THE IMPLICATIONS OF XBRL FOR THE FINANCIAL STATEMENT AUDIT

A REPORT PREPARED FOR THE ASSOCIATION OF CHARTERED CERTIFIED ACCOUNTANTS (ACCA) AND THE INTERNATIONAL ASSOCIATION FOR ACCOUNTING EDUCATION AND RESEARCH (IAAER) IN SUPPORT OF THE WORK OF THE INTERNATIONAL AUDITING AND ASSURANCE STANDARDS BOARD (IAASB)

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EXECUTIVE SUMMARY

XBRL is now in wide use around the world. Many of those implementations involve the transmission of XBRL-formatted financial statements that have been audited. The initial reaction of the IAASB and other international auditing standards setters has been to conclude that XBRL formatted financial statements do not fall within the scope of the traditional financial statement audit. The SEC and the PCAOB in the US setting have come to similar conclusions while, at least in the context of the SEC, recognizing that this may well change as XBRL becomes more integrated into the full extent of the financial reporting supply chain – including production by the corporation and use by information consumers. The increasing pace of XBRL adoption has led, understandably, to XBRL being placed on the long term agenda of the IAASB. The question that the IAASB must answer is what, if anything, the IAASB's role is with regard to XBRL-enabled financial reporting supply chains that incorporate financial statements that have been traditionally audited? Or, for that matter, for financial information flows that have not been subject to assurance?

Our study

To provide input into the IAASB's process we have undertaken a multi-component study. The primary objectives of this study were twofold. First, we wanted to understand the implications of XBRL for the financial statement audit. Second, we sought to understand investor perceptions of alternative forms of XBRL assurance. To address these objectives, we undertake a range of enquiries. First, we complete a desk review of the current state of XBRL adoptions internationally and the implications of those adoptions for audit, assurance and Agreed-Upon Procedures engagements. This desk review includes an analysis of the elements of an assurance engagement from an XBRL perspective.

In the first study, we undertook several focus groups with participants in the financial information supply chain. We sought to understand the demand for and implications of providing alternative forms of assurance and audit on XBRL-formatted statements. Then in the second and third studies we undertook experiments with investors from the US and the Netherlands, respectively. We sought to understand whether investors respond to alternative forms of audit and assurance on XBRL-formatted financial statements. We investigated a number of additional environmental and policy questions with these investors. In the fourth study, we analyzed the conduct of assurance on XBRL-formatted financial statements in two case studies – providing assurance on the financial statements of a "Big Four" professional services firm in the Netherlands and the conduct of Agreed-Upon Procedures in the US setting. We interviewed practicing auditors that have undertaken these AUP engagements on XBRL-formatted financial statements. Undertaking the desk review and these four studies allow us to come to some key conclusions and provide the foundation for the recommendations for the IAASB.

It is apparent that the need for assurance or audit on XBRL will be driven, to some large extent, by the interaction of a number of implementation considerations. If regulators consider the implications of

implementation choices when designing the XBRL reporting scheme on the need for XBRL assurance and their willingness to mandate XBRL assurance to support user needs. These implementation choices include the extent of coverage of the XBRL tagging (e.g., only the "face" of the financial statements or including the notes and additional or other disclosures), the complexity of the foundation taxonomy and the ability by corporations to extend the taxonomy. The form of XBRL reporting is also important. For example, production of financial statements in an iXBRL format that integrates human-readable HTML and XBRL, or by a "viewer" provided by an intermediary may be perceived as different by investors and corporations than in those cases where XBRL reports are distinct from other forms. Where the production of XBRL reports comes in the financial reporting process is also important. Perceptions may differ if the production of XBRL precedes other forms of financial reporting as compared to following other forms of reporting. Another factor is the degree to which the production of XBRL is integrated into the financial statement close process. Similarly, when XBRL becomes directly integrated into the decision making models of information consumers, perceptions of investors, corporations and auditors may change requiring regulators to continuously consider the costs and benefits of mandatory assurance.

XBRL formatted financial statements as an integral component of the audit?

The method of XBRL report production impacts on questions such as whether the instance document can be seen as an integral part of the overall financial reporting process, or a distinct process. Figure 1 illustrates five perspectives on the production process. Case A shows the simplest method of production. Here a regulator or other intermediary provides a Web-based form as a front end to an XBRL generation tool. After production of the financial statements, the entity enters the financial statement data onto a Web form. The regulator or intermediary generates XBRL from this data input. In this case, control is shared between the entity and the regulator. The entity must line up their financial statements with the form and correctly enter the data. Much of the control rests with the regulator in appropriately designing the tool and ensuring that it appropriately matches the taxonomy to reported facts. Case B shows the bolt-on approach that is consistent with the SEC and other environments in which companies produce financial statements in the traditional manner and then subsequently apply XBRL tags. Separate XBRL and HTML, Acrobat (PDF) or printed reports are produced.

In cases C and D, the financial statements are produced in iXBRL format. Here the XBRL instance data is embedded into the HTML, human readable report. In case C, production of the XBRL data follows the generation of the financial statements. While the financial statements and XBRL are subject to different and sequential production processes, the result is completely integrated. In cases D and E, XBRL is integrated into the financial statement production process and arguably then part of the overall financial statement process. XBRL tagging is integrated in the financial reporting process and then reports are generated in the format desired by the information consumer (i.e., HTML, PDF, XBRL, etc.). In Case D, the integrated production process results in two versions – HTML/PDF and XBRL. In Case E, which we see as the future of XBRL, production is an iXBRL document, where the XBRL metadata is embedded within an HTML document.

Case A: Web-based Tool Separate distribution
- Accounting Data → Accounting Information System → Financial Statement Preparation → Financial Statements HTML/Print
- Financial Statements HTML/Print → Information Consumer
- Regulator/Intermediary: Web-based Input Tool → XBRL Statement → Information Consumer

Case B: Bolt On - Separate distribution
- Accounting Data → Accounting Information System → Financial Statement Preparation → Financial Statements HTML/Print → XBRL Preparation → XBRL Statement
- Financial Statements HTML/Print → Information Consumer
- XBRL Statement → Information Consumer

Case C: Bolt On – iXBRL Integrated distribution
- Accounting Data → Accounting Information System → Financial Statement Preparation → XBRL Preparation → iXBRL Statement → Information Consumer

Case D: Integrated XBRL Statement Generation – Separate distribution
- Accounting Data → Accounting Information System → XBRL enabled Financial Statement Preparation → XBRL / HTML/Print → Information Consumer

Case E: Integrated XBRL Statement Generation – iXBRL integrated distribution
- Accounting Data → Accounting Information System → XBRL enabled Financial Statement Preparation → iXBRL Financial Statements → Information Consumer

Figure 1: Alternative Perspectives of Production of XBRL Financial Statements

We show that, by taking auditing standards as they currently exist (which were not promulgated with XBRL in mind) there are a number of combinations of the factors that give rise to consideration of XBRL, either as a fundamental element of the financial statements or as "other information" that the auditor must consider, given their obligations under ISA 720: 'The Auditor's Responsibilities Relating to Other Information in Documents Containing Audited Financial Statements'. We see a number of possible settings that would trigger the inclusion of XBRL within the financial statement audit.

First trigger: The first possible trigger for application of the financial statement audit to XBRL-based financial statements is where the XBRL instance document essentially *is* the set of financial statements. One way in which this can happen is where the instance document is in iXBRL format, which might be the case in settings similar to that illustrated in Cases C and E of Figure 1. When the human readable (HTML) financial statements encapsulate metadata on the financial statement data points (XBRL), it is difficult to envision that an audit not be mandatory where other forms of financial statements (e.g., HTML, print) are derived *from* the XBRL-based financial statements. It is clear that inappropriate categorization of metadata may lead to a misstatement involving "… classifications, presentation, or disclosures that, in the auditor's judgment, are necessary for the financial statements to be presented fairly, in all material respects, or to give a true and fair view" (ISA 200 - IAASB 2010c).

The method of implementation may make the automatic inclusion of XBRL within the financial statement audit engagement more or less likely. For example, Case D shows that the production of XBRL is concomitant with other forms, similar to the current Swedish institutional setting, where other forms of disclosure are derived from the XBRL instance document. In similar cases it is difficult to see that the XBRL instance document is other than an integral part of the financial reporting framework as defined in ISA 200: 'Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing' (IAASB 2010c).

Second trigger: The second possible trigger is when the XBRL-based financial statements rise to the standard of being "other information" in terms of ISA 720. Whether an XBRL instance document constitutes "other information" currently is the subject of much debate. In those settings where the production of XBRL and HTML or print formatted financial statements is integrated and where the XBRL metadata covers most or all of the financial statements, it seems reasonable that the XBRL version could be considered a document that contains audited financial statements.

Third Trigger: The third possible trigger is when the XBRL becomes part of the production of the financial statements and therefore part of the internal control framework, which includes "the related business processes relevant to financial reporting, and communication" (IAASB 2010d, Para 18). Breakdown in internal controls, such as failure to appropriately manage the financial statement process, may fail to prevent misstatements and present a control risk. Cases D and E in Figure 1 would seem to be examples where XBRL is integrated into production of the financial statements and therefore part of the internal control framework. At this stage, this level of

integration is rare but expected to increasingly represent the financial statement production process in coming years due to the pursuit of efficiency in the information supply chain.

Recent institutional developments

In our analysis of international developments we find that there are essentially two forms of national standard setter activity. The first seeks to provide management and the Board with guidance on the quality of XBRL instance documents through Agreed-Upon Procedures that, by definition, do not provide formal assurance. This is the current approach in the USA, UK and Japan. A second national approach is to either currently require assurance on XBRL, as is now the case in India, or to require it in the future as seems to be the direction in countries such as Sweden and the Netherlands. These latter countries are in a transition phase, with XBRL taking on a central rather than supporting role in the financial reporting supply chain. These latter developments are quite new. In the US setting, however, we now have over two years of experience with AUP engagements under the AICPA's SOP 09-1. While these engagements do not technically provide assurance, our extensive interviews with auditors conducting SOP 09-1 engagements reveal that these engagements bear all the hallmarks of a typical audit or assurance engagement. The experience of the AICPA in establishing criteria and mapping typical procedures will be vital in the IAASB's consideration of XBRL. Given the complexity of the typical XBRL report to the SEC, particularly those made by filers in their second year of XBRL filings when the notes and additional disclosures are tagged, these engagements are significant by any standard – at least in their first iteration. It is clear that as XBRL becomes a standard part of the close process and the inadequacies revealed in the first engagement are fixed, subsequent engagements require significantly lower resources.

Alternative Audit and Assurance Reporting

In our focus groups, we obtained the views of a cross-section of producers, consumers and regulators on the need for and issues surrounding the production of XBRL assurance. A majority of the participants felt that XBRL assurance should be mandatory regardless of whether XBRL was provided as the sole method of financial reporting or as a supplement to current reporting models (i.e., PDF, HTML, etc.). Further, nearly all participants, including those that did not believe that XBRL assurance should be mandatory, felt it was imperative that the IAASB move forward with XBRL assurance guidance. It was suggested by multiple participants that the IAASB might move first toward guidance similar to the AICPA's Agreed-Upon Procedures guidance (SOP 09-1) while moving forward on a specific assurance standard. As the focus group analysis shows, separate assurance on XBRL is also a possibility conducted under ISAE 3000 'Assurance Engagements Other Than Audits or Reviews of Historical Financial Information' with reasonable or limited levels of assurance. We distinguish between seven forms of audit and assurance on XBRL-formatted financial statements. In Figure 2 we show those seven audit or assurance reports in the descending order we believe they provide assurance and the investors will rank them:

Figure 2: Expected Investor Perception of Level of Assurance of Alternative Reports

Level of Assurance	Audit or Assurance Report
1	Standard audit report with explicit inclusion of XBRL in an emphasis of matter paragraph. (Report 2 in Appendix 2)
2	Standard audit report "stapled" to a separate reasonable assurance report on XBRL. (Report 4 in Appendix 2)
3	Reasonable assurance report on XBRL, in isolation. (Report 5 in Appendix 2)
4	Standard audit report "stapled" to a separate limited assurance report on XBRL. (Report 6 in Appendix 2)
5=	Standard audit report, with no mention of XBRL. This is the base case. (Report 1 in Appendix 2)
5=	Limited assurance report on XBRL, in isolation. (Report 7 in Appendix 2)
7	Standard audit report with explicit exclusion of XBRL in an emphasis of matter paragraph. (Report 3 in Appendix 2)

In our second and third studies, we test the effect of alternative forms of assurance experimentally in two experiments conducted with investors in the USA and the Netherlands. We provide the participants with background on XBRL and the nature of assurance and, then, extracts of audit or assurance reports that contain the essence of the audit or assurance report. We ask the investors two questions. First, we ask them to rate their perceptions of the level of assurance provided by the report. Second, we ask them to assess the level of errors in the final (i.e., post-assurance) XBRL instance document. We summarize the results of the two experiments in Table 1. While there are differences between the US and the Netherlands, investors rate the traditional audit report stapled to an ISAE 3000 reasonable assurance report (Report 4), an ISAE 3000 reasonable assurance report that stands alone (Report 5) and traditional audit report stapled to an ISAE 3000 limited assurance report (Report 6) as providing the greatest degree of assurance. Interestingly, an audit report with an emphasis of matter paragraph that provides explicit recognition of XBRL (Report 2), a traditional audit report with no mention of XBRL (Report 1) and a standalone ISAE 3000 reasonable assurance report (Report 5) broadly comparable. Investors rate the level of assurance on XBRL provided by audit report with an emphasis of matter paragraph that explicitly exclude XBRL (Report 3) significantly lower than any other form of reporting. When asked to assess the extent of errors, we do not see the same level of distinction between the different forms of report, with the exception of the report that excludes XBRL (Report 3), which is significantly higher than most other forms of reports.

We also investigate what investors in the USA and Netherlands perceive as appropriate assurance on the XBRL reports under circumstances where XBRL is supplementary to traditional forms of distribution or in addition. The results are very similar. Investors rank assurance on XBRL either as part of the audit or in a separate report the highest. For example, 90% of Netherlands investors state that there should be assurance on XBRL. This result does not vary under either assumption about the nature of XBRL production. Essentially, they see that the form of assurance should be mandated as part of the audit.

Table 1: Levels of Assurance and Expected Error Rates by Country

Audit Report	Statistics	Levels of Assurance			Errors		
		NL	US	All	NL	US	All
Standard audit report, with no mention of XBRL. This is the base case. (Report 1)	N	38	95	133	41	111	152
	Mean	81.1	57.4	64.1	41.1	61.3	55.9
	Std Dev	18.7	29.7	29.0	22.4	21.1	23.2
Standard audit report with explicit inclusion of XBRL in an emphasis of matter paragraph. (Report 2)	N	41	92	133	43	114	157
	Mean	62.3	65.4	64.5	49.8	55.1	53.6
	Std Dev	34.2	26.4	29.0	28.1	22.8	24.4
Standard audit report with explicit exclusion of XBRL in an emphasis of matter paragraph. (Report 3)	N	39	88	127	42	108	150
	Mean	25.6	42.8	37.6	50.0	65.2	61.0
	Std Dev	35.3	33.3	34.7	24.3	17.5	20.7
Standard audit report "stapled" to a separate reasonable assurance report on XBRL. (Report 4)	N	59	117	176	62	135	197
	Mean	79.6	64.2	69.3	42.2	55.0	51.0
	Std Dev	17.1	26.2	24.6	22.8	23.2	23.8
Reasonable assurance report on XBRL, in isolation. (Report 5)	N	58	112	170	62	128	190
	Mean	80.0	65.8	70.7	42.2	55.6	51.2
	Std Dev	18.8	26.8	25.2	23.2	24.4	24.8
Standard audit report "stapled" to a separate limited assurance report on XBRL. (Report 6)	N	62	110	172	64	137	201
	Mean	69.3	67.4	68.1	43.1	60.2	54.7
	Std Dev	21.6	25.6	24.2	21.2	22.4	23.4
Limited assurance report on XBRL, in isolation. (Report 7)	N	63	75	138	64	90	154
	Mean	59.8	67.0	63.7	46.0	61.3	55.0
	Std Dev	24.1	26.0	25.3	22.7	20.8	22.8
All	N	360	689	1,049	378	823	1,201
	Mean	66.8	61.8	63.5	44.6	58.9	54.4
	Std Dev	29.2	28.7	29.0	23.4	22.2	23.5

In our fourth study, we investigate the practical applications of conducting assurance engagements on XBRL versions of financial statements. We undertake two case studies. In the first case study, we review the assurance and audit engagements conducted by Ernst & Young Accountants LLP (Netherlands) on the XBRL instance documents for Deloitte Holding B.V. The examination of the instance document containing financial information of Deloitte by Ernst & Young over three consecutive years was started to explore the adequacy of the audit procedures and the boundaries of the scope of an audit or assurance engagement. In the last year the Exposure Draft "Proposed Principles and Criteria for XBRL-formatted Information" of the AICPA's Assurance Service Executive Committee XBRL - Assurance Task Force (AICPA ASEC 2011) was used as a guiding principle to perform the examination and structure the assurance engagement report based on ISAE 3000. It was concluded that there is a need for new and different audit procedures, a very clear direction to the scope of the engagement and the elements of the object of the engagement being examined.

We canvassed the views of auditors that have or are preparing to conduct AUP engagements for clients reporting to the US SEC under the AICPA's SOP 09-1. The insights provided indicate that companies are willing to pay for voluntary assurance. Companies are concerned with producing high-quality XBRL reports even when afforded limited liability provisions. The decision to obtain

voluntary assurance was independent of the decision to insource or outsource the production of XBRL reports. The audit firms were comfortable with the guidance provided by SOP 09-1 as a starting point but several felt it could be improved. While the SOP might be a starting point for the development of an auditing standard, additional guidance would be necessary to address questions of presentation, materiality and communicating the audit opinion.

Recommendations

The results of our research have implications for a wide-range of constituents: regulators, standard setters, auditors, investors, corporations and future researchers. It is through the understanding of the inherent risks in the production of XBRL reports within a given reporting scheme that actions can be taken to reduce the risks to an acceptable level to facilitate transparency in financial reporting and allow information consumers (e.g., regulators and investors) to have full-faith in the XBRL instance document.

First, we see that there are sufficient adoptions of XBRL around the world and countries that are considering assurance thereon to re-invigorate the IAASB's consideration of XBRL attestation. The IAASB should communicate this without any restraint. We believe that this is the first step because it will provide the impetus for change for other constituents.

Second, much work is required to fully consider the implications of each of the aspects of an assurance engagement that we consider in Chapter 3. Key questions that must be answered include: What are the engagement criteria? What is materiality within the context of an XBRL instance document? How should assurance be conveyed (i.e., individual data level or the rendered financial statement taken as a whole)? Can there be different levels of assurance provided on a single instance document?

Third, although investors would like to have assurance on XBRL it will not be uni-dimensional. The way in which XBRL is implemented within a reporting scheme by regulators impacts the form and necessity of assurance on the instance document. Regulators should consider this at the onset of decision-making in the implementation of XBRL. In case C, D and E, (Figure 1) where the instance document is or might be seen as the statutory financial statements an auditor's opinion should be developed to express reasonable assurance (e.g., along the line the assurance is given in the Deloitte case study). In cases A and B, at this moment the most common used, the user of the instance document can decide on the level of assurance to be delivered. For example, in some settings it may well be that the user of the instance document concludes that an Agreed-Upon Procedures (AUP) may be the acceptable solution to ensuring the quality of the XBRL reports. In other settings an assurance engagement based on ISAE 3000 (with either reasonable or limited assurance) on different XBRL elements may well be appropriate. This would allow auditors to report similarly on quarterly or semi-annual XBRL-formatted disclosures. By considering the impact of implementation choices during the design of the XBRL implementation project regulators can appropriately consider the risks of each decision (e.g., open versus closed taxonomy) and its impact on the need for separate instance document assurance.

Fourth, considerable effort must be undertaken to provide clear and transparent directions to the auditor community to develop new audit and review procedures on which the auditor can form an appropriate opinion or conclusion.

Fifth, development of interactive, intelligent tools that make it possible for auditors to perform quality audits in line with the ISA 200.

Sixth, corporations must be aware of the risks for errors in the production of XBRL reports given their ultimate responsibility for the production of timely and accurate XBRL reports. Companies must develop internal controls surrounding the production of the instance document. Further, the company must remain abreast of changing standards regarding XBRL assurance.

Seventh, as with other forms of assurance it is necessary to educate the investing public about the level of assurance that is being provided on the XBRL instance document regardless of whether the level of assurance is none, negative or positive.

Eighth, the IAASB should look into the relation between continuous monitoring, continuous assurance, just in time assurance and assurance by default, to be prepared for the developments that takes place in the audit firm's client's environments.

XBRL AND THE FINANCIAL STATEMENT AUDIT

1 INTRODUCTION

Since the advent of the Internet, the rate at which business information is exchanged has grown dramatically. With the trend towards more stringent and globalized reporting requirements, businesses are likely to see this trend continue. In traditional information environments, business data is transmitted in formats that do not come associated with metadata that allow information consumers to interpret the meaning of information components. Typically information in HTML, PDF or printed format requires rekeying or other time-consuming manual processes to acquire and then apply appropriate metadata. Designed to overcome these considerable constraints to efficient and effective information transfers, the XBRL (eXtensible Business Reporting Language), a version of the markup language XML, is a global standard for the exchange of business information. XBRL offers the ability to exchange interactive and computer-readable information. Using XBRL, the speed and efficiency of communicating information is enhanced through the ability for electronic systems to read and interact with the information. Because XBRL is a common format, reports prepared in this standard can be transmitted and consumed by all stages of the information chain while retaining data integrity. XBRL facilitates automated consumption of information without ambiguity in the underlying meaning of that information.

Since its inception more than a decade ago, a core application of XBRL has been to facilitate the flow of tagged corporate information, such as financial statements and annual reports, to go from companies and other entities directly to the databases, web sites and computers of regulators, stakeholders and information consumers. For example, the 2009 mandate by the Securities and Exchange Commission (SEC) in the USA required corporations to submit financial statements in XBRL format to the Commission's EDGAR information repository (SEC 2009). In Japan, the EDINET taxonomy impounds reporting requirements for Japanese GAAP. Internationally, the IFRS Foundation has created an International Financial Reporting Standards taxonomy. We see audited financial statements already being submitted to regulators either currently only in the XBRL format (e.g., Singapore and Sweden) or planned to be only in that format in the near future (e.g., India, Netherlands, Chile, and South Africa).

