the individual auditor, is the licensing entity. In the Netherlands two of big 4 audit firms are licensed to provide ISO certification. In addition, technical engineering firms and so called surveyor provide such assurance services. None of the other four services are covered by legal or licensing requirements in the Netherlands.

Research Method

A survey was sent to senior accounting and financial officers in 350 companies in the Netherlands. Companies included in the survey were identified using the *Research Database 2000*, which provides detailed information about companies in the Netherlands. The *Database* includes all Dutch listed companies as well as a great number of non-listed companies as registered at the Chamber of Commerce. We selected a random sample of 350 listed and large non-listed companies. The survey was conducted during 2001 and the questionnaire was addressed to the Financial Director of the company. Nine surveys could not be delivered (wrong or old addresses). We received 45 responses, one of which was omitted from the analysis because the responses were incomplete. While this response rate (roughly 13.5%) might seem low, given that the surveys were addressed to a very senior official in each organization, we feel that the response rate is reasonable for this type of survey.

The survey consisted of a number of separate sections including questions related to the background of the respondent, prior experience with assurance services (if any), and descriptive data about the organization. Respondents were asked to rank the seven general attributes of assurance service providers from 1 to 7. They were then asked to select the three most important attributes for each of the seven potential providers of assurance services included in the study. Finally, for each of the six assurance services included in the study, the respondents were asked to identify the three most important service provider attributes relative to the specific service and to select their first choice of provider for that service. The part of the survey relevant to this task is included as Appendix B. As a final question, participants were asked to indicate the likelihood that they would acquire each service from an independent accountant using a scale of 1 (high) to 5 (low).

Results

Overall Rankings of Service Provider Attributes

Table 4 (column A) presents the results for the general ranking of the attributes of assurance service providers. "Expertise" was the highest ranked attribute on average and was significantly higher than the next ranked attribute (2.90 vs. 3.40, $p<.01$). The second highest ranked attribute was "Objectivity" which was significantly higher than the third ranked attribute (3.40 vs. 3.71, $p<.05$). The attributes ranked as 3 through 6 did not differ significantly in their average ranking. However, "Costliness" was ranked significantly lower than all other attributes (3.98 vs. 4.31, $p<.01$). These results suggest that without considering specific services or service providers, consumers of assurance services would first look to expertise and

then objectivity when selecting an assurance service provider, and would not place much weight on cost considerations.

- - - - - - - - - - - - - - - - - - -
Insert Table 4 about here
- - - - - - - - - - - - - - - - - - -

Table 4 (columns labelled B) also presents the responses to a series of questions concerning which attributes were most important for each potential provider of assurance services. Specifically, respondents were asked to select the three attributes (of the total of seven) that are most important to a given profession. This selection was made without consideration of specific services. For the first five service providers listed, "Expertise" and "Professional reputation" were two of the three most frequently selected attributes. However, it is the third attribute selected for each provider that reveals interesting differences. Not surprisingly, "Confidentiality" is considered an important attribute for attorneys and "Independence" is considered an important attribute for accountants. However, for all three consulting related providers, "Costliness" rises to be one of the three most important attributes. This suggests that the services of consultants in general may be perceived as more fee sensitive than those of accountants or attorneys. The third important attribute for using the company's own personnel is "Integrity". The results in Table 4 also reveal that NGOs are looked at quite differently than the other potential service providers, being the only category with neither expertise nor professional reputation in the top three attributes.

Analysis of Service Provider Attributes Relevant to Specific Assurance Services

To further examine the relevance of assurance provider attributes, we asked the respondents to rate the provider attributes as they pertain to specific services. Using the six services identified in Table 3, we first asked the respondents to select the three attributes that would be most important in considering a preferred provider of each service. We than asked the respondent to identify the service provider that they felt they would most likely select for the service. The responses to these questions are summarized in Table 5

- - - - - - - - - - - - - - - - - - -
Insert Table 5 about here
- - - - - - - - - - - - - - - - - - -