As a result of the role that XBRL increasingly plays in the financial reporting supply chain, it has come on the radar of auditors and auditing standards setters, particularly the IAASB that has an active XBRL project. There is a great deal of uncertainty with many aspects of the impact of XBRL on assurance and audit services. XBRL has the potential to affect both the conduct of the financial statement audit and the way that information is consumed within a financial reporting value chain. In part, this interest in XBRL is due to the close association of XBRL reports to financial statements that are the subject of the traditional financial statement audit. Second, the potential for errors in XBRL is significant. The move to reporting in XBRL is not as simple as changing the "save as" file type to XBRL. The use of XBRL often requires considerable judgment in the selection of taxonomy tags, domain architecture in the case of taxonomies that employ this methodology and other appropriate metadata. As we have seen, for example, with the

adoption of XBRL by the United States Securities and Exchange Commission (SEC) the application of XBRL is a response to the complexity of the underlying information flow, requires considerable judgment and gives rise to potential errors. Common errors observed in the first two years include calculation errors, incorrect application of decimal attributes, incorrect tag selection, and unnecessary extensions. Filers were provided a two year grace period with limited liability for XBRL filing errors. In 2011 limited liability ended for large accelerated filers. While the SEC does not require filers to obtain assurance on their XBRL files more than a quarter of the filers have chosen to engage an auditor to provide XBRL related services as either a consulting or Agreed-Upon Procedures engagement. Internationally, we see movements in countries such as India, the Netherlands and South Africa to both require filings of financial statements in XBRL and require an audit on the XBRL formatted financial statements.

By its nature assurance on XBRL is different from assurance on the underlying financial data. XBRL tags individual data points; therefore, the concept of assurance on the financial statement taken as a whole is arguably less relevant. Key factors in XBRL include the consistency, completeness, and accuracy of tagging. There is not a current auditing standard for the conduct of an XBRL assurance engagement. However, within the US environment the AICPA issued SOP 09-1 to provide specific guidance for the provision of an Agreed-Upon Procedures engagement on XBRL files (ASB 2009). The AICPA is currently revising a principles and criteria document prior to revising and re-issuing SOP 09-1.

This study has been supported by the Association of Chartered Certified Accountants (ACCA) and the International Association for Accounting Education and Research (IAAER) in support of the work of the International Auditing and Assurance Standards Board (IAASB). The initial reaction of the IAASB and other auditing standards setters has been to conclude that XBRL formatted financial statements do not fall within the scope of the traditional financial statement audit. The SEC and the PCAOB in the US setting have come to similar conclusions while, at least in the context of the SEC, recognizing that this may well change as XBRL becomes more integrated into the full extent of the financial reporting supply chain – including production by the corporation and use by information consumers. The increasing pace of XBRL adoption has led, understandably, to XBRL being placed on the long term agenda of the IAASB. The question that the IAASB must answer is what, if anything, the IAASB s role should be as far as XBRL-enabled financial reporting supply chains that incorporate financial statements that have been traditionally audited? Or, for that matter, for financial information flows that have not been subject to assurance?

To provide some input to this question, we study the implications of XBRL for the financial statement audit. The primary objectives of the study are twofold. First, we want to understand what the implications of XBRL for the financial statement audit are at a policy and, to a lesser extent, at a technical level. Second, we seek to understand investor perceptions of alternative solutions to providing assurance on XBRL.

We address the following research questions:

1. What are the implications of XBRL for the conduct of the financial statement audit? Under what circumstances would an audit on XBRL-formatted financial statements be automatically required? How would the audit of XBRL-formatted financial statements be conducted? What is the current state of audit and assurance on XBRL around the world?

2. Do investors recognize the levels of assurance provided under alternative forms of audit and assurance on XBRL-formatted financial statements in ways that correspond to the fundamental tenets of audit theory and practice? Does the perception of the impact of alternative forms of audit and assurance also relate to their perception of the extent of residual errors in the XBRL instance documents? In other words, do investors respond to the subtle ways in which audit standard setters define alternative forms and levels of assurance?

3. How do the perceptions of investors on the level of assurance and residual errors in XBRL instance documents change under alternative assumptions on the level of risk in the generation of XBRL-formatted financial statements? Or, their beliefs about whether XBRL is currently included?

4. What are the views of investors on how assurance or an audit on XBRL should be conducted? Do investors recognize the effort involved in the conduct of the assurance engagement?

To confront these questions we conduct the following enquiries and three studies:

1. Undertake a desk study of international XBRL implementations that involved financial statements and assurance implications.

2. Analyze the conduct of assurance on XBRL-formatted financial statements in two case studies – conduct of Agreed-Upon Procedures in the US setting and assurance on the financial statements of a "Big Four" professional services firm in the Netherlands.

3. Undertook focus groups with participants in the financial information supply chain to understand the demand for and implications of providing assurance on XBRL – either as part of the financial statement.

4. Developed and applied two experiments with investors in the US and the Netherlands.

5. Interviewed practicing auditors that have undertaken or are planning to undertake engagements on XBRL-formatted financial statements and developed two case studies on XBRL engagements.

In the remainder of this report, we provide an overview of XBRL and analyze international applications of XBRL that incorporate audited financial statements in Chapter 2. Chapter 3 reviews the implications of XBRL for the conduct of the financial statement audit. In the next chapter, we traverse international developments that either currently or in the near future have audit or assurance engagements. Chapter 5 presents the results of focus groups conducted internationally. Chapters 6 and 7 report the results of experiments conducted with investors in the US and the Netherlands, respectively. In Chapter 8, we provide two case studies – the first one based on the conduct of Agreed-Upon Procedures in relation to XBRL filings with the SEC and the second which analyzes the experience of Ernst and Young in the conduct of assurance on XBRL reports produced by Deloitte Netherlands. In the final chapter, we set out conclusions, recommendations and suggested future research.

2 XBRL TECHNOLOGIES IN THEORY AND PRACTICE

Introduction

In this Chapter, we introduce the nature of XBRL and associated technologies. Some of the many international adoptions are described, concentrating on those that either represent financial statements or incorporate significant elements of financial statements. We draw from this discussion of XBRL technologies and adoptions to evaluate levels of complexity in reporting environments and, by extension, the potential for errors in XBRL reports. Recent professional, regulatory and academic evidence on errors in XBRL reports are canvassed.

What is XBRL?

The key way XBRL provides data interactivity is through the use of tags. When data is tagged it becomes a computer readable element that holds both the tagged information and relevant metadata (data about the data). These elements are described in what is called a *taxonomy*, which is an electronic dictionary that provides the structure for creating a document in XBRL. This XBRL document, created in compliance with the XBRL specification, is called an *instance document*.

There are four key elements in XBRL, as displayed in Figure 3. First, a taxonomy provides a common dictionary of concepts (Debreceny et al. 2009). The taxonomy may be considered the most important practical component for the use of XBRL. A taxonomy has two parts, an XML schema and linkbases. The schema is a document that defines elements and their metadata, such as if they are debit or credit attributes in a financial reporting environment. Linkbases describe relationships between the elements, link to external resources (e.g., authoritative literature), and effectively give the taxonomy form.

With the taxonomy, a user can tag data and create a business report in XBRL. The taxonomy defines the terms (e.g., "Cash and Cash Equivalents," "Total Assets") and the relationship of one term to another (e.g., "Cash is an Asset" and "Cash is a component of Current Assets"). The taxonomy can also provide background information on the meaning of the term and the authority for the taxonomy element. It provides a multitude of ways to label the meaning of the element. For example, in a financial reporting environment, a taxonomy includes information on the meaning of the concept, its data type (e.g., monetary, text, or share), and its class (e.g., assets, liabilities, revenue, or accounting policies disclosure).

Second, an entity reports business facts in an instance document. Tags on individual facts in the instance document tie back to the relevant taxonomy. Third, the instance document and taxonomy operates within the context of the XBRL Specification. Fourth, XBRL standards draw on its foundational XML standards.
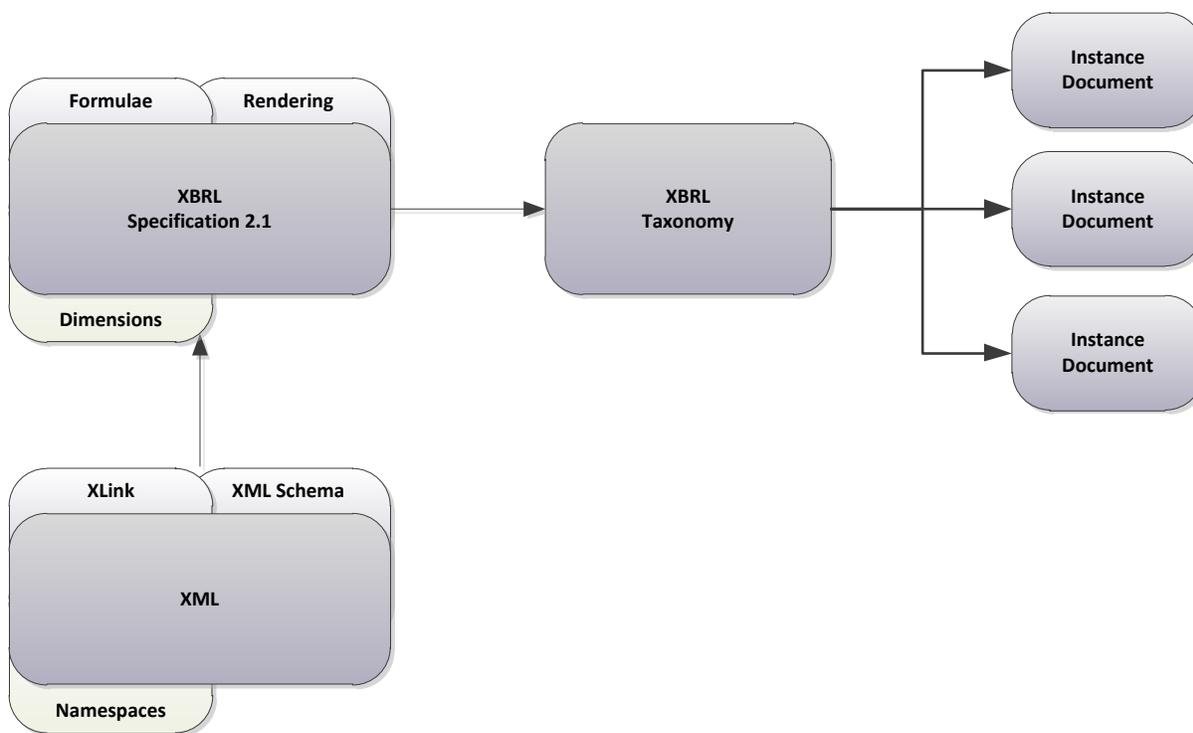
Figure 3: XBRL Technologies[1]

Figure 3 shows additional components that add functionality to the XBRL specification. The XBRL Dimensions 1.0 recommendation (XBRL International 2006) provides a standard method for representing information in a data cube. This functionality is widely adopted in a range of implementations around the world. The inline XBRL specification (iXBRL) (XBRL International 2010) integrates XBRL tagging into human-readable formatting of the information in HTML format. iXBRL is beginning to receive some traction internationally, with an important implementation by the tax authorities in the United Kingdom (Companies House and HMRC 2009).

Further, the XBRL Global Ledger (XBRL GL) suite of taxonomies provides functionality at closer to a transactional level (Garbellotto 2008, 2009c, 2010; ISACA/IFAC 2011). XBRL GL can be employed to communicate a range of business data including general ledger, management data, management accounting and management reporting information in a multinational, multilingual fashion.

Some of the features of XBRL promulgated by the XBRL community include:

- Association of data in business report with relevant metadata.

- Ability to automatically populate databases without re-entry of information.

- Ability to bind multiple taxonomies into a single reporting environment.

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[1]   From Debreceny and Farewell (2010).

- Ability to communicate complex data cubes of information.

- Ability to extend base taxonomies at the entity or reporting level.

- Coverage of both traditional business reporting and transaction.

- Wide range of data types.

- Automated validation and quality assurance over data. (Debreceny 2009; Locke et al. 2010)

Review of World-Wide XBRL implementations.

XBRL has been adopted in a wide variety of settings, both regulatory and commercial in many countries world-wide (Bonson et al. 2009; Kernan 2008; Locke et al. 2010; XBRL International 2011). It is often used by securities regulators (SEC, India), companies registrars (UK, Belgium, Sweden, Italy, Singapore), tax authorities (UK, Netherlands, Japan), stock exchanges South Africa (JSE), Japan (TSE (EDINET)), China (SSE)), banking regulators (Germany, Spain, Poland, France, Japan, US etc.) and simultaneous transmission by Small and Medium Enterprises (SMEs) to multiple regulators and information intermediaries (Netherlands, Australia (SBR)). While this list is not exhaustive, it demonstrates the breadth of adoption across social, judicial, and economic environments. These adoptions of XBRL involve a variety of information transferred from entity to entity and from entity to regulator.

The interaction between XBRL international and national taxonomies and national securities and corporate regulation is an important consideration. The focus of a given XBRL implementation may radically alter audit considerations. For example, in the US, the focus is on large, listed corporations all of which are audited. In the Netherlands the focus (Standard Business Reporting (SBR)) is on small and medium-sized firms only some of which may be audited. Some regimes (e.g., US SEC reporting) encourage entity-level extensions to the base taxonomy. Others discourage or disallow such extensions. Both present significant challenges to the auditor. What are the influences of these factors on the audit? How does ownership of the taxonomies impact the audit? Who maintains the taxonomy to adjust to new reporting requirements? What are the impacts of cultural factors and historical influences?

There are a number of different perspectives that can be made on the complexity of XBRL reporting environments.

Open versus closed taxonomies and private versus public information flows: The first perspective, described by Debreceny and Farewell (2010), the interaction between the level of openness in taxonomy design and the availability of information flowing from the XBRL reporting solution. Debreceny and Farewell note that "Closed" taxonomies are "those that meet the reporting requirements of a particular information consumer. Typically, closed taxonomies are those that meet the well-defined needs of a single information recipient" (383) Debreceny and Farewell see instance documents based on a closed taxonomies as "the XBRL equivalent of a pre-existing paper form, electronic document or spreadsheet" (383). They note that there is "typically little by way of public involvement in taxonomy design or due process review after initial development. Indeed, the taxonomy may not even be in the public domain. Closed taxonomies

are usually developed for a known set of information providers and for data points that are well understood and do not require extensions" (383) Responsibility for a closed taxonomy clearly rests with the owner. Conversely, open taxonomies "are usually developed by a single organization, such as XBRL US or the International Accounting Standards Committee Foundation (IASCF), they employ a strategy that seeks broad input into taxonomy design and content development and quality assurance. Normally, developers of open taxonomies expect and indeed may encourage extensions by individual information providers" (383). Responsibility for open taxonomies rests with the developer and the entities that extend the taxonomy. Extensions might have a negative effect on the taxonomy as designed by the developer.

The second dimension identified by Debreceny and Farewell relates to the flow of information into the public domain, from closed to open. They note that at the closed end of the continuum, "a very limited number of information consumers keep the information confidential" (383). At the open information distribution end of the continuum, they see two models. One model is when XBRL reports are placed on the Web on, for example, a corporate Website and, more frequently where a regulator or other intermediary provides a warehousing and often quality assurance function. Figure 4 provides examples of international implementations, shown on each of the control and information availability dimensions.

Financial Statement Coverage versus Taxonomy Coverage: The second set of perspectives is on the extent of financial statement inclusion in instance documents and the source of taxonomies. Unsurprisingly, given the focus of the XBRL community on reporting financial statements, many adoptions internationally incorporate all or some of the financial statements. A limited number of applications involve complete financial statements that include note disclosures (US (SEC), Japan (EDINET), Sweden). Others report core financial statements without note disclosures (Singapore). Some areas of adoption, particularly in the banking sector include relevant components of financial statements (reports to European banking regulators).
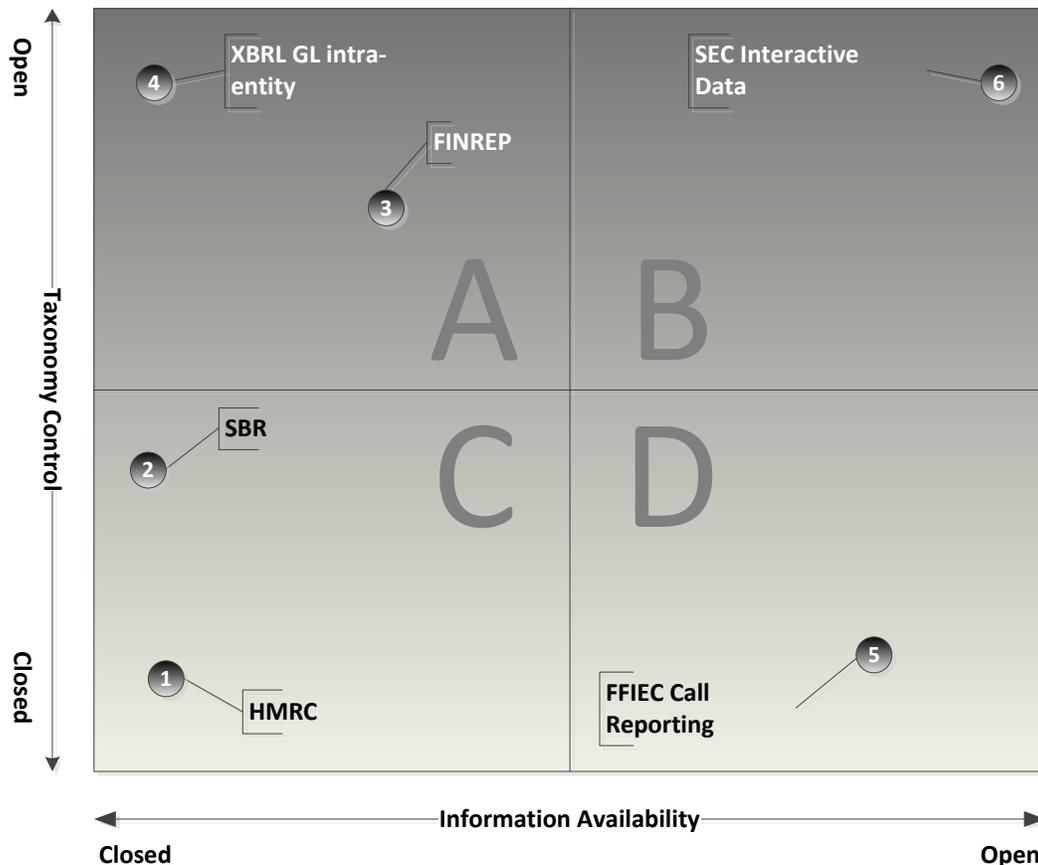
Figure 4: Taxonomy Preparation versus Information Openness[2]

International implementations use a variety of taxonomies. XBRL taxonomies can be built internationally (e.g., IASB) or nationally (e.g., USA, Sweden, Netherlands and Singapore) or a combination thereof. The XBRL technology supports integration of multiple taxonomies in a single reporting environment (Locke et al. 2010). It is feasible, then, to layer national or sectorial extension taxonomies onto international taxonomies. This integrative approach is taken, for example, in prudential supervision reporting by financial institutions to banking regulators in Europe, under the guidance of the FINREP project as part of the European Banking Authority's (EBA) Financial Reporting Framework (Eurofiling 2011). This project integrates significant elements of financial reporting based on the IFRS taxonomy (Statement of financial position, Income statement, Statement of changes in equity etc.) with additional sectorial specific reporting. A similar approach is taken in the Johannesburg Stock Exchange implementation, where the IFRS taxonomy is extended to include the reporting requirements of South African GAAP and the various listing requirements (JSE 2010). Figure 5 shows adoptions across these two perspectives. Clearly filings made by the JSE in Cell B, will be significantly more complex and subject to error than those in Singapore, in Cell C.

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[2]   Adapted from Debreceny and Farewell (2010)
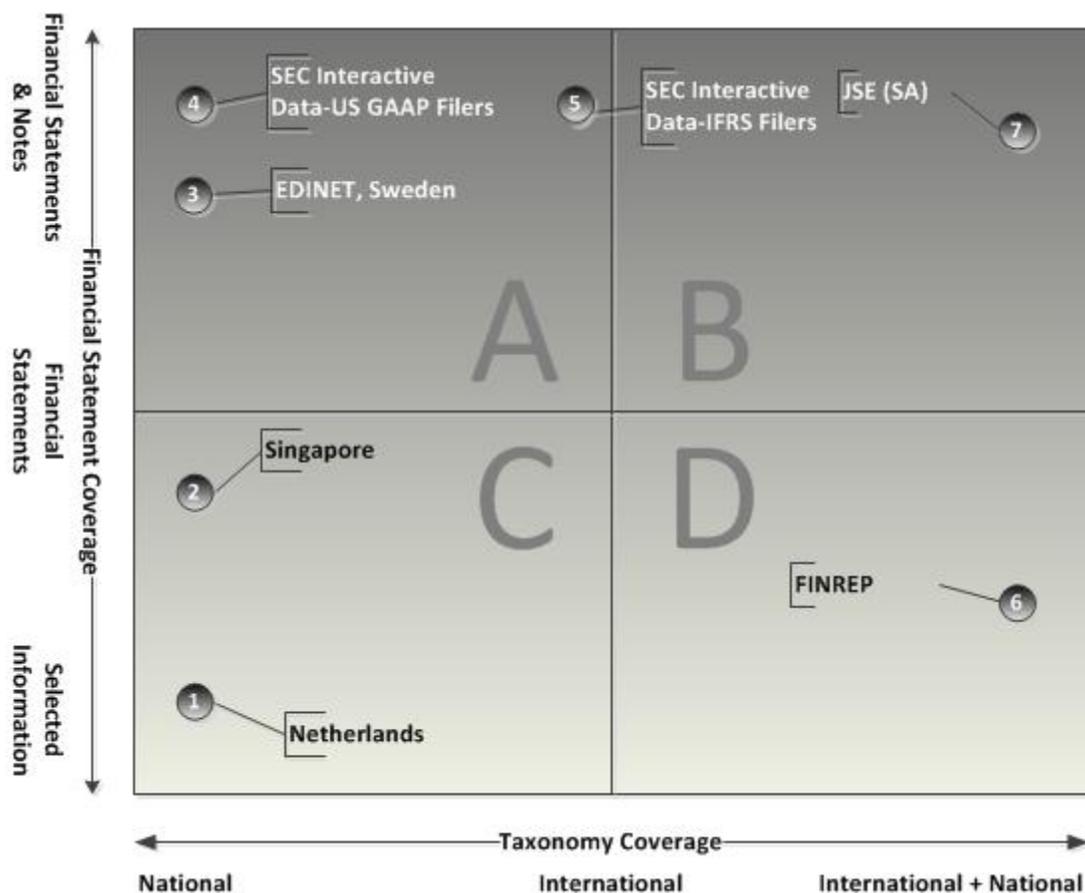
Figure 5: Financial Statement Coverage versus Taxonomy Coverage

Extensions: The next consideration is whether and to what degree extensions are allowed in the financial statement production. The fundamental design in the XBRL technology suite is to allow reporting parties to extend base taxonomies when the entity requires to make disclosures that are not provided in the base taxonomy. When regulators or other parties involved in information supply chains allow taxonomy extensions, a number of potential issues and problems arise (Debreceny et al. 2009; Debreceny et al. 2011 ; Plumlee and Plumlee 2008). For example, in implementing their interactive data mandate, the SEC requires filers to completely align their XBRL report to the traditional HTML report (SEC 2009, 2010b). As a result companies must create extension elements when there are no elements in the U.S. GAAP taxonomy to support the concepts contained in the financial statements and notes. The SEC provides a decision hierarchy to guide companies as they go about deciding on whether extensions are required. While the decision hierarchy should, in theory, result in correct extension choices there is the potential for inappropriate extensions.