Panel A of Table 5 reports the percentage of respondents who selected each attribute as one of the most important for a specific service. "Expertise" was the most frequently selected attribute for all six services, ranging from 66.7% in the case of ethics audits and rising to 97.6% in the assessments of system reliability. "Professional reputation" was the second most selected attribute for two services (ISO certification, legal compliance) while "Objectivity" was the second most selected attribute for three services (environmental measurement, system reliability, and ethics). Only two services had a third attribute that was selected by more than half the respondents, "Objectivity" for ISO certification and "Integrity" for ethics audits. Also of interest is that confidentiality and costliness were the least important considerations for many services, with both being selected less than 20% of the time for three services. Independence was also selecting relatively infrequently for all services, only rising to 38.1% in the case of financial statement audits. Finally, it is interesting to note that the financial statement audit had the most diverse set of

responses with all attributes being selected as important by at least 30% of the respondents.

Panel B of Table 5 reports the selection of preferred service providers. Not surprisingly, the selection of accountants as the best provider of financial statement audits was virtually unanimous (41 of 42). Engineering consultants were selected as the preferred provider of services related to nonfinancial environmental performance measures and ISO Certification. However, in both cases, the most frequently selected profession was still picked by less than half of the respondents, revealing a potentially diverse demand for those types of services. ICT consultants were strongly favoured for assessing system reliability (28 of 42) while attorneys were overwhelming preferred for verifying legal compliance (36 of 42). Finally, although accountants were tied for the most chosen provider of ethics audits, respondent preferences were widely scattered across a number of different professions.

Analysis of Association among Attributes, Services and Service Providers Selected

In order to analyze in more detail the relationship among specific services, attributes and service providers, a model was developed to identify the attributes and conditions that had a significant impact on the selection of an accountant as an assurance service provider for services other than a financial statement audit. The model we developed was based on an OLS regression, for which the dependent variable was defined as the likelihood that an independent accountant would be selected to provide a specific service, measured using a 5-point Likert scale. The sample was pooled across the five *non-audit* services. More specifically, we estimated the following OLS regression model:

$$PRACCT = b_0 + b_1 * LNSIZE + b_2 * BIG5 + b_3 * ASISOCERT + b_4 * ASSYSTEM + b_5 * ASCOMPLI + b_6 * ASETHICS + b_7 * CONFID + b_8 * EXPERT + b_9 * REPUT + b_{10} * INDEP + b_{11} * OBJECT + b_{12} * INTEG + b_{13} * COST$$

where:

Dependent Variable

PRACCT = 5-point Likert value indicating likelihood of engaging an independent accountant with 1=high and 5=low.

Control Variables

LNSIZE = natural log of total assets.

BIG5 = if the company's auditor is a Big 5 firm, 0 otherwise.

ASISOCERT = 1 if the service is ISO certification, 0 otherwise.

ASSYSTEM = 1 if the service is for assurance about system reliability, 0 otherwise.

ASCOMPLI = 1 if the service is for assurance about legal compliance, 0 otherwise.

ASETHICS = 1 if the service is for assurance about ethical compliance, 0 otherwise.

Service Provider Attributes

CONFID = Rank assigned to the attribute of "confidentiality" as an indication of its importance in selecting a service provider for a specific service (1=high, 7=low).

EXPERT = Rank assigned to the attribute of "expertise" as an indication of its importance in selecting a service provider for a specific service (1=high, 7=low).

REPUT = Rank assigned to the attribute of "professional reputation" as an indication of its importance in selecting a service provider for a specific service (1=high, 7=low).

INDEP = Rank assigned to the attribute of "independence" as an indication of its importance in selecting a service provider for a specific service (1=high, 7=low).

OBJECT = Rank assigned to the attribute of "objectivity" as an indication of its importance in selecting a service provider for a specific service (1=high, 7=low).

INTEG = Rank assigned to the attribute of "integrity" as an indication of its importance in selecting a service provider for a specific service (1=high, 7=low).

COST = Rank assigned to the attribute of "costliness as an indication of its importance in selecting a service provider for a specific service (1=high, 7=low).

LNSIZE and BIG5 are control variables related to the company from which the survey was obtained. These were included in the model because it can be expected that larger companies are more likely to purchase extended assurance services because they have greater need for such services and more resources available to expend on such services. Also, large accounting firms have a broader range of services to offer than small firms so it might be expected that a company is more likely to acquire assurance services if their auditor is a large accounting firm. The four variables representing specific assurance services are also considered to be control variables. Some of the assurance services included in the survey may be broadly associated with a specific profession so inclusion of a dummy variable for each specific service controls for this association. The intercept of the equation subsumes the examination of nonfinancial performance measures. The other seven variables reflect the seven attributes of assurance providers that we are examining in this paper. Each observation was assigned an importance weight ranging from 1 to 7 based on a relative ranking of the attributes. The most important attribute had a value of 1 and least important attribute had a value of 7.

The results of this analysis are presented in Table 6. The model has an adjusted R^2 of .135 and an F-value of 3.516 ($p<.001$). Residual analysis of the model shows no significant auto-correlation with a Durbin-Watson statistic of 2.345. Tests for multicollinearity do not indicate any problems with the model and Eigenvalues remain below the threshold values for collinearity. There are no cases with prediction errors outside of 3 standard deviations so we conclude that the model is well specified[8].

Neither of the client-specific control variables are significant, i.e., the likelihood of selecting an accountant to provide assurance services is not related to the size of the company (LNSIZE) or whether they use a Big 5 firm as their primary auditor (BIG5). Only one of the control variables reflecting specific assurance services is significant, ASSYSTEM. The negative value for the coefficient indicates that an independent accountant is less likely to be selected to perform a system reliability engagement when compared to the base line service (examination of nonfinancial performance measures). Given the amount of effort the profession has invested in IT consulting and related services, this result may come as a surprise to many accountants.[9]

Turning now to our seven test variables for the attributes of assurance service providers, we see that four of the attributes have a significant relationship with the likelihood of selecting an independent accountant to provide a specific service. The lack of significant coefficients for confidentiality, expertise and objectivity indicate that an accountant is no more likely to be selected to provide a service than other professionals when those attributes are important. Recall from our earlier analysis that expertise and objectivity were considered to be critical attributes across a broad range of services and service providers so it is not surprising that the services of an accountant may not be marginally more attractive based solely on expertise or objectivity. That is, all professions may be perceived as having expertise and being objective in general, so it would be difficult for accountants to distinguish themselves on those dimensions.

The positive coefficients for professional reputation ($b_9 = 0.345$, $p<.001$) and integrity ($b_{12} = 0.167$, $p<.028$) indicate that an auditor is more likely to be selected when those attributes are deemed important. This result suggests that accountants are perceived by the market to be different from other professions for overall reputation and integrity. These attributes may provide a source of competitive advantage for accountants. On the other hand, the negative coefficient for costliness ($b_{13} = -0.131$, $p<.065$) and independence ($b_{10} = -0.191$, $p<.012$) indicate that an accountant is more likely to be selected when those attributes are *not* important, suggesting a potential competitive disadvantage for accountants relative to other professionals. In the case of costliness, this result implies that accountants may be perceived as being expensive providers of other types of services.

The negative coefficient for the independence attribute is particularly surprising. This result means that an accountant is more likely to be selected to provide a service when independence is not considered to be an important attribute, which may seem counterintuitive given the importance of independence to the overall profession. Does the outcome imply that accountants are not generally independent? Such an interpretation would undermine one of the basic tenants of auditing. Furthermore, the result apparently contradicts the results presented in Table 4 where independence was selected as one of the key attributes of accountants. However, an alternative way to look at this outcome is that it reflects the conditional nature of assurance services other than audits, at least as pertaining to accountants. That is, accountants are only selected to provide a service when independence is *not important* because respondents may be implicitly considering the non-audit services

as extensions of an existing audit, in which case, it would be appropriate to use an accountant only when independence was not an in issue. This interpretation would support the view that independence is very important to accountants, but mainly as it relates to the audit of financial statements.

- - - - - - - - - - - - - - - - - - -
Insert Table 6 about here
- - - - - - - - - - - - - - - - - - -

Summary and Conclusions

In this paper, we examine the attributes of assurance service providers that affect the demand for assurance services. We consider the interactions among service provider attributes, specific services and alternative providers in order to assess those attributes that are most important for the selection of accountants to provide assurance services other than the basic financial statement audit. We found that expertise was the most important attribute of service providers in a general sense and that costliness was least important. When looking at the accounting profession specifically, we found that professional reputation and independence were also considered important. When we considered the interaction among attributes and services, we found that accountants were more likely to be selected to provide a service when professional reputation and integrity were highly important and/or costliness and independence were not important. While the latter outcome is a surprise, we interpret the result as indicating that accountants will be selected to provide services only when independence is not a problem so as to not interfere with their perceived primary role as auditors of the financial statements.