In other reporting environments (e.g., Israel, India, Netherlands) extensions are not allowed. As a result, there may be an inconsistency between the financial statements, as prepared by the corporation and the XBRL instance document that aligns with the fixed taxonomy. In the Netherlands extensions are not allowed because procedures are not in place that will guarantee that extensions will be in compliance with

the architecture and legal requirements. As soon as all those requirements are in place it is the intention to change the Dutch Taxonomy from a closed to an open taxonomy.

Method of Production: The next important issue is to consider the production process for generation of XBRL instance documents that represent financial statements. The method of production impacts on questions such as whether the instance document can be seen as an integral part of the overall financial reporting process, or a distinct process. Figure 6 illustrates five perspectives on the production process. Case A shows the simplest method of production. Here a regulator or other intermediary provides a Web-based form as a front-end to an XBRL generation tool. After production of the financial statements, the entity enters the financial statement data onto a Web form. The regulator or intermediary generates XBRL from this data input. In this case, control is shared between the entity and the regulator. The entity must line up their financial statements with the form and correctly enter the data. Much of the control rests with the regulator in appropriately designing the tool and ensuring that it appropriately matches the taxonomy to reported facts. Case B shows the bolt-on approach that is consistent with the SEC and other environments in which companies produce financial statements in the traditional manner and then subsequently apply XBRL tags (Garbellotto 2009a). Separate XBRL and HTML, Acrobat (PDF) or printed reports are produced. As Trites (2011, 11) notes, this method of generating XBRL is a relatively temporary and stop-gap measure that will be replaced by more integrated methods of producing XBRL content.

In cases C and D, the financial statements are produced in iXBRL format. Here the XBRL instance data is embedded into the HTML, human readable report. In case C, production of the XBRL data follows the generation of the financial statements. While the financial statements and XBRL are subject to different and sequential production processes, the result is completely integrated. The perception is likely to be that information that can be read in the HTML will be semantically equivalent to the underlying XBRL metadata. How can the information consumer be sure that the content in the HTML and XBRL formats documents are semantically identical?

In cases D and E, XBRL is integrated into the financial statement production process and arguably then part of the overall financial statement process (Garbellotto 2009b, 2009c). XBRL tagging is integrated in the financial reporting process and then reports are generated in the format desired by the information consumer (i.e., HTML, PDF, XBRL, etc.). It may be that in this setting, corporations may employ XBRL GL in the consolidation and instance document process (Garbellotto 2009a, 2009b, 2009c). In Case D, the integrated production process results in two versions – HTML/PDF and XBRL. Case E, represents what some see as the XBRL of the future -- Inline XBRL (iXBRL), where the XBRL metadata is embedded within an HTML document. With iXBRL users can read the financial content and simultaneously the computer can read the XBRL through the underlying tags. As we move from case to case, it is likely that the expectation gap between information consumer and assurance services provider will increase.
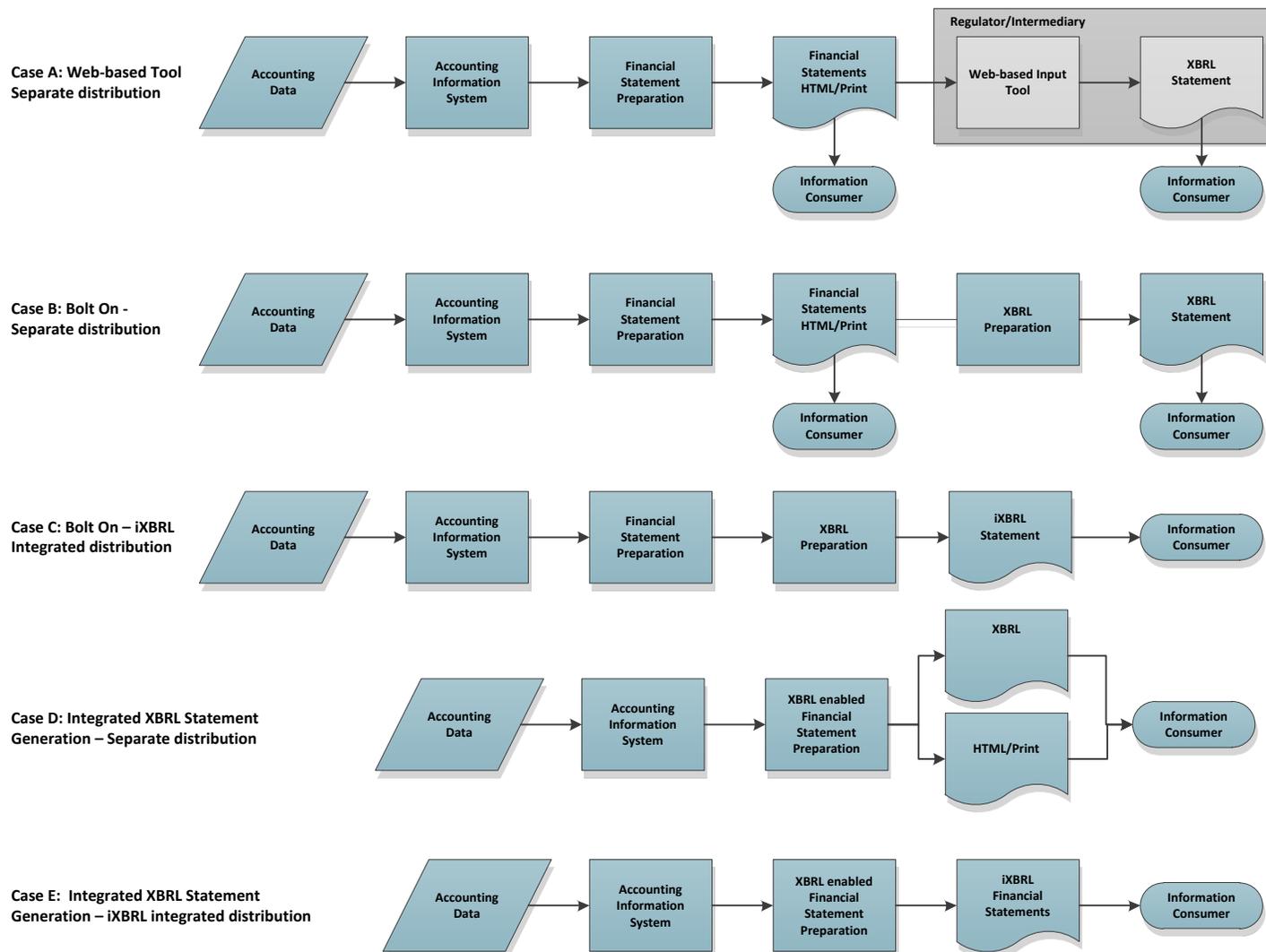
Figure 6: Alternative Perspectives of Production of XBRL Financial Statements

A complicating factor in cases A, B and D is that there is often a standard rendering mechanism for humans to reading the XBRL version of the financial statements. In some cases, such as the SEC setting in the US, the results are often inconsistent and may markedly differ from the HTML or PDF versions. In other countries, such as the Netherlands or Sweden, the elements that should be in a financial statement are defined in law or regulation. In this case a regulator or intermediary can build an authoritative viewer that makes it possible to 'read' the instance document with as much authority as the HTML or PDF version.

The Nature of Possible Errors in Instance Documents

In this section we turn to recent evidence on the nature of errors in the production of instance documents that represent financial statements. We draw upon recent professional advice, guidance from regulators and research. The categorization of errors is not meant to be exhaustive but merely indicative of the types of issues that may arise in a financial reporting environment. Given that reporting to the US Securities and Exchange Commission under the US GAAP Financial Reporting Taxonomy (hereafter, UGT) is arguably the most complex XBRL-based reporting environment and where all filings are readily available in the public domain, we primarily draw upon evidence from the SEC so-called "interactive data" XBRL mandate. The SEC provides guidance to filers on errors in filings (SEC 2010a, 2011a, 2011b) as does XBRL US (XBRL US 2010). Major classes of errors arise from issues with calculations of sets of numeric facts, extensions, use of unit attributes and integration of domain structures, particularly in note disclosures.

The first class of potential errors is calculation errors. Debreceny et al. (2010) researched the extent of calculation errors in the first wave of filings to the SEC. XBRL makes extensive use of the XLink specification, which is a technology used to create hyperlinks within XBRL documents. It, along with XPointer, are the two key technologies used by the taxonomy to define relationships. XLink makes use of arcs and roles to define these relationships in conjunction with the five linkbases. Of the linkbases, the calculation linkbase is a component of the taxonomy which employs validation rules to improve data accuracy. It functions using a summation relationship by giving a mathematical weight, generally of (+1) or (-1), to child elements in a parent-child hierarchy which in turn add up to the parent element. For instance, *Liabilities, Current*, and *Liabilities, Non-Current*, would both be given a weight of (+1), with which they would correctly sum to *Liabilities, Total*. This linkbase can therefore identify errors through the mathematical validation of defined hierarchies.

Debreceny et al. (2010) consider four classes of errors that can be found with the calculation linkbase. The first and second classes of errors are the erroneous exclusion or inclusion of a value from a calculation hierarchy. These are closely related, because in most cases if a value is erroneously excluded from a hierarchy it will then be included in another incorrect hierarchy, resulting in two separate errors. This is illustrated in Figure 7. "Panel A" represents the incorrect tagging, and shows two errors with the position of the elements *Net earnings attributable to non-*

controlling interest and *Provision for income taxes*. These elements have been reversed, creating a calculation error of $51m. "Panel B" shows the correct format.

Figure 7: Example of Incorrect Tagging of Calculation Hierarchy

Panel A - As tagged by filer

Label	Amount $m	Calculation Weight
Earnings before income taxes	$232	+1
Net earnings attributable to non-controlling interest	$2	-1
Net earnings attributable to controlling interest, before tax	$179	+1
Calculation error	*-$51*	
Provision for income taxes	$53	-1
Net earnings after tax	$177	
Calculation error	*$51*	

Panel B - Correct tagging

Label	Amount $m	Calculation Weight
Earnings before income taxes	$232	+1
Provision for income taxes	$53	-1
Net earnings to controlling interest, before tax	$179	+1
Net earnings attributable to non-controlling interest	$2	-1
Net earnings after tax	$177	

The third error class is the existence of an incorrect value within the tags. A possible cause of this would be a keying mistake during data tagging.

The fourth class of error is the incorrect classification of an item's debit or credit status. In XBRL, elements can be defined as either debit or credit using the *balance* attribute within the tags. This affects the element's computation and weighting in the taxonomy. The way an error typically arises is by a preparer improperly entering a negative or positive value into an element which then causes it to act as if it had the opposite balance. This form of error has been noted in many cases by the SEC (SEC 2010a, 2011b), and can be attributed to filers following the paper or HTML version of their financial statements without taking into account the requirements of the calculation linkbase. As the SEC notes "One of the fundamental requirements of the interactive data [XBRL] rules is to have the same data reflected in both the interactive data file and the traditional format financial statement filing. Data entered into the interactive data file with the incorrect positive/negative value gives the wrong value to users of the tagged data ... We noted filers using negative values to render brackets around numbers similar to their traditional format financial statement filing. Amounts must not be entered with negative values in an interactive filing for the sole purpose of forcing the amounts to render with brackets" (SEC 2010a).

An example is shown in Panel A of Figure 8. In this instance the filer has given *Treasury Stock* a negative value, assumingly reflecting a financial statement where treasury stock is subtracted in computing stockholder's equity. However, in the taxonomy *Treasury Stock* has a debit balance and

29

weight of (-1), and by entering a negative number the filer has effectively caused it to be computed as a credit. Panel B shows the correct tagging. It can be noted that the *Other Comprehensive Loss* line item correctly uses a negative value. The concept *Other Comprehensive Income/Loss* has a weight of (+1), which if a positive value is entered relates to *Other Comprehensive Income.* The filer must therefore enter a negative value to represent an *Other Comprehensive Loss*.

Figure 8: Debit/Credit Reversal[3]

Panel A - As tagged by filer		
Label	Amount $m	Calculation Weight
Common Stock	$808	+1
Additional Paid-in-Capital	$1,215	+1
Retained Earnings	$4,919	+1
Accumulated Other Comprehensive Loss	($984)	+1
Treasury Stock	($1,005)	-1
Stockholders' Equity	$4,953	
Stockholders' Equity as calculated by the calculation linkbase	$6,963	
Calculation error	*$2,010*	
Panel B - Correct tagging		
Label	Amount	Calculation Weight
Common Stock	$808	+1
Additional Paid-in-Capital	$1,215	+1
Retained Earnings	$4,919	+1
Accumulated Other Comprehensive Loss	($984)	+1
Treasury Stock[§]	$1,005	-1
Stockholders' Equity	$4,953	

The Debreceny et al. (2010) study assessed the calculation errors in the 393 filings made in the first three months of the program (June to August 2009). Custom-made software was used to compute the sums of the calculation relationships of the core financial statements in the filings, and identify any differences between the defined value of the "parent" concept and the processed sum of the "child" elements. The program provided a listing of the concepts involved and their respective values for each error. The study found that there were calculation errors in one quarter of the filings (103 of 393 filings). On average, there were 6.9 errors per filing, with a maximum of 32 errors in one filing. There were a total of 712 errors in the filings. Table 2 shows the extent of errors by class. The table shows that most of the calculation errors were caused by misuse of negative values.

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[3]   From Debreceny et al. (2010)

Table 2: Calculation Errors in US GAAP Filings.[4]

Calculation Error Classes

Error Type	Count	%
Missing Fact Value in calculation relationship	108	15%
Extraneous concepts in calculation relationship	81	11%
Wrong Fact value	93	13%
Debit/Credit Reversal (Misuse of Negative)	308	43%
Rounding Error	51	7%
Error in HTML 10-Q	21	3%
Other	50	8%
Total	712	100%

Debit/Credit Reversal Calculation Errors by Statement

Statement	Count	%
Cash Flow Statement	127	41%
Income Statement	144	47%
Statement of Financial Position	37	12%
Total	308	100%

The second major class of potential errors relates to corporate use of extensions. One of XBRL's most powerful traits is its extensibility. Depending on the nature of the XBRL implementation, users are able to create new elements for use with the base taxonomy, as well as modify existing relationships between elements. In diverse financial reporting environment, this is an important and often essential ability. However, the creators of a taxonomy may choose to limit and control the use of extensions. As explained previously, the two primary forms this control takes leads to "open" and "closed" taxonomies. In a "closed" taxonomy, the user is not allowed to extend the base taxonomy. An example of this is the taxonomy used for the US Federal Financial Institutions Examination Council's Central Data Repository project and the Dutch Taxonomy. This situation, characterized by defined regulatory reporting, benefits from the control gained by prohibiting extensions. An "open" taxonomy is one which allows extensions to meet the needs of the users. The UGT, part of the SEC's interactive data program, uses an open format that lets filers create extensions for concepts that cannot be found in the base taxonomy. However, when creating an extension the filer must follow a number of rules and best practices to ensure the result is appropriate. The foremost of these is careful analysis of the UGT to ensure that there is not already an element for the concept in question. The extension should also be given the correct data type (monetary, numeric, etc.) and period (duration or instant).

Debreceny et al. (2011) studied the nature of extensions in the first year of SEC filings. They note that extensions may be divided into four classes. The first class is unnecessary extensions, and are erroneous extensions for concepts that already exist in the taxonomy. Due to the complexity of large taxonomies such as that of US GAAP, there are many instances where a filer might extend

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[4]   Source: Debreceny et al. (2010)

the taxonomy in error. The SEC staff notes this problem: "Filers should concentrate more effort in the area of finding existing USGAAP elements so as to avoid creating custom elements. This area is critical to the usability of the data and filers should concentrate more effort on element selection (mapping) than any other part of the submission. On an overall basis, we observed that the extension rate is higher than appropriate particularly for the notes to the financial statements" (SEC 2010a)

The second class, filer specific extensions, is those that are made by the filer which correctly describe unique concepts not found in the base taxonomy. The third and fourth classes are aggregation and disaggregation extensions. An aggregation is created by combining two or more base taxonomy elements into a single new extension. A disaggregation occurs when a filer takes part of a base taxonomy element and creates an extension for only part of the accounting concept contained in the base taxonomy element. For example, if the base taxonomy contained 'prepaid expenses and other current assets' and the filer needed only 'prepaid expenses' they would create the extension element 'prepaid expenses' which is a disaggregation of the base taxonomy element. Debreceny et al. (2011) took a subset of 67 filers from the first year of filings to the SEC (20%). A total of 829 extensions that included financial reporting facts were made by these filers on the face of the financial statements. Debreceny et al. studied each of these extensions. Table 3 shows that 40% of the extensions were unnecessary as there were existing elements in the UGT. Another 17% merely aggregated existing elements.

Table 3: Classes of Extensions[5]

Class of Extensions	N	%
Unnecessary-existing	334	40%
Necessary-company specific	249	30%
Necessary-aggregate	142	17%
Necessary-disaggregate	35	4%
Taxonomy change	41	5%
Extension created and not used	15	2%
Other	13	2%
Total	829	100%

Conclusion

In this Chapter we describe the nature of XBRL, canvas current and future methods of producing XBRL instance documents and analyze the range of judgments required in the production of instance documents and possible errors. We show that there is an interaction between a range of factors including the extent of the taxonomy, ability to extend the taxonomy, the method of production of the XBRL instance document in the entity and the final method of distributing the XBRL instance document. The nature of errors in instance documents is canvassed, with reference

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[5]   Source: Debreceny et al. (2011)

to recent professional guidance and academic research. These include calculation errors and, more importantly, errors in extensions made to foundation taxonomies. We show that these and other possible errors would cause information consumers to come to incorrect judgments about entity performance.

We present five cases that illustrate combinations of production and distribution methods. These cases provide pointers to when XBRL comes within the scope of the financial statement audit or other potential assurance. These cases provide a foundation for discussion in the next chapter on the conduct of assurance on XBRL instance documents.

3 ASSURANCE AND XBRL

Introduction

In this Chapter, we discuss each of the elements of assurance engagements, as applied to the conduct of assurance on XBRL. The IAASB's International Framework for Assurance Engagements defines assurance in the following terms:

"Assurance engagement" means 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 against criteria. (IAASB 2010a, para. 7)

The key elements of an assurance engagement include:

- A tri-party relationship involving an assurance services provider, a responsible entity, and a population users of the information underlying the engagement.

- An appropriate assurance object (subject matter).

- Sufficient appropriate evidence.

- Suitable criteria against which the evidence.

- An assurance report issued under a given level of assurance (reasonable or limited assurance) (adapted from IAASB 2010a, para. 20).

We now cover the elements of the assurance engagement, to set up our later discussion on the practical application of assurance to XBRL based financial statements.

Assurance object and appropriate evidence

Identification of the assurance object seems relatively straightforward – it appears that the XBRL instance document is itself the assurance object along with the production process. Equally, evidence includes, as we will explore in the next chapter, all the supporting materials that lead to the generation of the instance document and the relevant business processes.

Suitable criteria

Any assurance engagement must have suitable criteria against which the assurance service provider can measure the assurance subject. Criteria in XBRL assurance engagements can include matters such as:

- Technical XBRL validation.

- Appropriate use of foundation taxonomy elements and extensions.

- Appropriate labels.

- Appropriate use of calculation and presentation linkbases.

- Appropriate dimensional structuring, where relevant.

- Correct representation of underlying information.

Recently the AICPA's Assurance Services Executive Committee (ASEC), guided by it's XBRL Assurance Task Force, has exposed a general purpose set of criteria for XBRL assurance engagements (AICPA ASEC 2011). The ASEC's exposure draft sets out four principles:

a. *Completeness—All required information is formatted at the required levels as defined by the entity's reporting environment. Only permitted information selected by the entity is included in the XBRL files.*

b. *Mapping—The elements selected are consistent with the meaning of the associated concepts in the source information in accordance with the requirements of the entity's reporting environment.*

c. *Accuracy—The amounts, dates, other attributes (for example, monetary units), and relationships (order and calculations) in the instance document and related files are consistent with the source information in accordance with the requirements of the entity's reporting environment.*

d. *Structure—XBRL files are structured in accordance with the requirements of the entity's reporting environment.*

In addition, as suggested by several commentators on the Exposure Draft, the maintenance of internal control over the production of instance documents might also be included as a principle. Other commentators, such as Ernst & Young, suggested that it was premature – at least in the US context – to formally promulgate principles. Nonetheless, the Exposure Draft – with the likely addition of internal controls – provides an indication of the likely shape of suitable criteria, adjusted as necessary for local implementations.

What are the differences in XBRL that require differences in XBRL assurance?

XBRL has the potential to influence several aspects of the audit production process, as we show, for example, in our analysis of the audit of Deloitte Holding BV Netherlands XBRL instance document in Chapter 5. The audit production process can be impacted by 1) the client tagging transactions and processes against a standard taxonomy of controls; 2) the use of XBRL Global Ledger (XBRL GL) as a pipeline for inter-system transfers of information to ensure transparency and visibility including from specialist systems to ERP or General Ledger and from the General Ledger to financial report production software; and 3) tagging financial statements against externally developed financial reporting XBRL taxonomies. Having databases of tightly tagged

XBRL financial statements such as those generated by the SEC's overhaul of EDGAR will change the nature of analytical procedures in the planning and review stages of the audit. The nature of the taxonomy (e.g., open or closed) significantly affects the potential audit process including the evaluation of the accuracy of tagging and the development of an extension taxonomy.

Assurance Reports on XBRL

There are several alternatives for reporting on XBRL-based financial statements, involving different levels of assurance. These include 1) incorporation into the financial statement audit, 2) an assurance report with either reasonable or limited assurance, either reported separately or "stapled" to the financial statement audit report, and 3) Agreed-Upon Procedures.

Financial statement audit: Whether XBRL-based financial statements should or must be incorporated into the financial statement audit depends essentially on three questions: First, is the XBRL instance document essentially isomorphic with the financial statements? Second, does the XBRL instance document constitute "documents containing audited financial statements," in the language of ISA 720 (IAASB 2010f)? Third, is the production of the XBRL-based financial statements an innate component of the financial statement production process? If the answer to any one of these questions is in the affirmative, it seems that *a priori*, the audit should incorporate review of the XBRL instance document.

The first possible trigger for application of the financial statement audit to XBRL-based financial statements is where the XBRL instance document essentially *is* the set of financial statements. One way in which this can happen is where the instance document is in iXBRL format, which might be the case in settings similar to that illustrated in Case D of Figure 6. When the human readable (HTML) financial statements encapsulate metadata on the financial statement data points (XBRL), it is difficult to see that other than the audit must consider the disclosure where a single or where other forms of financial statements (e.g., HTML, print) are derived *from* the XBRL-based financial statements (although ensuring this link continues to be valid presents a challenge, as we discuss in more detail later in this chapter). It is clear that inappropriate categorization of metadata may lead to a misstatement involving "… classifications, presentation, or disclosures that, in the auditor's judgment, are necessary for the financial statements to be presented fairly, in all material respects, or to give a true and fair view" (ISA 200 - IAASB 2010c). Auditing is conducted in national regulatory environments and the way XBRL is implemented (ISA 250 - IAASB 2010e).

The method of implementation may make the automatic inclusion of XBRL within the financial statement audit engagement more or less likely. The Swedish setting, for example (which we describe in more detail in the next chapter), seems likely to meet this first trigger. In the Swedish setting, the XBRL financial statements include both the various financial reports and notes and additional disclosures. Other forms of disclosure are derived from the XBRL instance document. In this case it is difficult to see that the XBRL instance document is other than an integral part of the financial reporting framework as defined in ISA 200 (IAASB 2010c).

The second possible trigger is when the XBRL-based financial statements rise to the standard of being "other information" in terms of ISA 720 ("The auditor's responsibilities relating to other information in documents containing audited financial statements") (IAASB 2010f). ISA 720 notes that, while the auditor is not required to audit disclosures in other information (which we will define shortly), "the auditor reads the other information because the credibility of the audited financial statements may be undermined by material inconsistencies between the audited financial statements and other information" (para. 2). The auditor "shall read the other information to identify material inconsistencies, if any, with the audited financial statements" (para. 6). In cases of such material inconsistencies, the standard requires the auditor to assess if the financial statements or "other information" need to be revised. The standard sets up procedures for the auditor to follow to achieve the necessary revisions. ISA 720 (para. 5) defines other information as:

> *Other information – Financial and non-financial information (other than the financial statements and the auditor's report thereon) which is included, either by law, regulation or custom, in a document containing audited financial statements and the auditor's report thereon.*

Selected examples of "other information" in ISA 720 include:

- *A report by management or those charged with governance on operations.*

- *Financial summaries or highlights.*

- *Selected quarterly data.*

Examples of information transfers that do not constitute "Other information" include:

- *A press release ...*

- *Information contained in analyst briefings.*

- *Information contained on the entity's website.*

Increasingly the Investor Relations Website is the principal place where corporation make key disclosures to stakeholders. In general, the response of standard setters and regulators (to which we will return in the next chapter) has been to state that XBRL-based financial statements do not constitute "other information" (e.g., IAASB 2010h) In those settings where the production of XBRL and HTML or print formatted financial statements is integrated and where the XBRL metadata covers most or all of the financial statements, it is difficult to see how the XBRL version is other than a document that contains audited financial statements. As we have shown above on errors in XBRL-based financial statements, it is certainly possible to have material inconsistencies between the two sets of financial statements. *A priori*, Cases C through E in Figure 6, would seem to trigger ISA 720.

The third possible trigger is when the XBRL becomes part of the production of the financial statements and therefore part of the internal control framework, which includes "the related business processes relevant to financial reporting, and communication" (IAASB 2010d, Para 18). Breakdown in internal controls, such as failure to appropriately manage the financial statement process, may fail to prevent misstatements and present a control risk. In the US context, the SEC considered this question. In the preamble to its final rule, the SEC notes:

> *As the technology associated with interactive data improves, issuers may integrate interactive data technology into their business information processing, and such integration may have implications regarding internal control over financial reporting no different than any other controls or procedures related to the preparation of financial statements. If this integration occurs, the preparation of financial statements may become interdependent with the interactive data tagging process and an issuer and its auditor should evaluate these changes in the context of their reporting on internal control over financial reporting. However, this evaluation is separate from the preparation and submission of the interactive data file, and as such the results of the evaluation would not require management to assess or an auditor to separately report on the issuer's interactive data file provided as an exhibit to a filer's reports or registration statements.* (SEC 2009, 100).

Again, Cases D and E in Figure 6 would seem to be examples where XBRL is integrated into production of the financial statements and therefore part of the internal control framework.

ISAE 3000 based assurance engagements: Another alternative for the conduct of assurance on XBRL may well be in a form of ISAE 3000-based assurance reports. These may come under reasonable or limited assurance levels, to which we will return shortly. They may stand alone or be "stapled" to a traditional audit report, depending on the national environment. We see no impediment to the use of ISAE 3000 based assurance engagements in any XBRL setting in current or planned national environments. It may be that ISAE 3000 based assurance engagements may be voluntary or mandated by a regulator or intermediary. A principal advantage of employing ISAE 3000 is that such engagements can be used at times when there is no financial statement audit, such as the release of quarterly or semi-annual interim results.

Agreed-Upon Procedures engagements: Agreed-Upon Procedures (AUO) engagements under ISRS 4400 do not technically constitute assurance (IAASB 2010g). Yet, they seem particularly appropriate in many XBRL settings where the use of XBRL does not rise to one of the triggers we discuss above and where corporations do not wish to release full ISAE 3000 reports. Whether ISRS 4400 constitutes an appropriate foundation for XBRL engagements is another question. The focus of ISRS 4400 is relatively narrow and may need amendment to incorporate the more technical aspects of XBRL and other similar objects of AUP engagements.

Levels of Assurance

A primary distinction in the development of assurance in a new area of endeavor, such as XBRL, is the level of assurance at which the service is provided. Determining and understanding the impact of alternative levels of assurance has been of considerable interest in the professional

assurance services domain for several decades (FEE 2003; Maijoor et al. 2002). Interest in alternative levels of assurance was sparked by promotion of assurance services beyond the traditional financial statement audit (AICPA 1996). Evidence from academic studies, to which we will return shortly, and debates in the professional assurance communities gave rise to changes in the way that the IAASB defined alternative levels of assurance in their standards. The Board's International Framework for Assurance Engagements defines two primary levels of assurance, "reasonable" and "limited" assurance engagements (IAASB 2010a). These replaced the previous formulation of "high" and "low" levels of assurance (Ruhnke and Lubitzsch 2010). The Framework sees both classes of engagement fulfilling the role of primary elements of an assurance engagement (i.e., tri-party relationship between assurance services provider, entity, and users of the information underlying the engagement; assurance object; evidence and suitable criteria). The framework sets up the distinction between reasonable and limited assurance in terms of the extent to which the engagement reduces engagement risk and, simultaneously, the communication of the assurance provider's report. The Framework notes:

> *The objective of a reasonable assurance engagement is a reduction in assurance engagement risk to an acceptably low level in the circumstances of the engagement as the basis for a positive form of expression of the practitioner's conclusion. The objective of a limited assurance engagement is a reduction in assurance engagement risk to a level that is acceptable in the circumstances of the engagement, but where that risk is greater than for a reasonable assurance engagement, as the basis for a negative form of expression of the practitioner's conclusion* (IAASB 2010a, para. 11)

More simply, a reasonable assurance engagement allows the assurance services provider to amass sufficient evidence for the provider to make a positive statement about the achievement of outcomes against some measurable criteria. The provider is able to say, in essence, that collected evidence that when matched up against agreed criteria and that the client did (or did not) meet those criteria.

The Framework goes on to define reasonable assurance as:

> *"Reasonable assurance" is a concept relating to accumulating evidence necessary for the practitioner to conclude in relation to the subject matter information taken as a whole. To be in a position to express a conclusion in the positive form required in a reasonable assurance engagement, it is necessary for the practitioner to obtain sufficient appropriate evidence as part of an iterative, systematic engagement process involving:*

> a) *Obtaining an understanding of the subject matter and other engagement circumstances which, depending on the subject matter, includes obtaining an understanding of internal control;*

> b) *Based on that understanding, assessing the risks that the subject matter information may be materially misstated;*

c) *Responding to assessed risks, including developing overall responses, and determining the nature, timing and extent of further procedures;*

d) *Performing further procedures clearly linked to the identified risks, using a combination of inspection, observation, confirmation, recalculation, re-performance, analytical procedures and inquiry. Such further procedures involve substantive procedures including, where applicable, obtaining corroborating information from sources independent of the responsible party, and depending on the nature of the subject matter, tests of the operating effectiveness of controls; and*

e) *Evaluating the sufficiency and appropriateness of evidence.* (IAASB 2010a, 61)

Interestingly, the Framework does not define limited assurance engagements in the same way. Rather we have guidance that sets up limited assurance engagements in contrast with reasonable assurance. For example, when considering evidence collection, the Framework notes:

.. in a limited assurance engagement, the combination of the nature, timing and extent of evidence gathering procedures is at least sufficient for the practitioner to obtain a meaningful level of assurance as the basis for a negative form of expression. To be meaningful, the level of assurance obtained by the practitioner is likely to enhance the intended users' confidence about the subject matter information to a degree that is clearly more than inconsequential. (IAASB 2010a, para. 59)

Reporting models from the assurance services provider in a reasonable assurance engagements are in the positive form: "In our opinion internal control is effective, in all material respects, based on XYZ criteria" (IAASB 2010a, para. 59). Limited assurance engagement reports are in the negative form: "Based on our work described in this report, nothing has come to our attention that causes us to believe that internal control is not effective, in all material respects, based on XYZ criteria" (IAASB 2010a, para. 60). The Framework sees this Byzantine wording as effectively communicating an assurance level "proportional to the level of the practitioner's evidence-gathering procedures given the characteristics of the subject matter and other engagement circumstances described in the assurance report" (IAASB 2010a, para. 59). Audits of financial statements are undertaken with a reasonable level of assurance. As we will discuss in more detail later, assurance engagements may offer assurance other than financial statement audits, with either reasonable or limited assurance (International Standard on Assurance Engagements 3000 (ISAE 3000) (IAASB 2010b)). In essence, these formulations communicate to users a level of assurance contextual on a combination of the factors that make up the engagement (Ruhnke and Lubitzsch 2010).

Agreed-Upon Procedures engagements do not provide any level of assurance. ISRS 4400 defines the objective of an AUP engagement in the following terms:

The objective .. is for the auditor to carry out procedures of an audit nature to which the auditor and the entity and any appropriate third parties have agreed and to report on factual findings. (IAASB 2010g, para. 4)

There are two views of what determines the maximum level of assurance for a given engagement, viz: the "work effort" and the "interaction of variables" models (Maijoor et al. 2002; Ruhnke and Lubitzsch 2010). Under the work effort view, the level of assurance is essentially held at some given level and then, after consideration of factors such as the extent and availability of evidence, the residual is extent of effort undertaken by the assurance services provider. Under the interaction of variables view, there are inherent limitations in one or more engagement factors that cap the level of assurance that a provider may offer. There is no scientific manner to conclusively resolve the appropriateness of these alternative perspectives. In the XBRL setting, it is difficult to see that there is any consideration of, for example, engagement subject matter, evidence or criteria that would inherently limit the maximum level of assurance, as long as it were kept lower than absolute.

Materiality and coverage of the engagement

There are a number of issues that apply to the application of materiality to XBRL filings. The level of materiality that applies in the financial statement audit applies to the financial statements as a whole. Conversely, XBRL disclosures are, by design providing atomic information on each data point in the XBRL-formatted financial statements. As Trites (2011, 51) notes, materiality in this situation is difficult to assess. How does an assurance service provider communicate the level of assurance provided on the underlying source document as a whole and that it does not relate specifically to each data point? Deloitte, in their submission on the AICPA's proposed principles and criteria, address these issues succinctly:

- *How to communicate the level of assurance provided on the XBRL files as a whole and that it does not relate specifically to each tag?*

- *What the various scenarios are that are likely to be encountered? For example:*

    - *Underlying financial statements are audited and no attestation engagement has been performed on the XBRL files.*

    - *Underlying financial statements are audited and an examination of the XBRL files has been performed:*

        o *Some underlying data in the audited financial statements is marked "unaudited" and an examination was performed of the XBRL files.*

        o *Underlying financial statements have been reviewed and no attestation engagement has been performed on the XBRL files.*

        o *Underlying financial statements have been reviewed and an attestation engagement has been performed on the XBRL files.*

        o   *Underlying financial statements have been neither audited nor reviewed and no attestation engagement has been performed on the XBRL files.*

- *Whether all of these scenarios can be addressed and by what means.* (Deloitte and Touche LLP 2011)

Whether and how materiality relates to XBRL versions of financial statements and other disclosures will be a matter for further debate.

Communicating the Audit Response

There are a number of issues that relate to the method of communicating assurance on XBRL disclosures. XBRL explicitly facilitates dismembering of the financial statements into chunks that may be communicated independent of the remainder of the financial statement data elements. As notes, when XBRL-formatted information is communicated at the atomic level users may not understand the complete context of the financial statement disclosure (Trites 2011). Further, at least with current technologies, the audit report may not travel with the atomic disclosure. It is not possible for the auditor to refer just to the financial statement in XBRL format in wording. It should be possible for the user of the auditor's report to determine if he has the instance document that the auditor has audited.

There are a range of possibilities for this communication, including:

1. A relatively low technology approach is to generate a separate XBRL instance document with the auditor's report and making use of the MD5 checksum. MD5 checksums are widely used for this purpose, software is freely available on the Internet. The auditor calculates the MD5 checksum of the audited instance document and include that checksum in his auditor's opinion like: We have pre-computed a MD5 checksum to uniquely identify the version of the instance document <name> we have examined. Using common utilities, users can compare the checksum of the downloaded XBRL file with the following pre-computed MD5 checksum: 3b55f8cbf57e41f04c04240bf0c2e31a.

2. A separate document with the auditor's report and making use of an electronic signature to identify the audited instance document. Using an electronic signature to identify the audited instance document creates automatically a file with the same name as the audited instance document but with a different extension. This file includes the identification of the auditor that has signed off the auditor's opinion, a checksum of the audited instance document and a timestamp. The user will download three documents namely, the auditor's report, the audited instance document and the electronic signature file. To verify the link between those three documents, the user can open the electronic signature file and access the checksum to verify if he has downloaded the correct audited instance document and can verify if he has the correct auditor's opinion with the auditor's identification and the timestamp. The same name and date included in the timestamp should be on the auditor's report. The problem might be in future that auditor's are signing off different auditor's opinions on the same day. If only the date is

on the auditor's opinion, there might be confusion about the relation between the auditor's opinion and the related audited instance document.

3. The auditor's opinion will be integrated in the instance document and the whole will be signed off with an electronic signature. There will be no separate auditor's opinion anymore. The user has to download two documents, namely the audited instance document and the electronic signature file and can verify the correctness of the download of the audited instance document with the electronic signature.

The problem with integrating audit reports and atomic disclosures might widen of the expectation gap. Providing a separate auditor's opinion may help the user to understand that the auditor's opinion is that the -instance document taken as a whole and rendered in a pre-defined way will give a true and fair view. The integrated audited instance document might lead the user to think that the auditor's opinion is on data level instead of the instance document taken as a whole and rendered in a pre-defined way. Unless the auditor performed a data level assurance engagement, integrating an auditor's opinion in the audited instance document and signing of electronically might be misleading the user.

The communication of the audit report on financial statements in XBRL requires additional study, building upon existing research and professional study (Cohen 2003; Cohen et al. 2003). This is an important matter as auditor move closer to the practical audit of XBRL-formatted financial statements. For example, in the Netherlands, the debate is how to solve the problems of linking auditor's opinions to audited instance documents. This should be solved before January 1, 2015. After that date companies are mandated to file their financial statements and the related auditor's opinions in XBRL.

Conclusions

In this chapter we discussed the implications of XBRL for the conduct of audit and assurance engagements. We discuss where the use of XBRL would, in our analysis, trigger the inclusion of XBRL within the financial statement audit. The chapter also addresses other aspects of assurance engagements including criteria under which the engagement is conducted, materiality, and communication of the audit report and methods of reporting, with different levels of assurance. We note that assurance on XBRL may well, in some environments, be in a form of ISAE 3000based assurance reports. These may come under reasonable or limited assurance levels. They may stand alone or be "stapled" to a traditional audit report. Several of these issues have open issues including the nature of materiality in XBRL engagements and how to communicate assurance conclusions in an electronic environment.

4 THE CURRENT AND FUTURE ENVIRONMENT FOR XBRL ASSURANCE

Introduction

In this Chapter, we discuss the current professional guidance available to auditors on providing XBRL assurance. The IAASB agenda currently includes XBRL. The US PCAOB which regulates public companies has been relatively silent on XBRL. The AICPA issued the first guidance on providing XBRL assurance and has recently ended the comment period for a Principles and Criteria for XBRL-Tagged Data document (AICPA ASEC 2011).

In addition, we consider in more detail environments which are rapidly progressing in the use of XBRL as these countries are either considering or more likely to consider XBRL assurance in the near future. These implementations demonstrate the need for additional guidance on conducting XBRL assurance engagements in the near term. For example, Ernst and Young Netherlands provided the first XBRL audit of the Deloitte Netherlands 2008-2009 financial information and has continued to do so. India is requiring the statutory auditor, CA, or CS to certify the XBRL filing to the Ministry of Corporate Affairs (MCA). Japan has recently released guidance on conducting XBRL Agreed-Upon Procedures engagements (Japanese Institute of Certified Public Accountants 2011). Singapore allows the XBRL filing to the Accounting and Corporate Regulatory Authority (ACRA) to be the sole method of reporting. South Africa is in the process of developing an XBRL assurance exposure draft. Sweden began allowing companies to file to the Bolagsverket (Companies Registrations Office) in 2006 and has recently moved toward a paperless environment.

IAASB

The IASB has placed XBRL on its agenda, with the creation of a task force and publication of a Staff Questions and Answers publication, "XBRL: The Emerging Landscape" (IAASB 2010h). As we noted above, guidance from auditing standards setters is that auditing standards do not currently apply to XBRL. For example, the IAASB in its Staff Questions and Answers publication notes that:

> *The IAASB's current auditing standards were not developed with XBRL in mind and, accordingly, do not impose an obligation on the auditor with respect to XBRL-tagged data.*

> *ISA 720, the IAASB's standard dealing with the auditor's responsibilities relating to other information in documents containing audited financial statements and the auditor's report thereon, defines other information as "financial and non-financial information (other than the financial statements and the auditor's report thereon) which is included, either by law, regulation or custom, in a document containing audited financial statements and the auditor's report thereon." XBRL-tagged data does not represent "other information" as contemplated in ISA 720, because it is simply a machine-readable rendering of the data within the financial statements, rather than "other information," as it is defined.*

Further, the ISA notes that the phrase "documents containing audited financial statements" refers to annual reports (or similar documents), that are issued to owners (or similar stakeholders), containing audited financial statements and the auditor's report thereon. In the most commonly used model of XBRL reporting at present, the financial statements are tagged in a separate process and filed with regulators or with tax authorities. Because the filing of this XBRL-tagged data is not a discrete document, the IAASB's discussions at its September 2009 meeting indicated that the Board is not of the opinion that the requirement of ISA 720 for the auditor to "read" the other information for purposes of identifying material inconsistencies or material misstatements of fact would be applicable to XBRL-tagged data. The requirement in the IAASB's standard dealing with reviews of interim financial information to read other information that accompanies interim financial information equally would not apply to XBRL tagged-data either. (IAASB 2010h)

As we discussed in the previous chapter, it will be difficult to sustain this position in circumstances where production of the XBRL instance document is integrated into the financial statement production process, is completely integrated with the financial statements as in an iXBRL document or is a primary or direct input into decision-making models.

India

The Ministry of Corporate Affairs (MCA) in India mandated the use of XBRL effective 31 March 2011 (Government of India Ministry of Corporate Affairs 2011). The MCA has moved quickly to develop a taxonomy releasing the final version of the taxonomy on June 25, 2011 (MCA 2011c). Approximately 40,000 companies will be affected by the mandate to meet Companies Act requirements. While the initial Circular did not provide for extensions, in the coming year filers will be able to create extensions, an accommodation to industry requests (Choudhury 2011).

While there was not a discussion of validation or assurance when the initial mandate was announced the MCA has subsequently moved forward to require certification on XBRL filings. The MCA does not require the statutory auditor to perform audit procedures on the XBRL data as part of the financial statement audit meaning that the auditor opinion on the financial statements does not cover internal controls surrounding the XBRL production process or the instance document (ICAI 2011). However, this appears to only be a very subtle distinction because the MCA does require that the XBRL filing instance document be certified by the statutory auditor (MCA 2011a) or a Practicing Chartered Accounting or a Company Secretary (MCA 2011b). Detailed guidance is provided in "Guidance Note on Certification of XBRL Financial Statements" (ICAI 2011). The guide provides example procedures such as comparing the source document to the rendered report, ensuring that changes have not been made to the document after validation, and examining MCA Validation tool reports with the end goal of providing certification "that the XBRL financial statements fairly present, in all material respects the audited financial statements of the Company in accordance with the MCA's taxonomy" (ICAI 2011). To support companies in ensuring the validity of their filing the MCA recently launched an online validation tool and released an XBRL Filing Manual (MCA 2011d).

Japan

The Bank of Japan (BoJ) began requiring financial service companies to report in XBRL in February 2006 (Bank of Japan and XBRL International 2006). The Bank of Japan is a central bank which receives data from nearly 600 banks. The BoJ developed a closed taxonomy consisting of approximately 3500 elements for balance sheet data after multiple revisions of the taxonomy over a three year period. Through the use of XBRL the BoJ has been able to reduce the effort of both reporting institutions and the BoJ in providing data and in data analysis, respectively.

This was followed by the incorporation of XBRL into the Electronic Disclosure for Investors' NETwork (EDINET) in 2008 (XBRL Planet 2011a). Both listed companies and mutual funds report under EDINET. However, while adoption of XBRL has continued to grow users have indicated that sometimes the XBRL formatting leads to error in the interpretation of the underlying data which has led to new formatting requirements by the Japan Accounting Association (Shashoua 2011). The EDINET XBRL implementation requires the audit report to include an explicit statement that the scope of the audit does not include the XBRL data. It is expected that there will be greater use of XBRL from investors if users receive XBRL assurance; therefore, the Japanese Institutes of Certified Public Accountants (JICPA) created a study committee which recently released an exposure draft on providing Agreed-Upon Procedures on XBRL Data (Japanese Institute of Certified Public Accountants 2011).

Netherlands

Introduction

The Dutch government began development of the Netherlands Taxonomy Project in 2005 for designing a generic infrastructure for the communication with the government. This was followed in 2009 with the Standard Business Reporting (SBR) program with a focus of implementing XBRL by 2011. The SBR program was developed with close cooperation with several constituents (i.e., the Tax Office, the Chamber of Commerce and the Central Bureau of Statistics). Reporting to the three entities included a number of redundancies. Through the cooperation and discussion the entities were able to identify and define the reporting elements; thus, eliminating redundancies while still allowing each organization to obtain the necessary data to support their supervisory role. The resulting taxonomy is, as set out before, for the time being closed, in that filers cannot create extensions for unique reporting elements. To facilitate communications to the government a generic infrastructure, Digipoort, was built.

The SBR program was developed in close cooperation with several market parties. Rob Kuiper and Paul Hameleers responsible for the implementation of XBRL in the Netherlands said in the first issue of the Interactive Business Reporting Magazine that:

> *Although the program started with the idea of reducing administrative burdens using ICT, XBRL created an opportunity to combine specific elements that are essential for the SBR approach, including the standardization of data, processes and technology. The Dutch SBR Program is a cooperation between the Tax Office, within the Ministry of Finance, the Chamber of Commerce and the Central Bureau of*

Statistics. These authorities share common information requests, so the standardization of company data reported to a governmental authority offered the prospect of significant gain in efficiency. To standardize information at the business level simplifies reporting to several different authorities. These three organizations realized that the type of information they requested contains similar or identical elements and that standardization required a discussion about the definition of the data they requested.