This paper offers new insights into the demand for assurance services and the role of independent accountants as assurance service providers. The findings help us to understand the potential role of the accounting profession to serve the assurance market. The results indicate that the trust in accountants' independence is crucial for market success. However, factors such as business' de facto willingness to pay for assurance services and, particularly in the recent climate of auditing scandals, the accounting profession's willingness to expand into new services, will determine if the assurance market will materialize as the future platform of the accounting profession.

APPENDIX A

Full List of Attributes Initially Considered during Pilot Testing

Attribute
Expertise
Integrity
Independence
Reliability
Objectivity
Education
Clear communicator
Impartial
Professional
Consistent
Experience
Professional reputation
Compliance with laws and regulations
Efficiency
Cost
Confidentiality
Correct/Accurate
Completeness
Quick reaction
Critical
Recognition
Technical
Internal quality standards
Member of professional group/organisation
Not pressured by budgets

APPENDIX B

Extract from Survey Document Pertaining to Specific Assurance Services

Description of Possible Assurance Service	The ***attributes of a service provider*** are listed below. Please mark (X) the ***three*** attributes that would be most important in deciding which provider of the service would be the best to you and your organization.	Based on the attributes you have indicated, who would be the best provider of the indicated service? ***(Choose one)***
1) Audit of financial statements *(Examination of financial statements to determine whether they give a true and fair view.)*	____ Confidentiality ____ Expertise ____ Professional reputation ____ Independence ____ Objectivity ____ Integrity ____ Costliness	O Accountant O Attorney/Lawyer O Engineering Consultant O ICT Consultant O Management Consultant O NGO O Your Own Organization O Other _____
2) Examination of nonfinancial environmental measures *(Verification that environmental performance measures are reliable.)*	____ Confidentiality ____ Expertise ____ Professional reputation ____ Independence ____ Objectivity ____ Integrity ____ Costliness	O Accountant O Attorney/Lawyer O Engineering Consultant O ICT Consultant O Management Consultant O NGO O Your Own Organization O Other _____
3) ISO certification *(Assurance of the adoption and implementation of ISO standards by a given organisation.)*	____ Confidentiality ____ Expertise ____ Professional reputation ____ Independence ____ Objectivity ____ Integrity ____ Costliness	O Accountant O Attorney/Lawyer O Engineering Consultant O ICT Consultant O Management Consultant O NGO O Your Own Organization O Other _____
4) System reliability *(Assurance that an entity's internal systems provide reliable information for operating and financial decisions.)*	____ Confidentiality ____ Expertise ____ Professional reputation ____ Independence ____ Objectivity ____ Integrity ____ Costliness	O Accountant O Attorney/Lawyer O Engineering Consultant O ICT Consultant O Management Consultant O NGO O Your Own Organization O Other _____
5) Compliance with laws and regulations *(Verification of the extent an organization complies with particular laws and regulations that are in force.)*	____ Confidentiality ____ Expertise ____ Professional reputation ____ Independence ____ Objectivity ____ Integrity ____ Costliness	O Accountant O Attorney/Lawyer O Engineering Consultant O ICT Consultant O Management Consultant O NGO O Your Own Organization O Other _____

6) Integrity and ethics audits *(Assessment and evaluation of the ethical principles, guidelines and actions of the entity.)*	____ Confidentiality ____ Expertise ____ Professional reputation ____ Independence ____ Objectivity ____ Integrity ____ Costliness	O Accountant O Attorney/Lawyer O Engineering Consultant O ICT Consultant O Management Consultant O NGO O Your Own Organization O Other _____

NOTES

[1] For example, see the report of the AICPA's Special Committee on Financial Reporting (1994), the so-call Jenkins report.
[2] For example, see Sundem, Dukes and Elliott (1996).
[3] With the tightening of rules concerning the types of services that auditors can offer to their audit clients, the market for non-audit assurance services has become more restricted. However, the services considered in this study are generally not considered to be consulting in nature, the primary area of new restrictions. Furthermore, there are no limitations on an accountant's ability to offer assurance services to non-audit clients.
[4] For FEE initiatives and environmental and social reporting and assurance in Europe see special issue of European Accounting Review (2000).
[5] Research has been conducted to examine aspects of users' perceptions of the new services (Fargher and Gramling, 1996 (investment performance assurance); Fargher, Gorman and Wilkins, 1998 (book-to-bill disclosures); Havelka, Sutton and Arnold, 1998 (information systems assurance); Houston and Taylor, 1999 (WebTrust); Hunton, Benford, Arnold and Sutton 2000 (WebTrust); Srivastava and Mock, 2000 (WebTrust)). In addition there are numerous professional publications providing descriptive evidence of the variety of assurance services being offered in practice.
[6] Note: Since our purpose was to test the impact provider attributes have on specific decisions by consumers of assurance services, we felt it was important to include a broader list of attributes than just those that are most frequently selected from a long list. Furthermore, our pilot testing did not depend on formal factor analysis because we were also concerned with how respondents to our survey would interpret and react to the identified attributes. There is some overlap of our final list of attributes with those identified by Carcello, Hermanson and McGrath (1992) and Warming-Rasmussen and Jensen (1998). Expertise appears in all three lists, independence and objectivity appears in the Warming-Rasmussen and Jensen list and, arguably, professional reputation has parallels in both lists. More unique to our study is the inclusion of confidentiality, integrity and costliness in the final set of attributes to be tested.
[7] Pilot testing was also used to arrive at the list of alternative service providers. We originally started with a list of 25 providers that were reduced to the current list of 7. Examples of professions eliminated through pilot testing include government agencies, bankers/financiers, academics, labor groups and directors.
[8] Examination of Cook's and Mahalanobis distances further confirm this conclusion.
[9] In the USA, these services would be similar to WebTrust and SysTrust as developed by the US and Canadian professional institutes.

REFERENCES

American Institute of Certified Public Accountants. (1994) *Improving business reporting-a customer focus: report of the AICPA Special Committee on Financial Reporting (Jenkins Committee)*. New York, NY: AICPA.

American Institute of Certified Public Accountants. (1996) *Report of the AICPA Special Committee on Assurance Services (Elliott Committee)*. New York, NY: AICPA.

Boritz, J. E. and Cockburn, D. (1998) '1998 Audit symposium panel discussion on assurance services', *Auditing: A Journal of Practice & Theory*, 17 (Supplement): 133-51.

Brackney, K. S. and Helms, G. L. (1996) 'A survey of attestation practices', *Auditing: A Journal of Practice & Theory*, 15(2): 85-98.

Carcello, J. V., Hermanson, R. H. and McGrath, N. T. (1992) 'Audit quality attributes: the perceptions of audit partners, preparers, and financial statement users', *Auditing: A Journal of Practice & Theory*, 11(1) (Spring): 1-15.

Carcello, J. V., Messier, W. F. and Ricchiute, D. N. (1998) '*Research opportunities in assurance services'*, Working paper, AAA Audit Section.

Dassen, R. J. M., Schelleman, C. C. M. and Gloudemans-Sweelssen, V. M. L. J. (2001) '*The market for assurance services in The Netherlands',* Working paper MARC WP/3 1999-04, Universiteit Maastricht.

Eilifsen, A., Knechel, W. R. and Wallage, P. (2001) 'External assurance services and strategic business risk: an international field study', *Accounting Horizons,* 15(3) (September): 193-207.

European Accounting Review. (2000) *Special issue on environmental and social accounting in Europe*, 9(1).

Fargher, N. L. and Gramling, A. A. (1996) 'A new market for attestation services: the performance presentation standards of the association for investment management and research', *Auditing: A Journal of Practice & Theory*, 15 (Supplement): 72-91.

Fargher, N. L., Gorman, L. R. and Wilkins, M. S. (1998) 'Timely industry information as an assurance service-evidence on the information content of the book-to-bill ratio', *Auditing: A Journal of Practice & Theory*, 17 (Supplement): 109-23.