The other aspect is the technology, where the task was to agree to use a generic infrastructure. There was a digital infrastructure which could be used for sending reports to various government parties, called Digipoort. It is now one of the key elements of SBR. SBR has affected not only on the back office of government, it has also affected software providers and the accountancy profession. When we started in 2009, there was an immense list of issues to be solved and now that list is shrinking because we have a fully functioning process infrastructure, a yearly update of our taxonomy and a number of software packages are XBRL inclusive. The Dutch business community is moving toward the correct application of XBRL. [IBR, vol1, August 2011].

The Dutch Taxonomy:

The Dutch Taxonomy 2011 is a so-called authoritative taxonomy: the taxonomy is based on Dutch law and Dutch GAAP and the Dutch government guarantees the completeness and correctness of this taxonomy. Requirements regarding the content and form of the information to be included in the financial reports using Dutch GAAP have been codified in detail by the Dutch Accounting Standards Board (DASB). The Dutch Taxonomy is a relative straight-forward "conversion" of these requirements into the XBRL environment. The Dutch Taxonomy contains only one presentation linkbase.

One of the key architectural choices, enabling assurance, is the choice that all concepts available in the Dutch Taxonomy are part of a presentation linkbase. This presentation linkbase is a hierarchical ordering of these concepts and is consistent with generally available "paper based" dummy annual accounts. In other words, the presentation linkbase is the blueprint for creating adequate rendering solutions. The level of judgmental decisions necessary in the mapping (and therefore also the auditing of this mapping) of "paper based" information elements to the Dutch Taxonomy is very low.

Not all XBRL instance documents do pretend to be the annual accounts, those are presented as financial information consistent with the annual accounts. The instance document is based upon the Dutch Taxonomy 2011 report for annual accounts of large companies. The scope of this report are full (consolidated and statutory) annual accounts based upon Dutch law and Dutch GAAP. From this it may be expected that all information present in the annual accounts can be mapped to the Dutch Taxonomy with only an exception for not legally required information.

The Dutch government has ruled that the Dutch Taxonomy is a so called 'closed' taxonomy, meaning that users of the Dutch Taxonomy are not allowed to create taxonomy extensions. This has the following consequences:

- not legally required information present in the annual accounts, not required for a true and fair view, should be omitted in the XBRL instance document;

- information required for a true and fair view, for which the Dutch Taxonomy does not have concepts available, should be mapped to the "best fitting" concept that is available in the Dutch Taxonomy. For this purpose some "more generic" concepts are available together with a concept in which explanatory information on this situation can be provided;

- if the purpose of the XBRL instance document would be to contain the annual accounts (so a company plans to have no paper based accounts) and the "best fit" approach does not result in annual accounts that confirm to the true and fair view requirement, companies are not allowed to report using the Dutch Taxonomies (this is applicable only to small companies, at present mid-sized and large companies are not yet allowed to report their annual accounts in XBRL format).

Mandatory use of SBR:

May 27, 2011, it was decided by the Minister of Economic Affairs, Agriculture and Innovation to make the XBRL/SBR the exclusive channel for delivering certain tax reports starting January 1, 2013. Was this totally new? No, electronic filing was already mandated in the Netherlands. That specific date will be de start of phasing out the old channel. In the coming years, the Minister said, all tax reports will be delivered through XBRL/SBR as well as statistics to the Central Statistics Agency and annual reports to the Dutch Chamber of Commerce. The next step in the development in the Netherlands will be the widening of the scope of the implementation of XBRL to the whole communication with the government.

Official publication on the side of SBR http://www.sbr-nl.nl/wat-is-sbr/international/

Dutch Minister decides: From 1 January 2013 on Standard Business Reporting will be the exclusive standard for delivering tax reports to the government starting with Income Tax and Corporate Tax.

The Dutch Minister of Economic Affairs, Agriculture and Innovation and the State Secretary of Finance decided this in close cooperation with various government agencies and market participants. "This ensures that entrepreneurs have less work to mandatory reporting to governments and banks," minister Verhagen explained. "Clever use of this standard makes live for entrepreneurs easier."

In the coming years, other tax reports will be delivered through SBR as well as statistics to the Central Statistics Agency and annual reports to the Dutch Chamber of Commerce.

SBR standard

With SBR, entrepreneurs, or their intermediaries, can easily re-use information from their administration. The use of the Dutch Taxonomy and the standard language XBRL enables this. Dutch banks are increasingly working with this standard for credit reports. Both information-requesting and supplying parties (businesses, accountants and other reporting professionals,

administration offices) will benefit because reports can be compiled and processed quicker and more accurate. Also data are more compatible and there will be a reduction of errors. SBR is the standard for tax, annual reports, statistical information and credit reports. All requesting parties are committed to using this standard.

All on Digipoort

Individual entrepreneurs who do their tax returns via the Internet can continue to do just that. SBR will be the system-to-system standard and thus the standard for reporting professionals. They will have to use the one channel to the government, called Digipoort.

A phased implementation of the SBR standard allows software vendors to adjust their software on time and make it SBR-enabled. Also they can prepare their clients for the introduction of SBR. Banks and other market parties are supporting the new approach.

No cost increase

In a letter of intent, all parties expressed that they expect the transition will not necessarily mean higher costs for entrepreneurs. Also the benefits should be passed on to businesses.

The implementation schedule for the mandated use of XBRL/SBR looks like:

- January 1, 2013: company tax reports;

- January 1, 2014: the filing of annual accounts for smaller companies and the VAT filings;

- January 1, 2015: the filing of annual accounts for larger companies including auditor's reports, all other tax reports and all the reports for the central Bureau of Statistics.

On voluntary basis companies can make use of the XBRL/SBR channel earlier than it is mandatory.

In 2009 the three largest banks in the Netherlands, ABN/AMRO, ING and Rabobank, developed their own XBRL channel for their credit lending process by using the XBRL/SBR taxonomy and infrastructure. The data the banks need are almost the same as the data that is exchanged with the tax office. The bank channel is on this moment operational.

Assurance discussion:

The main topic in the debate with respect to the assurance issue is the focus on the ISA standard to be used. As noted previously, the Dutch Taxonomy is a closed taxonomy whereby extensions are not acceptable. The government, the owner of the taxonomy, guarantees that all the tags in the taxonomy may be rendered through the in the Dutch Taxonomy included presentation linkbase and on the other side the chosen entry point to the taxonomy together with the presentation linkbase only allow for data that are tagged with the Dutch Taxonomy. So there is a very strong link between those two.

To issue an auditor's opinion on a traditional paper version of the financial statement in the Netherlands, the financial statement should be either in compliance with Dutch GAAP or IFRS. In

those cases the auditor will use the format of the auditor's report as required by ISA 700: Forming an opinion and reporting on financial statements. The same requirement is in force regarding a financial statement in XBRL format. So the rendered XBRL document should be in compliance with Dutch GAAP or IFRS. Only the Dutch Taxonomy version 2011 and specifically the presentation linkbase is not Dutch GAAP or IFRS proof. For that reason the XBRL financial information instance document does not qualify as a statutory financial statement when the Dutch Taxonomy 2011 is used without extensions what is not allowed and the auditor for that reason cannot issue an auditor's opinion in compliance with ISA 700. Even if a company would like to file only statutory financial statements in XBRL format including an auditor's opinion in compliance with ISA 700, it is prohibited by the government until such time as the assurance problems are solved.

Using the Dutch Taxonomy 2011 the auditor can issue a report based on ISAE 3000: Assurance Engagements Other Than Audits or Reviews of Historical Financial Information. The auditor's report included in this Standard is more flexible than the one under ISA 700. It is possible to describe scope limitations called 'inherent limitations' and express reasonable and limited assurance in one auditor's opinion at the same time. The auditor can emphasize the important characteristic of XBRL namely the fact that multiple presentations of a XBRL instance document are possible, without a single one presentation being the 'normative' or 'default' presentation. He can make a reference to the view or template as being the one used in his audit as the basis for his conclusion in wording like: The presentation link base of the Dutch Taxonomy contains a hierarchical order of all data elements that companies can report. This hierarchical order is the basis for rendering the XBRL-formatted information into presentations that are similar to the financial statements. Our examination and our opinion are limited to this hierarchical order. It is expected that the Dutch Taxonomy 2012 will be Dutch GAAP and IFRS proven so than statutory financial statements and ISA 700 auditor's opinions are possible

Singapore

The Accounting and Corporate Regulatory Authority (ACRA) mandated the use of XBRL for the corporate regulatory filings of companies incorporated in Singapore effective November 1, 2007 (Accounting and Corporate Regulatory Authority 2007). Filers were provided with the option to report in full or partial XBRL. For companies filing in full XBRL the XBRL filing was the only filing made to the regulator. If the company filed in partial XBRL it was also necessary to provide a PDF copy of the complete set of financial statements provided to shareholders. To facilitate filing in XBRL the ACRA provides filers with access to the FS Manager interface to complete the tagging process. The FS Manager interface eliminates the need for filers to be familiar with XBRL as the tagging of the financial statement facts happens "behind the scenes." However, "(e)nsuring the correctness and accuracy of the financial statements in XBRL format filed with ACRA will continue to be the responsibility of the directors of the company" (Accounting and Corporate Regulatory Authority 2007). The ACRA taxonomy consists of more than 500 data elements and filers are not allowed to create company specific extensions. In the future, it is expected that the information repository will be expanded to meet the needs of additional government agencies.

Further, in January 2010 ACRA launched Open Analytics an analysis tool which uses the ACRA XBRL files (Accounting and Corporate Regulatory Authority 2010).

South Africa

The Johannesburg Stock Exchange (JSE) embarked on a program of voluntary XBRL filings in 2009 (XBRL Planet 2011a). Filing in XBRL is supplemental to existing reporting requirements. The JSE makes use of the IFRS taxonomy and the JSE taxonomy. To facilitate XBRL filing the JSE provides an online portal for filers to produce XBRL filings with filers permitted to make extensions, as necessary, to support their filing needs. Thus far one company has filed in XBRL.

The Independent Regulatory Board of Auditors (IRBA) has taken a very progressive role in addressing the need for assurance on the XBRL filings. The IRBA is currently developing a South Africa Assurance Engagement Practice Statement exposure draft that is expected to be released before the end of 2011 (Simons 2011). The Practice Statement guidance has been developed based on the experiences of auditors and other world-wide regulators and provides auditors guidance with providing filers with limited assurance engagements. Unique to environment is that the limited assurance reports would be provided to the company management and the regulator.

Sweden

In Sweden filing in XBRL to the Bolagsverket (Companies Registrations Office) has been possible since 2006; however, it has not been widely adopted (Rydberg and Thorling 2011). In general those filing in XBRL format have used a service provider. The Swedish GAAP taxonomy was based on the standardized chart of accounts, BAS, and included an audit report taxonomy. Because the taxonomy is based on the standard chart of accounts extensions are not permitted. Although XBRL use is still limited Sweden is moving forward to a fully-electronic reporting format that provides for the audit report to be electronically signed, with the interim provision of a paper-signed original document. To further encourage adoption the XBRL Sweden Board plans to encourage and facilitate SBR discussions among relevant parties in the upcoming year.

The auditor is not obligated to provide assurance on the publically available XBRL filing. Further, Sweden does not provide specific guidance on how an auditor might conduct an XBRL assurance engagement if desired. The audit report is based on the printed version of the financial statements. However, the Bolagsverket does perform several validations and consistency checks on the data.

UK

Her Majesty's Revenue and Customs (HMRC) mandated that all companies submit their company tax return beginning on April 1, 2011 for all accounting periods ending after March 31, 2010 (Companies House and HMRC 2009). In addition, all companies subject to Companies Act 2006 must provide their financial statements using inline-XBRL (iXBRL) (Companies House and HMRC 2009). The current plan is for the XBRL data to be used internally and not publically

disseminated; however, there are plans to make available from the Companies House in the unspecified future.

The HMRC does not require auditor assurance on the iXBRL submission even if the company is above the audit exemption threshold (APB 2010). However, the APB has provided auditors with guidance on auditor association with the XBRL data (APB 2010). Included in the APB's guidance is further clarification that the ISAs for UK and Ireland do not require auditor association with the XBRL file because it is not viewed as 'other information.' The guidance includes a discussion on how auditor involvement may be deemed a threat to auditor independence including making decisions for management, which may be the case if the auditor were asked to select the XBRL tags. Recognizing that companies may seek voluntary assurance on their iXBRL files the ICAEW Audit and Assurance Faculty issued guidance for performing iXBRL Agreed-Upon Procedures engagements (ICAEW 2011). The ICAEW Technical Release provides guidance on planning and reporting the results of the engagement. An appendix is included that provides a list of illustrative procedures and findings and reporting the results of the engagement

United States

The regulator of the auditors of SEC registrants is the Public Accounting Companies Oversight Board (PCAOB). The PCAOB has been silent on XBRL with the exception of a single statement made by the Board's staff ("staff questions and answers") on attest engagements on filings under the predecessor Voluntary Filing Program VFP (PCAOB 2005). XBRL has not subsequently been on the PCAOB's agenda except for a brief mention in the 2010/2014 Strategic Plan, pointing to the SEC not currently requiring audits of XBRL filings (PCAOB 2010). The Plan notes that were the SEC to require such an audit, the Board would need to make suitable changes in its standards.

The Auditing Standard Board of the AICPA has taken the most substantive moves on XBRL with the release of SOP 09-1, which provides a framework for the conduct of Agreed-Upon Procedures (AUP) on XBRL filings made to the SEC under its "interactive data" XBRL mandate (ASB 2009). Later in this chapter we discuss in some detail the experience of US auditors in undertaking these engagements. As we discussed in Chapter 3, the AICPA's Assurance Services Executive Committee (ASEC) has recently exposed a proposed set of "Principles and Criteria for XBRL-Formatted lnformation" (AICPA ASEC 2011).

Conclusion

In this Chapter we considered the regulatory and professional environment for assurance and XBRL around the world. We show that the drum beat of XBRL assurance implementations grows louder. The drums are in middle distance but can be heard clearly. There is now over three years of experience with Agreed-Upon Procedures (AUP) in the US setting and more recent promulgations in the UK and Japan. While AUP do not technically offer assurance, as defined by the IAASB, the procedures are very similar to an assurance engagement, be it with limited or reasonable assurance. In an increasing number of countries, including Sweden, Netherlands and India the move to fully electronic disclosure systems is bringing into focus the integration of XBRL

into the audit. In the UK, allowing companies to file with the companies regulator in iXBRL format – where XBRL metadata tagging underpins the traditional financial statements in the same XBRL document brings the role of audit also into question.

5 STUDY 1 – FOCUS GROUPS

Overview

The use of focus groups as a qualitative research tool has grown over the past 50 years. The primary purpose of focus groups is to obtain participants' views and perceptions in an interactive environment. Using focusing groups can generate data and also help to generate hypotheses for future quantitative work (Merton and Kendall 1946). However, it has only been in the last 30 years that they have grown into an acceptable qualitative research method with best practices for appropriate settings, methods and approaches (Bryman and Burgess 1999; Langer 1991; Morgan 1993; Morgan 1988; Stewart and Shamdasani 1990; Vaughn et al. 1996). In general focus groups contain between eight and twelve individuals (Stewart and Shamdasani 1990, 10). Although, it is possible to have smaller "mini focus groups" the choice of ideal group size varies between researchers. There are several possible moderator roles (single; dueling moderators; respondent as moderator) we chose to have a dual moderator focus group so that one moderator could oversee the technical equipment and ensure complete coverage of the focus group questions (Wikipedia 2011).

Our purpose in conducting the focus groups was two-fold: first, to better understand the views of regulators, users, and public policy setters; and second, to design a quantitative research experiment. Focus groups were conducted during February 2010 at the Fédération des Experts Comptables Européens (FEE) XBRL Task Force meeting in Brussels, Belgium and the Consultative Advisory Group (CAG) to the IAASB in Barcelona, Spain. While the focus groups were conducted at the CAG meeting the individuals choosing to participate in the focus groups were providing their own opinions and not necessarily those of the Member Organizations which they represent. The focus groups were supplemented with interviews of key constituents at the AICPA XBRL Task Force meeting in New York, as well as interviews in China and New Zealand. This chapter outlines the specifics of the recruitment of participants, focus group procedures, data collection and results of our focus group interviews.

Method

To understand the opinions of preparers, regulators, and consumers of financial information in regard to the need for XBRL assurance we conducted focus groups. The use of focus groups is important in the early stage of this research because it allowed participants to develop a dialog based on a structured list of questions and build on the opinions of other participants. This section provides information on the participants, instrument and procedures used in conducting focus group interviews.

Participants

The participant populations were chosen because they represent the views of a broad range of regulators, users and public policy setters. Members of the FEE XBRL Task Force clearly

understand XBRL and its implications for FEE members. CAG members represent market participants world-wide. Because of the difference in composition of the two groups the FEE task force had a greater depth of understanding of XBRL; however, the majority of the participants in the CAG focus groups had a general knowledge of XBRL. The differences in the breadth and depth of understanding were reflected in the focus groups responses.

Fourteen members of the XBRL Task Force participated in a large round-table focus group session held during a scheduled afternoon session. Members of the CAG were recruited to participate in focus group sessions held on the sidelines of the scheduled meeting. There were two focus group sessions. One session had three participants while the second session had four participants.

Instrument

The instrument for the focus groups is provided in Appendix 1. The questions were designed to broadly assess whether participants felt assurance should be required. The same questions were used for two scenarios. The first scenario was similar to the current reporting environment which includes financial reports in both PDF and XBRL format. The second scenario was in the future when XBRL is the sole method of financial reporting. In addition, whether there was sufficient guidance in existing audit standards to provide assurance on XBRL or whether additional specialty standards were needed. And more specifically, what level of assurance should be provided and how it should be communicated.

While the question set was fixed in advance of the meeting, it is sometimes fruitful to deviate from the planned question order or to add additional questions to pursue a line of thought suggested by a participant. All focus group sessions gravitated to the issues of "what is materiality in an XBRL reporting environment," "what is the implication of not having a 'true and fair' view," and "how the current bolt-on method for the production of XBRL influences the need for assurance."

Procedures

The FEE session was conducted as part of the scheduled FEE XBRL Task Force meeting. The XBRL Task Force was a standing group and the members of the Task Force had previously met. One member of the research team is a member of the Task Force. We were allowed 90 minutes to conduct our focus group.

Members of the CAG were contacted personally before the meeting and asked to participate in one of three scheduled focus groups or to schedule individual interviews. In addition, during the CAG general assembly meeting we were afforded the opportunity to discuss our project and solicit additional participants. Focus groups were conducted on the afternoon prior to the start of the general session and in the evenings following the general sessions.

Participants were greeting at the beginning of each focus group. At this time the participants were reminded that we would be using a video camera and two digital voice recorders to capture user responses for future analysis and sharing within the research team. The participants were also

informed that all responses would be reported in the aggregate and that no individually identifying information would be included in the final write-up of this report.

The sessions began with a discussion of why and for whom we were conducting the research project. In addition, at the CAG sessions background information was provided on XBRL (i.e., purpose, implementations, etc.). It was necessary to include a discussion of XBRL at the CAG sessions because the participants varied in their understanding of XBRL. The opening script of the focus group questions in Appendix 1 provides the XBRL background explanation given to participants.

Following the introductions and background discussion we introduced the fictional reporting environment of Palladia. We created a fictional country so that participants would not relate our questions to any existing reporting environment. This was necessary so participants would focus on the key aspects of the reporting environment rather than the perceptions that might surround a particular countries implementation of XBRL. Key aspects of the financial reporting environment in Palladia are the use of IFRS, a mandatory audit requirement for public and private companies exceeding 50 million Euro in assets, and a common law legal environment. In regard to XBRL the country has implemented XBRL *in addition to* traditional reporting in PDF to the stock exchange and companies' office.

The first question in each session was whether the XBRL reports should be audited. The order of the remaining questions varied significantly between groups. If a group member introduced a topic that was included on our list we would attempt to solicit each group members' views (Kitzinger 1999). Further, if a member seemed to nod in agreement or disagreement one of the two interviewers would encourage that group member to verbally express their views. If participants strayed from the topic they were re-directed to a new question in the question-set after completing their thought. The first person asked each new question was randomly chosen.

When the interview questions had been completed for the fictional environment in Palladia the new reporting environment was introduced---Palladia was now requiring reporting only in XBRL format (i.e., there was no longer going to be a PDF version on the financial reports). And the questions were repeated, with the first question being "Should the XBRL reports be audited?"

At the end of the scheduled time the participants were thanked for their participation and provided with contact details for the interviewers.

Results

This section will summarize and categorize the findings based on the transcribed results from the focus groups which eliminated individually identifying details. The recordings from the four focus group sessions were transcribed by an independent agent, with the audio maintained to complete any areas in the transcripts which the agent was unable to transcribe adequately due to environmental factors present during recording. Environmental factors included noise from a waterfall in the proximity of the session or street noise. The key topics of conversation were:

1. Should assurance be mandatory?
2. Whether XBRL reports were included in the financial statement audit or were separate?
3. What level of assurance should be provided in an XBRL engagement?
4. Is there a need for additional specialty XBRL assurance guidance?
5. How to communicate XBRL assurance?

Mandatory Assurance

Most of the participants at the FEE meeting felt that assurance should be mandated in the dual XBRL and PDF financial reporting environment. Several other individuals felt that the market should drive the demand for assurance. Individuals acknowledged the need for assurance may be specific to a particular implementation. The primary motivation expressed for this view was because for the accounting profession to push for mandatory XBRL assurance could be viewed by the market as self-serving. Additional thoughts expressed revolved around the many unknowns of providing XBRL assurance whether it was possible to move forward toward assurance without answering questions such as, "What am I auditing? The data? The database? The conversion?", "What about materiality?", and "What about the loss of a fixed view of the financial statements?"

The CAG participants were split on the need for mandatory assurance with one group of participants coming to a consensus that assurance was not necessary because XBRL was just a reporting mechanism; however, it is not clear this group had direct knowledge of the many judgments required in the production of an XBRL instance document within any reporting regime. The other groups either felt assurance should be required or that assurance should be required if there was user demand. The latter group reached somewhat of a consensus view that no company would provide voluntary assurance.

When the discussion shifted and XBRL was the sole reporting mechanism the opinion was that XBRL would have to be included as part of the standard financial statement audit. However, in general it was felt that additional specific audit procedures would be necessary to provide XBRL assurance due to the unique judgments and to address *how* the assurance would be communicated. There were two related minority opinions expressed. The first was that there was sufficient guidance in ISAE 3000 and ISA 700. The second was more that when XBRL became integrated into the companies reporting system at the GL level it would be necessary to focus on the internal controls present within the system and that this was covered by existing standards.

Of those participants who felt that assurance should be mandated they indicated that assurance would be necessary to add confidence to the data. Others agreed that it was necessary for the XBRL to be of high quality but quality could be achieved without an assurance mandate. One participant offered the analogy that when cars were first introduced there were not seat belts or airbags because we didn't know we needed them but now we know they save lives and they are required; XBRL is the same, users don't understand all of the risks so mandatory protection in the form of an audit might be necessary.

Integrated or Separate Assurance Report

The decision to provide XBRL assurance integrated into the standards audit report or to provide a separate XBRL assurance report was primarily motivated by when and how the XBRL instance document was created. If the instance document was created as part of a separate bolt-on process there was a strong feeling that it would need to be reported in a separate assurance report. Individuals clearly expressed views that if it was not integrated into the accounting information systems then the procedures performed on the instance document were sufficiently different from the tasks undertaken in a financial statement audit to warrant separate assurance. However, if the XBRL was imbedded into the accounting information system participants felt that the audit focus would be directed at internal controls which they are now reporting on in the financial statement audit; therefore, any assurance on the XBRL would be included in the standard audit report.

Another key point of discussion in the decision to provided integrated or separate assurance was how the information consumer would use the XBRL instance document. Respondents indicated that we do not have any knowledge of how it will be used; therefore, how can we structure the appropriate form of the report. For example, one participant indicated that analysts only use about twenty percent of the information contained in the annual report. Therefore, an analyst might only want assurance on particular elements thus warranting a separate assurance report.

Finally, a couple of participants believed strongly that there was no need for integrated or separate assurance because "XBRL was a reporting mechanism" and the reporting mechanism does not require an audit.

Level of Assurance

A number of key points were raised in relationship to the level of assurance that was desired by consumers and that should be provided by auditors. It was stated that while higher assurance was "better" it was not necessarily required. Participants felt that XBRL assurance could take many forms and that the level of assurance provided should be matched with consumer needs. Further, multiple levels of assurance might be necessary or desirable within the same instance document. For example, one financial statement fact may have a reasonable level of assurance while another fact has no assurance. In addition, the level of assurance may vary across time with fixed reporting periods requiring a higher level of assurance. Individuals recognized that in the future XBRL could support continuous reporting and as such it might be provided with no assurance; however, periodic reports such as the current financial statements might require assurance. Participants equated this with quarterly and annual reporting to the US SEC wherein quarterly reports are not audited but annual reports are audited.

Further, several participants felt that multiple levels of assurance services could and should coexist. For example, no assurance in the form of an AUP might be appropriate in some circumstances while other implementations of XBRL would lead to the demand for audit assurance.

The Need for Specialty XBRL Assurance Guidance

A significant majority of the respondents felt that the IAASB needed to issue specialty guidance in relation to XBRL assurance. Two intertwined issues that surrounded the discussion on the need of XBRL-specific assurance guidance were presentation and materiality of XBRL data. In the current audit environment assurance is provided at the financial statement level. Do the financial statements give a true and fair view? The audit opinion is based on the financial statements taken as a whole. Materiality is judged at the financial statement level. In an XBRL environment we have individual facts. The facts in an instance document are consumed without a fixed view of the financial statement therefore they stand alone. So as several participants expressed either the fact is correct or it is not correct. Further, are all parts of the metadata equally important? What is the implication of this right versus wrong on materiality? Further, a couple of users expressed whether materiality could be related to a particular line item based on usage. For example, is "current assets" a more material element than a disaggregated element? Because there is not a fixed financial statement view in most XBRL implementations this contributes to the need for a separate assurance standard. There were no resolutions to the issues of how to define materiality in XBRL, only that it caused a significant departure from existing auditing standards thus was a motivating factor for separate assurance standards.

Communicating XBRL Assurance

While individuals felt it was important to communicate the type and level of assurance provided on the XBRL data they were unclear about how to best do this. It is important to know what level of reliance can be placed on the data. However, given that the data would be consumed electronically there was some debate as to whether it was appropriate to have a PDF version of the audit report which covered XBRL. So while the participants recognized the importance of communicating XBRL assurance and why the current communication method was not desirable for the future no participants offered solutions on how to communicate assurance.

Conclusions

In this chapter, we obtained the views of a cross-section of producers, consumers and regulators on the need for and issues surrounding the production of XBRL assurance. While there were some differences, a majority of the participants felt that XBRL assurance should be mandatory regardless of whether XBRL was provided as the sole method of financial reporting or as a supplement to current reporting models (i.e., PDF, HTML, etc.). The difference of opinion in most cases was related to the respondent's depth of understanding of the potential for errors in the production of XBRL reports. For example, nearly all respondents who had been involved in developing XBRL standards or the production of XBRL reports felt assurance should be mandatory; whereas, most participants who were aware of and had a general understanding of XBRL supported the need for mandatory assurance. It seems that direct or indirect knowledge of the possibilities for errors increases the perceived need for mandatory assurance. Further, nearly all participants, including those that did not believe that XBRL assurance should be mandatory, felt it was imperative that the IAASB move forward with XBRL assurance guidance. It was suggested by multiple

participants that the IAASB might move first toward guidance similar to the AICPA's Agreed-Upon Procedures guidance (SOP 09-1) while moving forward on a specific assurance standard. Participants felt it was important to establish the IAASB as leading in the development of a standard rather than trying to develop a standard in haste after XBRL assurance has been mandated in the first reporting environment. Participants did acknowledge that this puts the IAASB in the conundrum of trying to develop a standard to meet the needs of an unknown set of XBRL data consumers in an environment that has yet to develop a clear set of best practices.

The results of the focus groups suffer from the general limitations of focus groups including that the opinion of the participants is not representative of the population, that the participants may have been providing information that they believed would please the investigators or that they were influenced by the use of audio-video recording equipment. And, the information provided in focus groups is likely not projectable to the population. However, the information provided in the focus groups is helpful for the design of the quantitative research studies which we undertake in stage 2 of our research.

6 STUDY 2 – EXPERIMENT 1 - USA

Overview

This third study addresses end-user understanding of the nature of assurance of financial statements in XBRL, in the US setting. We do so primarily in an experimental setting. Formally, we address three principal issues: first, the impact of alternative forms of assurance on XBRL on investor perceptions of 1) the level of assurance provided by the assurance engagement and 2) the level of errors that remain in the instance document following the assurance engagement. Third, we seek feedback from investors on matters such as the nature of audit procedures they expect auditors to provide on XBRL engagements and their desired reports.

Research Question Development

Level of Assurance: The primary construct we address in this study is the possible set of assurance reports on XBRL filings and the levels of assurance on those reports. There is limited academic literature on the effect of different levels of assurance on user perceptions and decision making. Roebuck et al. (2000) examined whether the engagement's subject matter (historical versus prospective) and the amount of work performed (higher work effort versus lower work effort) affect how assurance report users perceive the level of assurance. Users perceived a higher level of assurance for historical than prospective reports. However, they did not vary the level of assurance placed on the reports as a result of the extent of the work performed by assurance specialist (Roebuck et al. 2000).

Hasan et al. (2003) categorize the reporting on assurance services for other than financial statements into (i) opinion on procedures, (ii) negative assurance, (iii) positive assurance, and (iv) positive assurance with a limitation paragraph. They tested whether users of assurance services perceive underlying differences in levels of assurance (moderate/high) or in these alternative forms of reports. In a survey of shareholders (being potential consumers of a range of assurance services), they found little perceived differences in the level of assurance provided by alternative forms of assurance reports on an environmental performance subject. The only form of report that stood out was the so-called opinion on procedures report, which Hasan et al. (2003) speculate, was seen by consumers as comparable to a full audit report on a set of financial statements. While not manipulating the level of assurance Coram et al. (2009), find that the provision of assurance on voluntary disclosure of non-financial performance was influential with sophisticated users only when the disclosures were positive, and therefore potentially self-serving by management.

As we discussed earlier, the form of communicating the level of assurance within assurance services reports is correlated with the nature of the engagement object, form and extent of evidence and assurance effort. There are several studies that address user perception on the form of report (Bartlett 1991; Johnson et al. 1983; Pany and Smith 1982; Pillsbury 1985) largely conducted in the 1980s when review engagements (largely comparable to limited assurance engagements) became available in the US setting. The research has mixed results with some studies showing that users

perceived a higher level of assurance provided by an audit than with a review engagement (Bartlett 1991; Yardley 1989) with others showing no substantive difference in the level of assurance (Pany and Smith 1982). Maijoor et al. (2002), in summarizing this research, note that information consumers have difficulty distinguishing between different levels of assurance. Further, there is an expectations gap between assurance services providers and information consumers.

There are several alternatives that assurance services providers can make on XBRL-based financial statements. All permutations and combinations of these alternatives are set out in Figure 9:

Case 1: The current base case, where the audit report presents no information on XBRL. Auditors, under guidance from the PCAOB (US environment) or the IAASB (international environment), undertake no mention of XBRL. Information consumers must make a judgment as to coverage of XBRL.

Case 2: Standard audit report with explicit inclusion of XBRL within the audit report, in an emphasis of matter paragraph.

Case 3: Standard audit report with explicit exclusion of XBRL within the audit report, in an emphasis of matter paragraph

Case 4: Standard audit report with an accompanying reasonable assurance report on XBRL

Case 5: A standalone reasonable assurance report on XBRL

Case 6: Standard audit report with an accompanying limited assurance report on XBRL

Case 7: A standalone limited assurance report on XBRL

Figure 9: Alternative Assurance Reports on XBRL-based Financial Statements

How will information consumers, such as investors, differentiate between these alternative assurance forms? Some of the pairs are relatively straightforward to predict. It is clear, if these reports communicate the level of assurance that the IAASB expects that they do, that users should believe that auditors will communicate a higher level of assurance on XBRL when the report stipulates a reasonable level of assurance (Cases 4 and 5) than those that provide only a limited level of assurance (Cases 6 and 7). Similarly, when the audit report explicitly includes XBRL in an emphasis of matter paragraph (Case 2) it will communicate a higher level of assurance than the typical boilerplate audit report that investors may be familiar with (Case 1). In turn a boilerplate audit report will communicate a higher level of assurance than a report explicitly excludes XBRL (Case 3). Those cases that are arguably more problematic are where the level of assurance – and by extension, assurance objective, engagement effort – are identical. For example, the level of assurance between the two cases that have reasonable (Cases 4 and 5) and limited levels of assurance (Cases 6 and 7). However, the form of communication of these engagements are not identical. Cases 4 and 6 include the standard audit report, arguably enhancing the source credibility of the overall communication. Source credibility theory argues that the reasonable level of assurance will exceed the reasonable assurance case (Beaulieu 1994; Giffin 1967; Pornpitakpan 2004).

The same level of assurance is provided in Case 2, where reasonable assurance on the XBRL is incorporated within the audit report and Case 4, where the reasonable assurance stands alongside the audit report. Again relying on source credibility theory, we predict that where the assurance on XBRL is incorporated within the audit report, greater credibility is provided for the information consumer. While we can predict many of the relationships between the cases, there are several that are more problematic. For example, how will users interpret the perceived level of assurance between a standard audit report that makes no mention of XBRL (Case 1) and a standalone limited assurance report (Case 7)? We have no professional guidance or prior research to allow us to exercise judgment, so we make no prediction. Figure 10 summarizes how we predict that users will perceive the level of assurance on XBRL versions of financial statements.

Predicted Order	Case	Description
1	2	Standard audit report with explicit inclusion of XBRL
2	4	Standard audit report with separate reasonable assurance report on XBRL
3	5	A standalone reasonable assurance report on XBRL
4	6	Standard audit report with separate limited assurance report on XBRL
5=	1:	Standard audit report with no information on XBRL
5=	7	A standalone limited assurance report on XBRL
7	3	Standard audit report with explicit exclusion of XBRL

Figure 10: Predicted User Perception of Assurance Provided

Task Complexity: The second perspective that we have is based on the complexity and difficulty of the audit engagement, particularly in terms of the subject matter and criteria. Perhaps unsurprisingly, we have seen no research that addresses this question. Unsurprising because most of the audit research considers audit engagements based around financial statement audits. Here, the audit effort is well known and there is little variation in views of the complexity of the audit task. In new areas such as the audit of greenhouse gas emissions and XBRL, the level of task complexity in the audit engagement is essentially unknown by information consumers. Task complexity, is generally associated with either task difficulty or task structure (Bonner 1994). Bonner (1994) proposes a model to examine the effects of audit task complexity on audit judgment performance. Bonner's definition of task complexity classifies elements of task complexity into the three components of general information processing models: input, processing and output. Within these components, task characteristics such as amount of information and clarity of information are important. The low complexity tasks are relatively simple and straightforward. Conversely, high complexity task require more steps to perform and the decision makers have to draw on the expertise of other individuals. Based on Bonner (1994), we posit that as a task becomes more complex, the consumer of the assurance services will consider that a higher level of assurance is provided.

Method

Overview

We conduct a 7x2 repeated measures experiment with individual investors to test the predictions on investors' perceptions of alternative forms of assurance. The complexity manipulation is between-participant. The reports are measured within-participant, with each participant reporting their perceptions on three cases. The context in which investors are placed relates to the filings in XBRL made to the SEC. Extensive consultation on the wording of the instrument was made with professional auditors familiar with XBRL and specialists at the AICPA. Three rounds of pre-testing were completed, including a major pre-test with 281 adults from the general US population. As a result, significant changes were made in the experimental instrument prior to final administration.

Participants:

The participants in the experiment are drawn from individual investors in shares. We employ a commercial provider of survey participants. We make no direct payments to the participants, but the provider makes a variety of small incentives to incentivize them to complete the experiment. The provider maintains a variety of quality mechanisms to ensure the final results are representative of the US population. Employing our extensive set of demographic questions, we then extract participants from this larger panel.

While the participants may be aware of the financial statement audit, it is unlikely that they will be aware of the nature of broader assurance offerings, including (in the US context) attestation. It is almost certain that very few or none of the participants will be aware of XBRL. Equally, it was clear from pre-testing that while participants may know about assurance at an abstract level they did not do so at a concrete level. We provide a simple introduction to these concepts, using terms and concepts from the auditing standards. We then provide background on XBRL. This preparatory material is reproduced in Appendix 3 – Experimental Materials.

Environment

The experiment introduced a mythical corporation ("Offshore Tooling, Inc." (OT) operating as an "independent trading organization in tooling and parts used by offshore oil industries, based in Houston," and based on corporations in the industry. Participants in the experiment are advised that: "In March 2011, OT finalized its Annual Report for the year ended 31 December 2010. As required by the SEC, OT prepared both HTML (Web) and XBRL versions of the Annual Report. In preparing the XBRL version, OT tagged all the detailed information in the report, include all the dollar values in the Financial Statements and the Notes and all textual disclosures. As required by SEC rules, OT used the current version of the UGT to prepare the XBRL version of the Annual Report. When the UGT did not have needed tags, OT created its own tags in an extension taxonomy. OT filed the HTML (Web) and XBRL versions of the Annual Report with the SEC and published them on its Website." The participants are advised that Offshore Tooling is audited by "Accountants and Auditors LLP of Houston." More details on the preparation of the participants is provided below and in Appendix 3.

Flow of the experiment

Following collection of demographics, we provide participants with background on the hypothetical company, Offshore Tooling Inc., audit and assurance, the nature of XBRL; the XBRL risk generation manipulation; and reporting scenarios each with collection of responses to the two questions relative to the measurement of the hypotheses. Three reporting scenarios are provided to each participant. Given the design, we do not allow review and examination attestation scenarios to be presented to the same participants. In other words, a participant receives either review or examination attestation scenarios. While the experiment tests the two rather simple dependent variables, we also took the opportunity to ask additional questions. We ask participants for their view on matters such as 1) the desirability of a range of assurance reports if the XBRL version of companies' annual report "were to be the ONLY version required to be filed by companies with the SEC" or "If both XBRL and HTML (Web) version of the Annual Report are BOTH required to be filed by companies with the SEC," and 2) the assurance procedures that the auditor would be likely to complete.

Independent Variables

Assurance Reports: As discussed in the previous section, we explore each of the seven possible combinations of the audit and attestation reports on the financial statements and the production of XBRL reports. As discussed above, there are seven alternative sets of reports are as follows:

1. Standard audit report, with no mention of XBRL. This is the base case.

2. Standard audit report with explicit inclusion of XBRL. Here the audit report communicates the finding of the audit report.

3. Standard audit report with explicit exclusion of XBRL.

4. Standard audit report with a separate examination attestation report on XBRL. The examination attestation is equivalent to a reasonable assurance engagement in the IAASB framework.

5. Examination attestation report on XBRL.

6. Standard audit report with separate review attestation report on XBRL. The review attestation is equivalent to a limited assurance engagement in the IAASB framework.

7. Review attestation report on XBRL.

We now illustrate the formulations presented to participants, showing three of the cases discussed above. The first presentation is Case 1, which was a standard audit report, with no mention of XBRL. Participants read the following extract:

Accountants and Auditors LLP published an unqualified audit report on the internal controls and financial statements of Offshore Tooling, Inc. The report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's annual report, filed with the SEC. An extract of the audit report says "In our opinion, the financial statements ... present fairly, in all material respects, ... , in conformity with U.S. generally accepted accounting principles."

The second extract is Case 3, the standard audit report with explicit exclusion of XBRL

Accountants and Auditors LLP published an unqualified audit report on the internal controls and financial statements of Offshore Tooling, Inc. The report states that the audit engagement excluded the preparation of the XBRL report. The report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's Annual Report, filed with the SEC.
An extract from the report says: "Our engagement explicitly excludes the representation of the financial information contained in the XBRL report."
Another extract says: "In our opinion, the financial statements ... present fairly, in all material respects, ... , in conformity with U.S. generally accepted accounting principles."

The third extract is Case 7, a separate review (limited assurance) attestation report on XBRL:

Accountants and Auditors LLP published a review attestation report on the preparation of the XBRL version of Offshore Tooling, Inc.'s Annual Report. The review attestation report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's Annual Report, filed with the SEC.
An extract from the review attestation report says: "Based on our review, nothing came to our attention that caused us to believe that the XBRL report is not derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling, Inc. or that it was not correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US."

Complexity: We manipulate the level of complexity in the production of XBRL financial statements. The text for the low complexity state is "The US GAAP XBRL taxonomy that supports quarterly and annual reporting is large but straightforward. Mapping the various facts in the quarterly and annual reports to the taxonomy requires little judgment." Text for the high complexity state is "The US GAAP XBRL taxonomy that supports quarterly and annual reporting is large and complex. Mapping the various facts in the quarterly and annual report to the taxonomy requires considerable judgment."

Repeated Measures

Each participant completes three independent scenarios.

Dependent Variables

We use two dependent variables to test our predictions:

Perception of level of assurance on XBRL report: We ask all participants to assess directly their understanding of the level of assurance with the following question: "What level of assurance is Accountants and Auditors LLP providing on the preparation of the XBRL version of Offshore Tooling, Inc.'s 2010 Annual Report?" To control for common method bias, we have two versions of the level of assurance DV. One version is a scale (-100 0, +100, with a "Not sure" option). The

other is a traditional Likert scale, on a seven point scale. We test the reliability of each of these measures and integrate them in the analysis, below.

Likelihood of residual errors in the final annual report: This dependent variable and associated question addressed the issue of efficacy in auditor conduct of their assurance engagement on managerial behavior and, by extension, on the quality of the final report. Half of the participants are asked to score their responses to the following question: "How likely is it that there will be errors in Offshore Tooling, Inc.'s XBRL version of the Annual Report that would negatively impact the reliability of the report, as compared with the HTML (Web) version of the Annual Report? (-100 = Definitely will NOT be errors, 0 = Not sure, 100 = Definitely will be errors)." The remaining participants were asked to assess their agreement with the following question: "There WILL(WILL NOT) be errors in Offshore Tooling, Inc.'s XBRL version of the Annual Report that will negatively its reliability, as compared with the HTML (Web) version of the Annual Report," on a seven point Likert scale.

Descriptive Results

Survey population

The commercial provider draws its panels from the broad US population. Given the nature of these panels, a number of participants will commence the survey, see the nature of the survey and go no further. Others will commence the study but not complete all the questions. Table 4 shows the number of participants at the various stages of the study. In the results shown below, we include only those participants that complete all stages of the experiment. Of the 853 participants that complete the full study, 292 own shares.

Table 4: Survey Population – US

Commenced study	2,686
Completed:	
- demographics	1,165
- experiment	890
- post-experiment	853
Of which, own shares	292
Do not own shares	561
Total	853

Quality screening

Given that the participants are drawn from the broad US population, we undertake a variety of screening procedures to develop a subset of the participants that meet our requirements. These tests are designed to screen out participants that may not have the knowledge or skills necessary to assess the questions posited in the experiment or post-experimental surveys. The first screen is for age. We eliminate 10 participants that are less than 20 years of age. The second screen is whether the participants read annual reports. We eliminate 68 participants that indicate that they do not read

annual reports. It is likely that the quality of responses will be lower for those that do not read annual reports. The third screen is for an inconsistency between answers to questions on share ownership. We ask participants how many companies in which they own shares. All those that answer that they own stocks in one or more corporations are treated as owning shares. In a separate demographic question, we ask participants for a list of which investments they hold, including "stocks and shares." We eliminate 92 participants that indicate that they do not own stocks and shares under the secondary question but do show that they own share in one or more companies. The final screen relates to answering the set of questions relating to the first dependent variable, viz: the level of assurance. In this question, we allow respondents to say that they are not sure of the level of assurance for a given scenario we present them. We eliminate six participants that indicate that they are unsure of the level of assurance for each of the three scenarios. The overall effect of the screen process is to reduce the number of participants from 292 to 116. We show the demographics and experimental results below for the three groups that: 1) completed all questions (853); 2) own shares (292); and 3) meet screening criteria (116).Demographics

Given that our participants are from a commercial provider in a Web-based survey, we asked extensive questions on demographics. To indicate the nature of these participants we present selected demographic variables, contrasting those that own shares with those that do not. As shown in Table 5, those that own shares have a considerably higher proportion of those that are employed than those that do not own shares.

Table 5: Employment

Current or Previous Employment Status	All	Own shares		Quality
		No	Yes	Screen
Employee Of Private-For-Profit Business	450	258	192	88
	53%	46%	66%	75%
Employee Of Private-Not-For-Profit	37	21	16	3
	4%	4%	5%	3%
Local Government Employee	23	14	9	4
	3%	2%	3%	3%
State Government Employee	26	17	9	6
	3%	3%	3%	5%
Federal Government Employee	19	12	7	4
	2%	2%	2%	3%
Self-Employed In Non Incorporated Business	74	49	25	8
	9%	9%	9%	7%
Self-Employed In Own Incorporated Business	16	12	4	1
	2%	2%	1%	1%
Working Without Pay In Family Business	19	12	7	2
	2%	2%	2%	2%
No Previous Employment.	189	166	23	2
	22%	30%	8%	2%
N	853	561	292	118
	100%	100%	100%	100%
Pearson $\chi^2(8) = 35.1302$ Pr < 0.001				

Similarly, the level of education is considerably higher for those that own shares.

Table 6: Education

Education Level	All	Own shares		Quality
		No	Yes	Screen
Less than High School	117	102	15	4
	14%	18%	5%	3%
High School / GED	301	232	69	22
	35%	41%	24%	19%
Some College	203	127	76	23
	24%	23%	26%	20%
2-year College Degree	81	45	36	15
	9%	8%	12%	13%
4-year College Degree	127	46	81	42
	15%	8%	28%	36%
Master's Degree	20	8	12	8
	2%	1%	4%	7%
Doctoral Degree	2	1	1	1
	0%	0%	0%	1%
Professional Degree	2	-	2	1
	0%	0%	1%	1%
N	853	561	292	116
	100%	100%	100%	100%

Many of the participants that are taking this type of survey are young. Those that own shares are older.