Fédération des Experts Comptables Européens. (1999) '*Providing assurance on environmental reports',* Discussion Paper.

Fédération des Experts Comptables Européens. (2002) '*Providing assurance on sustainability reporting',* Discussion Paper.

Havelka, D., Sutton, S. G. and Arnold, V. (1998) 'A methodology for developing measurement criteria for assurance services: an application in information systems assurance', *Auditing: A Journal of Practice & Theory*, 17 (Supplement): 73-92.

Houston, R. W. and Taylor, G. K. (1999) 'Consumer perceptions of CPA Web Trust assurance: evidence of an expectation gap', *International Journal of Auditing*, 3(2): 89-106.

Hunton, J. E., Benford, T., Arnold, V. and Sutton, S. G. (2000) 'The impact of electronic commerce assurance on financial analysts' earnings forecasts and stock prices estimates', *Auditing: A Journal of Practice & Theory*, 19 (Supplement): 5-22.

International Federation of Accountants/International Auditing Practices Committee (2000) '*ISAE 100 Assurance Engagements'*.

International Federation of Accountants/International Auditing and Assurance Standards Board. (2002) International Symposium for Audit Research Group, *The determination and communication of levels of assurance other than high* by M. Hasan, H.-J. Kirsch, S. Maijoor, T. J. Mock, P. Roebuck, R. Simnett, H. T. Tan and A. Vanstraelen.

International Federation of Accountants/International Auditing and Assurance Standards Board. (2003a) *International framework for assurance engagements*.

International Federation of Accountants/International Auditing and Assurance Standards Board. (2003b) *ISAE 3000 Assurance engagements other than audits or reviews of historical financial information*.

Knechel, W. R. (2001) *Auditing: Assurance & Risk, 2nd Edition*. Cincinnati, OH: South-Western College Publishing.

Rankin, L. J. and Sharp, F. C. (2000) 'Are CPA firms jumping on the new assurance services bandwagon?', *The Ohio CPA Journal* (October-November) : 15-19.

Srivastava, R. and Mock, T. J. (2000) 'Evidential reasoning for WebTrust assurance services', *Journal of Management Information Systems*, 16(3): 11-32.

Sundem, G. L. Dukes, R. E., and Elliott, J. A. (1996) *The value of information and audits*. New York, NY: Coopers & Lybrand.

Warming-Rasmussen, B. and Jensen, L. (1998) 'Quality dimensions in external audit services-an external user perspective', *The European Accounting Review*, 7(1): 65-82.

TABLE 1

Expansion of Assurance Opportunities by Independent Accountants

		Customer Base	
		Existing	Expanded
Needs	Served	(I) Financial audit Review Agreed-upon procedures Compilations	(III) ISO 9000 certification Internet controls
	Not Served	(II) Performance indicators Risk assessment IT quality	(IV) E-commerce System reliability Health care effectiveness

Source: Adapted from the AICPA Special Committee Report on Assurance Services (1996).

TABLE 2

Risk Management and the Independent Accountant

Component of Risk Management	Traditional Roles of Independent Accountants	Potential Future Roles of Independent Accountants
Identification of risk	• Assess risks that financial assertions are misstated.	• Assess completeness of business risks identified by management. • Assess reasonableness of the prioritization of risk by management.
Response to risk	• Assess quality of controls related to accuracy of financial reporting.	• Assess quality of actions taken by management in response to specific risks. • Assess cost effectiveness of responses to risks.
Information system for monitoring risk	• Assess reliability of the accounting information system for financial reporting.	• Assess quality and appropriateness of performance measures used to measure risk. • Assess reliability of information systems used to generate performance measures. • Evaluate appropriateness of technology underlying information systems.
Performance measurement reporting	• Verify accuracy of financial statements and disclosures	• Verify accuracy of performance measures. • Evaluate appropriateness and timeliness of information distribution.
Reaction to risk		• Assess quality of management's utilization of risk information. • Evaluate timeliness and appropriateness of management's response to changing risk conditions.

Source: Adapted from Knechel (2001).