Table 7: Age

Age group	All	Own shares		Quality
		No	Yes	Screen
Less than 20	86	76	10	-
	10%	14%	3%	0%
20 to 24	69	51	18	6
	8%	9%	6%	5%
25 to 34	155	94	61	24
	18%	17%	21%	21%
35 to 44	153	99	54	22
	18%	18%	18%	19%
45 to 54	200	131	69	24
	23%	23%	24%	21%
55 to 64	147	85	62	27
	17%	15%	21%	23%
65 years and over	43	25	18	13
	5%	4%	6%	11%
N	853	561	292	116
	100%	100%	100%	100%

The next question asked for details of the investments held. It shows that those that indicated that they owned shares had a range of investments – but also data quality issues (only 54% of participants that say they own shares indicate on this question that they have stocks and shares in their portfolio – although 58% says that they have Section 401K investments which may account for the variance).

Table 8: Investments

Investment type	All	Own shares		Quality
		No	Yes	Screen
Real estate	8%	3%	16%	21%
Section 401K, 529 etc	29%	13%	59%	66%
Stocks and shares	18%	1%	52%	100%
Bonds	9%	3%	19%	34%
Mutual funds	15%	4%	38%	53%
Currencies, gold etc	4%	1%	9%	15%
Bank deposits	31%	19%	54%	60%
Certificates of deposit	13%	5%	28%	36%
None	45%	67%	3%	2%
Other	3%	2%	5%	2%
Average number of investment types held	1.30	0.52	2.81	3.85
N	853	561	292	116

The next question we ask for sources of investment advice, ranking alternatives on an eight point scale. Interestingly, television is still important for investors. Advice from friends and colleagues (the majority of "Other") is also vital. The highest ranked source of information is financial websites, with Internet search and corporate websites following, as shown in Table 9:

Table 9: Sources of Information Ranked

Source of Investment Information	All		Own shares				Quality Screen	
			No		Yes			
	Mn	Std Dev	Mn	Std Dev	Mn	Std Dev	Mn	Std Dev
Internet search	4.01	2.27	3.85	2.31	4.30	2.18	4.72	2.06
Analyst and Stockbroker Research	4.29	2.16	4.45	2.11	3.97	2.23	3.59	2.27
Investor Relations Websites	4.47	1.98	4.48	2.00	4.45	1.93	4.38	1.84
Quarterly/Annual Reports	4.13	2.11	4.22	2.10	3.98	2.11	3.75	2.01
Financial Press	4.56	1.95	4.66	2.00	4.38	1.86	4.42	1.84
Television	4.67	2.32	4.49	2.32	5.02	2.28	4.94	2.35
Financial Website	5.77	2.87	5.67	2.87	5.96	2.88	6.20	2.77
Other	4.10	2.04	4.18	2.05	3.96	2.01	4.01	2.03
N	853		561		292		116	

The number of company annual reports read is surprisingly high.

Table 10: Company Reports Read

Reports read	All	Own Shares No	Own Shares Yes	Quality Screen
None	565	495	70	
	66%	88%	24%	
1 to 5	226	61	165	79
	26%	11%	57%	68%
6 to 10	43	3	40	26
	5%	1%	14%	22%
11 to 15	11	2	9	5
	1%	0%	3%	4%
Greater than 15	8	0	8	6
	1%	0%	3%	5%
N	853	561	292	116
	100%	100%	100%	100%

We finally asked respondents for their self-perceived level of knowledge (on a scale of 1-100) on key measures. Interestingly, the self-perceived levels of knowledge are surprisingly high, with the exception of XBRL, which very few had heard of.

Table 11: Self-Perceived Levels of Knowledge

Knowledge Area	All Median	All Mean	All Std Dev	Own Shares No Median	Own Shares No Mean	Own Shares No Std Dev	Own Shares Yes Median	Own Shares Yes Mean	Own Shares Yes Std Dev	Quality Screen Median	Quality Screen Mean	Quality Screen Std Dev
Accounting	25.0	33.9	32.0	12.0	26.8	30.1	49.0	47.4	31.3	55.5	54.8	30.0
Auditing	13.0	26.0	29.2	5.0	18.8	25.6	37.0	39.9	30.6	50.0	47.2	29.1
Investing	23.0	29.4	29.7	7.0	19.5	24.2	50.0	48.4	30.1	62.0	59.0	26.8
XBRL	2.0	12.6	22.7	1.0	7.9	16.0	4.0	21.7	29.8	7.0	25.5	30.9
N	853			561			292			116		

We also asked about audit procedures. While perhaps not so clear, it seems that respondents take a practical approach in their judgment on audit procedures.

Descriptive Statistics

We now show the descriptive statistics for the levels of assurance (Table 12) and expected residual errors in the XBRL instance documents (Table 14), tabulated by risk of generating XBRL (low and high) for each of the seven classes of assurance report.

Table 12: Levels of Assurance
Participants owning shares

Report	Statistic	Owning Shares	Quality Screen

		Risk			Risk		
		Lo	Hi	All	Lo	Hi	All
Audit Report	N	44	51	95	20	22	42
	Mean	62.8	52.7	57.4	58.4	53.5	55.9
	Std Dev	25.8	32.2	29.7	27.9	31.9	29.8
Audit Report with XBRL	N	54	38	92	26	19	45
	Mean	65.7	65	65.4	71.3	74.5	72.6
	Std Dev	27	26,0	26.4	24.1	18.2	21.7
Audit Report excluding XBRL	N	40	48	88	16	23	39
	Mean	47	39.4	42.8	38.9	44.8	42.4
	Std Dev	32.8	33.6	33.3	32.3	36.1	34.3
Audit Report and Reasonable Assurance	N	60	57	117	27	27	54
	Mean	67.4	60.8	64.2	67.9	71.9	69.9
	Std Dev	20	31.2	26.2	18.1	24.4	21.4
Reasonable Assurance	N	57	55	112	25	27	52
	Mean	70.5	61	65.8	70.0	67.5	68.7
	Std Dev	23.1	29.5	26.8	22.2	25.8	23.9
Audit Report and Limited Assurance	N	56	54	110	26	22	48
	Mean	69	65.6	67.4	72.5	64.9	69.0
	Std Dev	26.7	24.6	25.6	23.0	24.9	24
Limited Assurance	N	41	34	75	18	14	32
	Mean	68.7	65	67	79.8	60.5	71.3
	Std Dev	27.6	24.2	26	24.2	23.5	25.4
All	N	352	337	689	158	154	312
	Mean	65.2	58.2	61.8	66.8	62.8	64.8
	Std Dev	26.6	30.3	28.7	26.1	28.5	27.0

The results shown in Table 12 are broadly in line with our predictions. As shown in the summary of our predictions and actual outcomes in Table 13, the perceptions of the level of assurance for limited assurance is marginally higher than the perceptions for either the audit report including XBRL (case 2) or the two versions of explicit reasonable assurance on XBRL (cases 4 and 5).

**Table 13: Predicted versus Actual Rank of Levels of Assurance
Based on Quality Screen**

Predicted Order	Actual Order	Case	Description of cases
1	1	2	Standard audit report with explicit inclusion of XBRL
2	3	4	Standard audit report with separate reasonable assurance report on XBRL
3	5	5	A standalone reasonable assurance report on XBRL
4	4	6	Standard audit report with separate limited assurance report on XBRL
5=	6	1	Standard audit report with no information on XBRL
5=	2	7	A standalone limited assurance report on XBRL
7	7	3	Standard audit report with explicit exclusion of XBRL

Table 14 shows the perceptions of participants on the residual level of errors in XBRL-formatted instance documents representing financial statement.

Report	Statistic	Owning Shares			Quality Screen		
		Risk			Risk		
		Lo	Hi	All	Lo	Hi	All
Audit Report	N	51	60	111	21	22	43
	Mean	61.7	61	61.3	62.7	63	62.9
	Std Dev	20.8	21.4	21.1	18.2	22.5	20.2
Audit Report with XBRL	N	68	46	114	28	20	48
	Mean	55.6	54.4	55.1	52.0	49.8	51.1
	Std Dev	23.8	21.4	22.8	27.7	21.1	25
Audit Report Excluding XBRL	N	46	62	108	17	25	42
	Mean	66.1	64.6	65.2	64.9	65.2	65.1
	Std Dev	15.7	18.8	17.5	10.7	18.9	15.9
Audit Report and Reasonable Assurance	N	66	69	135	27	27	54
	Mean	54.6	55.4	55	55.6	49.2	52.4
	Std Dev	21.5	24.9	23.2	19.6	24.9	22.4
Reasonable Assurance	N	64	64	128	25	27	52
	Mean	53.7	57.6	55.6	51.4	56.1	53.9
	Std Dev	25.9	22.9	24.4	24.7	26.2	25.4
Audit Report and Limited Assurance	N	67	70	137	26	25	51
	Mean	58.8	61.5	60.2	56.1	64.1	60.0
	Std Dev	24.6	20.1	22.4	24.9	18	21.9
Limited Assurance	N	46	44	90	19	15	34
	Mean	59	63.7	61.3	54.4	62.3	57.9
	Std Dev	22.6	18.7	20.8	24.5	17.5	21.7
All	N	408	415	823	163	161	324
	Mean	58	59.7	58.9	56.2	58.3	57.3
	Std Dev	22.8	21.6	22.2	22.7	22.4	22.5

Table 15 shows our predictions as compared with the outcome. In line with predictions, the audit report that explicitly excludes XBRL (Case 3) has the highest expected error rate. The other cases closely follow our prediction.

Table 15: Predicted versus Actual Rank of
Error Levels
Based on Quality Screen

Predicted Order	Actual Order	Case	Description
1	1	2	Standard audit report with explicit inclusion of XBRL
2	2	4	Standard audit report with separate reasonable assurance report on XBRL
3	3	5	A standalone reasonable assurance report on XBRL
4	5	6	Standard audit report with separate limited assurance report on XBRL
5=	6	1	Standard audit report with no information on XBRL
5=	4	7	A standalone limited assurance report on XBRL
7	7	3	Standard audit report with explicit exclusion of XBRL

Multivariate results

Table 16 shows the repeated measures ANOVA analysis of the level of assurance. It shows that the level of risk does not play a significant result. Conversely, the nature of the report is strongly significant.

Table 16: Levels of Assurance

	Partial SS	df	MS	F	Prob > F
Model	416,849.9	281	1,483.5	3.82	0.000
Risk	371.8	1	371.8	0.96	0.328
Report	14,735.5	6	2,455.9	6.33	0.000
Risk * Report	786.9	6	131.2	0.34	0.917
Participant	363,268.2	268	1,355.5	3.49	0.000
Residual	165,255.2	426	387.9		
Total	582,105.2	707	823.3		
N	708				
Root MSE	19.696				
R^2	0.716				
Adj R^2	0.529				

Table 17 shows the same analysis for those participants that pass the quality screen. As might be expected from the descriptive statistics, the result for the report manipulation is notably stronger.

Table 17: Levels of Assurance – Quality Screen

	Partial SS	df	MS	F	Prob > F
Model	170,574.8	129	1,322.3	3.79	0.000
Risk	117.7	1	117.7	0.34	0.562
Report	16,961.3	6	2,826.9	8.10	0.000
Report * Risk	1,486.3	6	247.7	0.71	0.642
Participant	134,357.6	116	1,158.3	3.32	0.000
Residual	67,397.2	193	349.2		
Total	237,972.1	322	739.0		
N	323				
Root MSE	16.871				
R^2	0.717				
Adj R^2	0.528				

Table 18 shows the analysis of the perceived level of errors in a repeated-measures ANOVA. Here, for the first time, we see a marginally significant interaction between risk and the nature of the report. Once again the primary effect of report is strongly significant while the level of risk is not significant.

Table 18: Repeated Measures ANOVA – Error Levels

	Partial SS	df	MS	F	Prob > F
Model	299,644.0	290	1,033.3	5.04	0.000
Risk	445.7	1	445.7	2.17	0.141
Report	11,010.6	6	1,835.1	8.95	0.000
Risk * Report	2,587.4	6	431.2	2.10	0.051
Participant	284,595.9	277	1,027.4	5.01	0.000
Residual	99,404.0	485	205.0		
Total	399,047.9	775	514.9		
N	776				
Root MSE	14.316				
R^2	0.751				
Adj R^2	0.602				

Table 19 shows the same analysis with those participants that passed the quality screen.

Table 19: Repeated Measures ANOVA – Error Levels – Quality Screen

	Partial SS	df	MS	F	Prob > F
Model	125,533.4	132	951.0	4.35	0.000
Risk	12.6	1	12.6	0.06	0.810
Report	7,645.7	6	1,274.3	5.84	0.000
Risk * Report	1,269.2	6	211.5	0.97	0.448
Participant	113,935.2	119	957.4	4.38	0.000
Residual	44,548.0	204	218.4		
Total	170,081.4	336	506.2		
N	337				
Root MSE	14.774				
R^2	0.738				
Adj R^2	0.569				

Results – Other Variables

We also were interested to learn how participants viewed the likelihood of different types of audit procedures being undertaken in an XBRL engagement (1=Extremely unlikely, 1=Extremely likely). Table 20 shows the perceived likelihood of procedures. Interestingly, participants recognized the added cost of testing all tags for consistency (mean = .458) as compared to a sample (mean = .497 (Students' t = 3.672). A similar result is observed for testing tags for accuracy (Students' t = 4.002) and against the underlying fact (Students' t = 4.349). In essence, the participants take a realistic view of the range of audit procedures.

Table 20: Audit Procedures

Audit procedures (Likert scale 1-7)	Difficulty of XBRL Generation								
	Low			High			Total		
	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev	N
Verified correct taxonomy use	5.23	1.50	145	4.95	1.55	149	5.09	1.53	294
Tested sample tags for consistency	5.11	1.54	145	4.84	1.55	149	4.97	1.55	294
Tested all tags for consistency	4.76	1.56	145	4.41	1.61	149	4.58	1.59	294
Evaluated necessity of extension	5.01	1.45	145	4.78	1.58	149	4.90	1.52	294
Verified facts correctly tagged	5.06	1.48	145	4.69	1.65	149	4.87	1.58	294
Evaluated internal control	5.08	1.40	145	4.81	1.52	149	4.95	1.46	294
Tested sample of tags accuracy	5.03	1.48	145	4.88	1.52	149	4.96	1.50	294
Tested all tags accuracy	4.66	1.50	145	4.43	1.59	149	4.54	1.55	294
Tested sample tags to correct fact	5.12	1.45	145	4.88	1.46	149	5.00	1.46	294
Tested all tags to correct fact	4.59	1.48	145	4.50	1.59	149	4.54	1.53	294
Reviewed guidance	5.08	1.47	145	4.82	1.63	149	4.95	1.56	294
Interviewed OT staff	4.70	1.64	145	4.50	1.62	149	4.60	1.63	294
Checked validity	5.30	1.42	145	4.89	1.41	149	5.10	1.43	294

We wished to learn what the respondents would choose as their desired form of assurance, were XBRL to be in addition to HTML or print forms and when it stood alone. We asked first: "If both XBRL and HTML (Web) versions of the Annual Report are BOTH required to be filed by companies with the SEC, please rank the desirability of the following possible reports from the auditor on the preparation of the XBRL version." As shown in Table 21, the highest ranked response was a standard audit report with explicit XBRL reporting ($\overline{x}$=2.29), followed by standard audit report with separate assurance on the XBRL metadata (1=Highest rank, 7=Lowest rank). The lowest ranked options are for the audit report to exclude XBRL ($\overline{x}$=4.15) and no assurance ($\overline{x}$=5.49).

Table 21: Desired Assurance Report – Both XBRL and HTML

Assurance report	Rank	Difficulty of XBRL Generation								
		Low			High			All		
		Mn	Std Dev	N	Mn	Std Dev	N	Mn	Std Dev	N
Standard audit report - explicit XBRL	1	2.27	1.45	59	2.31	1.68	58	2.29	1.56	117
Standard audit report & separate attestation	2	2.32	1.17	59	2.84	1.66	58	2.58	1.45	117
Separate attestation report on XBRL	3	3.42	1.85	59	3.59	1.62	58	3.50	1.74	117
Standard audit report	4	4.10	1.56	59	3.48	1.37	58	3.79	1.49	117
The standard audit report explicitly excludes XBRL	5	4.15	1.53	59	3.53	1.54	58	3.85	1.56	117
None	6	5.49	1.7	59	5.84	1.23	58	5.67	1.49	117
Other	7	6.24	0.57	59	6.4	0.56	58	6.32	0.57	117

We then ask "If the XBRL version of the Annual Report were to be the ONLY version required to be filed by companies with the SEC, please rank the desirability of the following possible reports from the auditor on the preparation of the XBRL version." As can be seen in Table 22, there is little change in the relative ranking or mean ranking scores when XBRL is the only form of publication. In summary, there is a clear preference of investors to receive audit or assurance on XBRL, even when there are both traditional and XBRL forms of information dissemination.

Table 22: Desired Assurance Report – Only XBRL

Assurance report	Rank	Difficulty of XBRL Generation								
		Low			High			All		
		Mn	Std Dev	N	Mn	Std Dev	N	Mn	Std Dev	N
Standard audit report - explicit XBRL	1	2.31	1.52	61	2.14	1.42	58	2.23	1.47	119
Standard audit report & separate attestation	2	2.39	1.45	61	2.55	1.67	58	2.47	1.56	119
Separate attestation report on XBRL	3	3.41	1.55	61	3.38	1.59	58	3.39	1.56	119
Standard audit report	4	3.69	1.66	61	3.5	1.39	58	3.6	1.53	119
The standard audit report explicitly excludes XBRL	5	4.05	1.45	61	4.03	1.23	58	4.04	1.34	119
None	6	5.84	1.13	61	6.03	1.06	58	5.93	1.09	119
Other	7	6.31	0.81	61	6.36	0.64	58	6.34	0.73	119

Conclusions

In this chapter, we addressed three important questions. Do investors recognize the influence of alternative forms of audit and assurance on the levels of assurance that they receive or on the residual errors that remain in XBRL instance documents? Do investors respond to alternative scenarios on the inherent risk of generating XBRL instance documents? How do investors see that assurance on XBRL instance documents might be provided? We ran an experiment with a large sample of US adults, screening out only those respondents that owned shares. We also applied

quality screens on this group for higher quality analysis. At the same time, we asked participants additional, exploratory questions.

The key conclusions that we can draw from the descriptive and multivariate analysis of the experimental results are:

- Our prediction that the level of risk would affect perceptions on the level of assurance provided and the residual level of errors did not hold.

- Our predictions on the ranking of the different types of assurance broadly held, particularly when considering the residual error rate in instance documents. Communicating that an audit report explicitly excludes XBRL clearly impacts investor perception. Particularly for residual errors, explicit reasonable assurance reports are shown as being most effective. There is no statistical difference between these three classes of assurance (Cases 2, 4 and 5). User perceptions of vanilla audit reports rank almost as low as audit reports that exclude XBRL. We asked supplementary questions on the nature of audit procedures investors thought auditors would apply. Interestingly, investors seem realistic in the extent of procedures and the relative importance of procedures (e.g., sampling versus complete testing). In other words, the form, method and impact of alternative forms of assurance were interpreted broadly in line with the expectations set in auditing standards and practice.

- Investors rank the standard audit report with explicit recognition of XBRL and standard audit report coupled to secondary attestation on XBRL instance documents as the most highly ranked alternatives for the conduct of audit and assurance on XBRL. The lowest ranked alternatives were explicit exclusion of XBRL from the audit and no assurance. These results held whether the XBRL reporting was a secondary format or the primary format.

7 STUDY 3 – EXPERIMENT 2 - NETHERLANDS

Introduction

This fourth study extends Experiment 1 in the Netherlands' setting. We choose the Netherlands for two principal reasons. First, as we discuss in Chapter 4, XBRL is embedded in the Dutch business environment in a more significant fashion than is true in perhaps any other country. Second, the audit regulatory environment in the Netherlands adopts, in large measure, IAASB auditing standards. For the purposes of providing a direct comparison with the US data, we maintain the vast majority of issues from the first experiment. As we discuss in more detail, we remove the emphasis on risk generation of XBRL instance documents. We then focus on whether the experimental participants believe that XBRL is currently a feature of the financial statement audit, or should be associated with the financial statement audit. And if so, how should that be achieved?

In this Chapter, we first provide an overview and rationale for the focus taken in this experiment. The changes made in the experiment are laid out. The implementation of the experiment in the Netherlands is reviewed. Following analysis of the demographics of participants, we review the key descriptive statistics – notably including the perspectives of the participants on the role of XBRL in the audit process. Finally, we test the effect of the hypothesized relationship between nature of the audit report, beliefs about XBRL and on the perceived levels of assurance provided by auditors and the extent of XBRL errors in XBRL versions of the financial statements. At the same time, we bring together the US and Netherlands experiments to test the report and country effects.

Focus of the Experiment

In this section we set out the focus taken in this study. We both introduce new material studied – in particular, the perspective of participants on the implications of XBRL for the audit. We also show how we adjust the core experimental constructs for the Netherlands setting.

XBRL and the Audit:

Given the results of the first experiment, it is clear that the nature of the audit engagement on XBRL and the accompanying report format was significantly associated with the experimental participants' perceptions of the level of assurance and the extent of residual errors in the XBRL instance document associated with corporate financial statements. The level of risk in the creation of the instance documents was not, however, significantly associated with the level of assurance and errors. In this study we focus on an equally important issue, which is the perception of the investors on the association of auditing with XBRL. First, do investors believe that the financial statement audit currently incorporates the XBRL version of financial statements? Second, do investors believe that auditors *should* opine on XBRL? And if they do so believe, in what form should that opinion take? We show in more detail later in this section how we implement these

broad questions. We then associate these views as an independent variable in the repeated measures ANOVA that concludes this chapter.

Reports:

As with the US experiment, we explore each of the seven possible combinations of the audit and attestation reports on the financial statements and the production of XBRL reports. These seven alternative sets of reports are as follows:

1. Standard audit report, with no mention of XBRL. This is the base case.
2. Standard audit report with explicit inclusion of XBRL. Here the audit report communicates the finding of the audit report.
3. Standard audit report with explicit exclusion of XBRL.
4. Standard audit report with separate examination attestation report on XBRL.
5. Examination attestation report on XBRL.
6. Standard audit report with separate review attestation report on XBRL.
7. Review attestation report on XBRL.

We adjust the reports for the IAASB standards and the Netherlands institutional environment.

The first report is the standard audit report with no mention of XBRL:

Accountants and Auditors LLP published an unqualified audit report on the financial statements of Offshore Tooling NV. The report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's annual report, filed with the Chamber of Commerce.

The opinion paragraph reads:

"Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code."

The Dutch version is:

Accountants en Auditors LLP geven een goedkeurende controleverklaring bij de jaarrekening van Offshore Tooling NV. De verklaring van Accountants en Auditors LLP is opgenomen in de HTML (Web)

versie en in de XBRL versie van Offshore Tooling NV's jaarrekening zoals gedeponeerd bij de Kamer van Koophandel.