TABLE 3

Assurance Services Included in Survey

Category of Service	Established Service	Emerging Service
Quality of data	Audit of financial statements	Examination of nonfinancial environmental measures
Effectiveness of processes	ISO certification	System reliability
Compliance	Legal compliance	Ethical compliance

TABLE 4

Rankings of Assurance Provider Attributes
(n=42)

Attribute	(A) Mean Ranking	Std deviation	Percentage Selected as Top Three Attribute (B)						
			Accountant	Attorney	Engineer Consultant	IT Consultant	Management Consultant	NGO	Own Organiz.
Expertise	2.90	2.15	64	93	83	95	86	45	87
Objectivity	3.40	1.84	39	23	40	34	36	63	28
Confidentiality	3.71	1.90	36	64	18	16	25	23	15
Independence	3.90	1.90	41	16	13	7	9	68	13
Integrity	3.90	1.97	30	32	20	25	30	50	54
Professional Reputation	3.98	2.14	50	39	53	45	52	25	46
Costliness	4.31	2.02	36	30	68	73	50	10	51

TABLE 5

Desirable Attributes of Assurance Providers for Specific Services (n=42)

	Financial Statement Audit	Nonfinancial Environmental Measures	ISO Certification	System reliability	Legal and Regulatory Compliance	Integrity and Ethics
Panel A: Percentage Each Assurance Service Provider Attribute Selected for a Specific Service [a]						
Confidentiality	42.8	16.7	7.1	11.9	38.1	35.7
Expertise	76.2	90.5	88.1	97.6	90.5	66.7
Professional Reputation	47.6	45.2	52.4	47.6	52.4	40.5
Independence	38.1	26.2	21.4	19.1	23.8	16.7
Objectivity	33.3	61.9	50.0	59.5	42.8	57.1
Integrity	30.9	23.8	19.1	19.1	28.6	52.4
Costliness	30.9	16.7	38.1	45.2	21.4	9.5
[a] Shading indicates attributes selected by more than half of the subjects.						
Panel B: Frequency of Selection for Each Preferred Assurance Service Provider [b]						
Accountant	41	6	4	7	1	9
Attorney	1	0	0	0	36	4
Engineer	0	14	13	0	0	0
ICT Consultant	0	0	1	28	0	0
Management Consultant	0	6	10	5	0	4
NGO	0	5	2	0	3	8
Own Organization	0	4	5	2	2	9
Other	0	7	7	0	0	8
[b] Shading indicates most frequently selected service provider.						

TABLE 6
Results from Regression Analysis

Model: PRACCT [a] = b_0 + b_1* LNSIZE + b_2*BIG5 + b_3* ASISOCERT + b_4* ASSYSTEM + b_5* ASCOMPLI + b_6* ASETHICS + b_7* CONFID + b_8* EXPERT + b_9* REPUT + b_{10}* INDEP + b_{11}* OBJECT + b_{12}* INTEG + b_{13}*COST

	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	t-value	Sig.	[b]
(Constant)	1.874	0.946		1.981	0.049	**
CONFID	0.013	0.049	0.019	0.258	0.797	
EXPERT	0.016	0.041	0.027	0.384	0.702	
REPUT	0.204	0.047	0.345	4.387	0.000	***
INDEP	-0.127	0.050	-0.191	-2.527	0.012	**
OBJECT	0.088	0.056	0.128	1.564	0.119	
INTEG	0.107	0.048	0.167	2.217	0.028	**
COST	-0.082	0.044	-0.131	-1.854	0.065	*
LNSIZE	0.009	0.033	0.018	0.267	0.789	
BIG 5	0.397	0.585	0.049	0.679	0.498	
ASISOCERT	0.167	0.254	0.053	0.657	0.512	
ASSYSTEM	-0.548	0.254	-0.176	-2.157	0.032	**
ASCOMPLI	0.071	0.254	0.023	0.281	0.779	
ASETHICS	0.143	0.254	0.046	0.563	0.574	

Adj. R-square	13.53%	
F-Value	3.5162	
Model sig.	0.0001	**

[a] Dependent Variable: PRACCT = likelihood of selecting an independent accountant using a 5-point Likert scale.

[b] *, ** and *** indicate that the coefficient is significantly different from zero at the 0.10, 0.05 and 0.01 levels or better, respectively.