De tekst van de oordeelsparagraaf luidt:

" Oordeel betreffende de geconsolideerde jaarrekening

Naar ons oordeel geeft de geconsolideerde jaarrekening een getrouw beeld van de grootte en samenstelling van het vermogen van Offshore Tooling NV per 31 december 2010 en van het resultaat en de kasstromen over 2010 in overeenstemming met International Financial Reporting Standards zoals aanvaard binnen de Europese Unie en met Titel 9 Boek 2 BW.

Oordeel betreffende de enkelvoudige jaarrekening

Naar ons oordeel geeft de enkelvoudige jaarrekening een getrouw beeld van de grootte en samenstelling van het vermogen van Offshore Tooling NV per 31 december 2010 en van het resultaat over 2010 in overeenstemming met Titel 9 Boek 2 BW."

The second version is explicit inclusion of XBRL

Accountants and Auditors LLP published an unqualified audit report on the financial statements and the production of the XBRL report of Offshore Tooling. The report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's annual report, filed with the Chamber of Commerce.

The opinion paragraph reads:

"Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the XBRL instance document

In our opinion, the data contained in the instance documents 'Offshore Tooling NV annual report 2010.xbrl' is, in all material respects, in accordance with the criteria on which the "Jaarrapport Groot"- report, which is part of the Dutch Taxonomy 2010.1, is based."

The Dutch version is:

Accountants en Auditors LLP geven een goedkeurende controleverklaring bij de jaarrekening en het XBRL rapport van Offshore Tooling NV. De verklaring van Accountants en Auditors LLP is opgenomen in de HTML (Web) versie en in de XBRL versie van Offshore Tooling NV's jaarrekening zoals gedeponeerd bij de Kamer van Koophandel.

De tekst van de oordeelsparagraaf luidt:

" Oordeel betreffende de geconsolideerde jaarrekening

Naar ons oordeel geeft de geconsolideerde jaarrekening een getrouw beeld van de grootte en samenstelling van het vermogen van Offshore Tooling NV per 31 december 2010 en van het resultaat en de kasstromen over 2010 in overeenstemming met International Financial Reporting Standards zoals aanvaard binnen de Europese Unie en met Titel 9 Boek 2 BW.

Oordeel betreffende de enkelvoudige jaarrekening

Naar ons oordeel geeft de enkelvoudige jaarrekening een getrouw beeld van de grootte en samenstelling van het vermogen van Offshore Tooling NV per 31 december 2010 en van het resultaat over 2010 in overeenstemming met Titel 9 Boek 2 BW.

Oordeel betreffende het XBRL instance document

Naar ons oordeel zijn de gegevens over 2010 welke opgenomen zijn in het instance document "Offshore Tooling NV jaarrekening 2010. XBRL", in alle van materieel belang zijnde aspecten, in overeenstemming met de criteria waarop het "Jaarrapport Groot"-rapport, welke onderdeel is van de Nederlands Taxonomie 2010. 1, is gebaseerd."

The third case is the standard audit report explicitly excluding XBRL:

Accountants and Auditors LLP published an unqualified audit report on the financial statements of Offshore Tooling NV. The report states that the audit engagement excluded the preparation of the XBRL report. The report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's Annual Report, filed with the Chamber of Commerce.

An extract from the report says: "Our audit explicitly excludes the representation of the financial information contained in the instance document 'Offshore Tooling NV annual report 2010.xbrl' . Offshore Tooling NV expects to submit this XBRL report to the Chamber of Commerce and post it to its Website."

The opinion paragraph reads:

"Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code."

The Dutch version is:

Accountants en Auditors LLP geven een goedkeurende controleverklaring bij de jaarrekening van Offshore Tooling NV. De controleverklaring sluit expliciet uit dat deze betrekking heeft op het XBRL rapport. De verklaring van Accountants en Auditors LLP is opgenomen in de HTML (Web) versie en in de XBRL versie van Offshore Tooling NV's jaarrekening zoals gedeponeerd bij de Kamer van Koophandel.

De tekst van de uitsluiting luidt:

"Wij benadrukken expliciet dat onze controle geen betrekking heeft op de presentatie van de financiële gegevens welke opgenomen zijn in het instance document "Offshore Tooling NV jaarrekening 2010. XBRL". Offshore Tooling NV is voornemens dit XBRL rapport te deponeren bij de Kamer van Koophandel en te plaatsen op haar website."

De tekst van de oordeelsparagraaf luidt:

" Oordeel betreffende de geconsolideerde jaarrekening

Naar ons oordeel geeft de geconsolideerde jaarrekening een getrouw beeld van de grootte en samenstelling van het vermogen van Offshore Tooling NV per 31 december 2010 en van het resultaat en de kasstromen over 2010 in overeenstemming met International Financial Reporting Standards zoals aanvaard binnen de Europese Unie en met Titel 9 Boek 2 BW.

Oordeel betreffende de enkelvoudige jaarrekening

Naar ons oordeel geeft de enkelvoudige jaarrekening een getrouw beeld van de grootte en samenstelling van het vermogen van Offshore Tooling NV per 31 december 2010 en van het resultaat over 2010 in overeenstemming met Titel 9 Boek 2 BW."

The next version is an assurance report under ISAE 3000 with a reasonable level of assurance. This report either comes stapled together with a standard audit report (Case 4) or on its own (Case 5). The English version of the report is:

Accountants and Auditors LLP published an assurance report on the preparation of the XBRL version of Offshore Tooling NV's Annual Report. The assurance report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's Annual Report, filed with the Chamber of Commerce.

The conclusion paragraph in the assurance report reads:

"Based on our examination we conclude that the XBRL report (Offshore Tooling NV annual report 2010.xbrl') is derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling NV and correctly tagged in accordance with the criteria on which the "Jaarrapport Groot"- report, which is part of the Dutch Taxonomy 2010.1, is based."

The Dutch version is:

Accountants en Auditors LLP geven een assurance rapport bij de XBRL versie van de jaarrekening van Offshore Tooling NV. Het assurance rapport van Accountants en Auditors LLP is opgenomen in de HTML (Web) versie en in de XBRL versie van Offshore Tooling NV's jaarrekening zoals gedeponeerd bij de Kamer van Koophandel.

De tekst van de conclusie van het Assurance rapport luidt:

"Op basis van onze onderzoek zijn wij van mening dat het XBRL rapport, genaamd "Offshore Tooling NV jaarrekening 2010. XBRL" in alle van materieel belang zijnde aspecten op een juiste wijze is ontleend aan de jaarrekening 2010 van Offshore Tooling NV en op een juiste wijze is voorzien van tags, in overeenstemming met de criteria waarop het "Jaarrapport Groot"-rapport, welke onderdeel is van de Nederlands Taxonomie 2010. 1, is gebaseerd."

The final version is an ISAE 300 assurance report with a limited level of assurance. This report is published either with the standard report (Case 6) or on its own (Case 7):

Accountants and Auditors LLP published an assurance report on the preparation of the XBRL version of Offshore Tooling NV's Annual Report. The assurance report from Accountants and Auditors LLP was included in the HTML (Web) and XBRL versions of OT's Annual Report, filed with the Chamber of Commerce.

The conclusion paragraph in the assurance report reads:

"Based on our review, nothing came to our attention that caused us to believe that the XBRL report (Offshore Tooling NV annual report 2010.xbrl') is not derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling NV or that it was not correctly tagged in accordance with the criteria on which the "Jaarrapport Groot"- report, which is part of the Dutch Taxonomy 2010.1, is based."

The Dutch version is:

Accountants en Auditors LLP geven een assurance rapport bij de XBRL versie van de jaarrekening van Offshore Tooling NV. Het assurance rapport van Accountants en Auditors LLP is opgenomen in de HTML (Web) versie en in de XBRL versie van Offshore Tooling NV's jaarrekening zoals gedeponeerd bij de Kamer van Koophandel.

De tekst van de conclusie van het Assurance rapport luidt:

"Op grond van onze beoordeling is ons niets gebleken op basis waarvan wij zouden moeten concluderen dat het XBRL rapport, genaamd "Offshore Tooling NV jaarrekening 2010. XBRL" niet in alle van materieel belang zijnde aspecten op een juiste wijze is ontleend aan de jaarrekening 2010 van

Participants

The participants were drawn from several groups in the Netherlands. Unlike in the USA, there is no readily available commercial panel of participants. We reach out to a range of organizations that support small business and investors in the Netherlands and exploited other networks of individuals who are likely to own shares.

Descriptive Results

Survey Population

We do not know the exact size of the mailing lists of the various organizations that supported this study. As with the US study, there was a drop-off in completion throughout the stages of the instrument, although somewhat lower given the significantly more targeted audience. The significant difference between the two groups was the much higher proportion of those owning shares in the Netherlands (US: 34%, Netherlands: 60%). The different stages of the survey are shown in Table 23:

Table 23: Survey Population – Netherlands

Commenced study	350
Completed:	
- demographics	184
- experiment	153
- post-experiment	126
Of which, own shares	76
Do not own shares	50
Total	126

Quality Screen

We apply similar quality screens as for the US study. The first screen, in the Netherlands setting, is those participants that indicate that they do not read annual reports. The second screen is for an inconsistency between answers to questions on share ownership. In the final screen we exclude participants that indicate that they are unsure of the level of assurance for each of the three scenarios presented to them. The effect of the quality screen is to drop the number of participants by 33 participants. We show the demographics and experimental results below for the three groups that: 1) completed all questions (126); 2) own shares (76) and 3) pass quality screening tests (43).

Demographics

Give the source of the participants who had actively joined organizations or were in established networks, the demographics of the Netherlands were different from the US participants drawn from the broader population. The Dutch participants are older, more highly educated and more established than the US group. Table 24 shows the employment structure of the participants. As compared with the US data, there is a higher proportion of self-employed participants (participants owning shares: US: 10%, Netherlands, 40%).

Table 24: Employment

Current or Previous Employment Status	All	Own shares		Quality
		No	Yes	Screen
Employee Of Private-For-Profit Business	55	22	33	22
	44%	44%	43%	51%
Employee Of Private-Not-For-Profit	11	7	4	3
	9%	14%	5%	7%
Federal Government Employee	7	4	3	1
	6%	8%	4%	2%
Self-Employed In Non Incorporated Business	22	8	14	7
	17%	16%	18%	16%
Self-Employed In Own Incorporated Business	26	9	17	9
	21%	18%	22%	21%
Other	5	0	5	1
	4%	0%	7%	2%
N	126	50	76	43
	100%	100%	100%	100%

Similarly, the level of education is markedly higher for the Netherlands (participants owning shares and with Masters, Doctoral or Professional degrees: US: 5%, Netherlands, 84%).

Table 25: Education

Level of Education	All	Own shares		Quality
		No	Yes	Screen
High School	1	0	1	1
	1%	0%	1%	2%
Some College	2	1	1	4
	2%	2%	1%	9%
2-year College Degree	9	3	6	
	7%	6%	8%	0%
4-year College Degree	10	5	5	4
	8%	10%	7%	9%
Master's Degree	63	26	37	19
	50%	52%	49%	44%
Doctoral Degree	8	3	5	3
	6%	6%	7%	7%
Professional Degree	33	12	21	12
	26%	24%	28%	28%
N	126	50	76	43
	100%	100%	100%	100%

Despite the differences in employment and education, the median age is similar (participants owning shares aged 45 years and above: US: 51%, Netherlands, 52%).

Table 26: Age

Age group	All	Own shares		Quality
		No	Yes	Screen
25 to 34	21	8	13	9
	17%	16%	17%	21%
35 to 44	42	18	24	13
	33%	36%	32%	30%
45 to 54	42	15	27	16
	33%	30%	36%	37%
55 to 64	18	8	10	5
	14%	16%	13%	12%
65 years and over	3	1	2	0
	2%	2%	3%	0%
N	126	50	76	43
	100%	100%	100%	100%

The average classes of investment held is similar but the mix is different with a greater weighting to real estate and bank deposits. The data quality issues are lower for the Dutch participants (79%

of participants that indicate they own shares on this question indicate elsewhere that they own shares).

Table 27: Investments

Investment type	All	Own shares		Quality
		No	Yes	Screen
Real estate	33%	19%	41%	43%
Retirement Funds	23%	23%	22%	29%
Stocks and shares	48%	0%	79%	100%
Bonds	27%	9%	38%	33%
Mutual funds	27%	26%	27%	29%
Currencies, gold etc	9%	0%	15%	19%
Bank deposits	29%	26%	32%	29%
Certificates of deposit	0%	0%	0%	0%
None	18%	45%	1%	0%
Other	13%	15%	12%	10%
Average number of investment types held	2.08	1.17	2.67	2.74
N	126	50	76	43

The next question we ask is to rank sources of investment advice (8 point scale). Analyst and stockbrokers and corporate Investor Relations Websites rank noticeably higher for Dutch participants than US. Television is ranked highly by both US and Netherlands participants.

Table 28: Sources of Information Ranked

Source of Information	All		Own shares				Quality Screen	
			No		Yes			
	Mn	Std Dev	Mn	Std Dev	Mn	Std Dev	Mn	Std Dev
Internet search	4.49	2.01	4.56	2.2	4.45	1.9	4.33	1.81
Analyst & Broker Research	5.09	2.35	5.04	2.29	5.12	2.41	5.33	2.42
IR Websites	4.56	1.93	4.04	1.84	4.89	1.93	5.02	1.75
Quarterly/Annual Reports	4.25	2.02	4.04	2.12	4.39	1.95	4.35	2.08
Financial Press	3.87	2.23	4.46	2.12	3.49	2.24	3.4	2.19
Television	4.82	2.13	4.72	2.26	4.88	2.05	4.91	2.06
Financial Website	5.02	3.07	5.1	3	4.96	3.13	4.86	3.24
Other	3.9	2.11	4.04	2.22	3.82	2.05	3.81	1.97
N	126		50		76		43	

The number of company annual reports read is also relatively high, with 60% of those owning shares reading corporate annual reports:

Table 29: Company Reports Read

Reports read	All	Own Shares		Quality Screen
		No	Yes	
None	68	38	30	0
	54%	76%	39%	0%
1 to 5	49	9	40	37
	39%	18%	53%	86%
6 to 10	4	2	2	2
	3%	4%	3%	5%
11 to 15	2	1	1	1
	2%	2%	1%	2%
Greater than 15	3	0	3	3
	2%	0%	4%	7%
N	126	50	76	43
	100%	100%	100%	100%

We finally asked respondents for their self-perceived level of knowledge on accounting, auditing, investing and XBRL. The self-perceived knowledge was noticeably higher on each dimension for the Dutch participants. Most interestingly, the self-perceived level of knowledge on XBRL is dramatically higher for the Netherlands participants.

Table 30: Self-Perceived Levels of Knowledge

Knowledge Area	All		Own Shares				Quality Screen	
			No		Yes			
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Accounting	72.8	23.4	72.9	24.0	72.7	23.1	70.7	24.5
Auditing	79.9	23.4	78.0	24.5	81.2	22.8	78.3	25.0
Investing	51.0	23.6	46.1	25.0	54.3	22.3	53.7	22.3
XBRL	51.1	26.9	52.2	30.6	50.4	24.3	51.1	25.3
N	126		50		76		43	

We also asked about audit procedures. While perhaps not so clear, it seems that respondents take a practical approach in their judgment on audit procedures.

Descriptive Results

Does the audit include XBRL?

As we discuss in more detail earlier in this chapter, in this second study we focus on the policy implications of introducing XBRL into the financial reporting supply chain. A principal focus is on the perceptions of investors on the interaction of assurance and XBRL. Does the current audit engagement include XBRL? Should there be assurance on XBRL? If so, how should that be

achieved? The first question we ask is: "The audit of the annual financial statements of a corporation currently INCLUDES an audit of the XBRL version of the financial statements"

Table 31: Does the Audit include XBRL?

Change in Fees	All	Own shares		Quality Screen
		No	Yes	
Strongly agree	23	9	14	10
	18%	18%	18%	23%
Somewhat agree	3	2	1	0
	2%	4%	1%	0%
Agree	11	3	8	4
	9%	6%	11%	9%
Neutral	9	5	4	2
	7%	10%	5%	5%
Disagree	36	13	23	17
	29%	26%	30%	40%
Somewhat disagree	11	3	8	3
	9%	6%	11%	7%
Strongly disagree	33	15	18	7
	26%	30%	24%	16%
N	126	50	76	43
	100%	100%	100%	100%

What do users want?

We then ask: "Should annual financial statements in the XBRL format include assurance about XBRL when the XBRL format is IN ADDITION to conventional financial statements?" Using the same screen as we apply in our demographic analysis above, we show in Table 32 that nearly 90% of participants indicate that assurance should be provided.

Table 32: Desired Assurance on XBRL – XBRL as Supplementary Format

Choice	All	Own shares		Quality Screen
		No	Yes	
No	13	5	8	5
	10%	10%	11%	12%
Yes	112	44	68	38
	89%	88%	89%	88%
Not sure	1	1	0	0
	1%	2%	0%	0%
N	126	50	76	43
	100%	100%	100%	100%

The next issue is how assurance should be provided. We ask those participants that answered in the affirmative that assurance was necessary, how the assurance should be provided. Participants were provided with the following choices: "As an integral part of the financial statement audit

engagement, voluntarily adopted by corporations," "As an integral part of the financial statement audit engagement, mandated by regulators," "As additional assurance engagement reported to shareholders, separate from the financial statement audit engagement and finally "As additional assurance engagement reported to management and the board, separate from the financial statement audit engagement." The results of the choices made by the participants are interesting, as they clearly prefer incorporation within the mandated audit.

Table 33: Method of Assurance on XBRL – XBRL as Supplementary Format

	All	Own shares		Quality
		No	Yes	Screen
Part of audit-Voluntary	13	5	8	5
	12%	11%	12%	13%
Part of audit-Mandated	84	33	51	27
	75%	75%	75%	71%
Separate Assurance-to shareholders	8	3	5	3
	7%	7%	7%	8%
Separate Assurance-to Board & Management	7	3	4	3
	6%	7%	6%	8%
Total	112	44	68	38
	100%	100%	100%	100%

We then ask a variation on theme asking the participants for their view on assurance when the XBRL format replaces the conventional forms of print and HTML (Should annual financial statements in the XBRL format include assurance about XBRL when the XBRL format REPLACES conventional financial statements?). There is essentially no change in perspective from the case when XBRL is supplementary, as shown in Table 34.

Table 34: Desired Assurance on XBRL – XBRL Mandated

Choice	All	Own shares		Quality
		No	Yes	Screen
No	10	4	6	4
	8%	8%	8%	9%
Yes	114	45	69	38
	90%	90%	91%	88%
Not sure	2	1	1	1
	2%	2%	1%	2%
Total	126	50	76	43
	100%	100%	100%	100%

The questions we asked on the form of assurance were adjusted to reflect the mandated nature of the hypothetical situation presented to the participants. The choices presented were: "As a conventional financial statement audit engagement, without additional focus on XBRL-specific issues," "As a conventional financial statement audit engagement, with additional specific focus on XBRL-specific issues," "As an XBRL-specific assurance engagement reported to shareholders," "As an XBRL-specific assurance engagement reported to management and the board only." As Table 35 shows, the responses were more broadly distributed and nuanced than

the previous version. Nearly 60% say that they want it to be a focus of the audit, but with no distinct auditor reporting. A quarter of participants say that they want the XBRL to be the subject of a separate assurance engagement, with reporting to shareholders. Less that 10% of participants see only for reporting to the board and management only or that XBRL should be part of the audit, but with no individual focus.

Table 35: Method of Assurance on XBRL – XBRL Mandated

Choice	All	Own shares		Quality
		No	Yes	Screen
Part of audit-No particular XBRL focus	9	5	4	3
	8%	11%	6%	8%
Part of audit-XBRL focus	63	22	41	19
	55%	49%	59%	50%
Separate Assurance-to shareholders	27	9	18	10
	24%	20%	26%	26%
Separate Assurance-to Board & Management	15	9	6	6
	13%	20%	9%	16%
Total	114	45	69	38
	100%	100%	100%	100%

What will the impact of assurance be?

The US experiment provided evidence of support for audit or assurance on XBRL. We were interested to see what the Dutch investors considered the impact of XBRL would be on the cost of audit engagements. The first question we asked was "Assume that assurance on XBRL is MANDATED as part of the financial statement audit when the annual financial statements in the XBRL format are IN ADDITION to the conventional financial statements. What is the expected change in audit fees?" Table 36 shows that 22% of participants that own share thought that there would be a reduction or no change in the audit fees. Conversely, a quarter of respondents thought that fees would increase by 15% or more.

Table 36: Expected Change in Audit Fees – XBRL in Addition to Traditional Format

Change in Fees	All	Own shares		Quality Screen
		No	Yes	
-20%	5	1	4	2
	4%	2%	5%	5%
-15%	2	0	2	2
	2%	0%	3%	5%
-10%	5	1	4	3
	4%	2%	5%	7%
-5%	0	0	0	0
	0%	0%	0%	0%
-1%	0	0	0	0
	0%	0%	0%	0%
No change	17	10	7	4
	13%	20%	9%	9%
+1%	2	0	2	1
	2%	0%	3%	2%
+5%	26	9	17	8
	21%	18%	22%	19%
+10%	40	19	21	12
	32%	38%	28%	28%
+15%	12	4	8	3
	10%	8%	11%	7%
+20%	17	6	11	8
	13%	12%	14%	19%
N	126	50	76	43
	100%	100%	100%	100%

We then asked for their perceptions if the XBRL were to replace the conventional form of distribution of the financial statements (If assurance on XBRL were MANDATED as part of the financial statement audit and annual financial statements in the XBRL format REPLACES conventional financial statements, what would be the appropriate change in audit fees paid by corporations?). The change in perceptions is marked. Now some 53% of the participants believe that fees would be reduced or not change. Less than 20% of participants thought that fees would increase by 15% or more. The mean score on the 11 point scale was 7.921 when XBRL is in addition to traditional financial statements and 6.763 when XBRL replaces traditional modes of distribution (Students' $t = 4.498$).

Table 37: Expected Change in Audit Fees – XBRL as only Format

Change in Fees	All	Own shares		Quality Screen
		No	Yes	
-20%	8	3	5	3
	6%	6%	7%	7%
-15%	2	0	2	0
	2%	0%	3%	0%
-10%	13	5	8	6
	10%	10%	11%	14%
-5%	3	1	2	0
	2%	2%	3%	0%
-1%	1	0	1	1
	1%	0%	1%	2%
No change	41	20	21	12
	33%	40%	28%	28%
1%	5	1	4	3
	4%	2%	5%	7%
5%	17	11	6	2
	13%	22%	8%	5%
10%	19	6	13	6
	15%	12%	17%	14%
15%	5	0	5	4
	4%	0%	7%	9%
20%	12	3	9	6
	10%	6%	12%	14%
N	126	50	76	43
	100%	100%	100%	100%

Descriptive Statistics

We now provide descriptive statistics on the primary dependent variables – the level of assurance afforded by each of the report types and the residual errors in the final XBRL instance documents that contain the financial statements. Table 38 shows the perceived level of assurance for each of the seven types of assurance reports. We tabulate the assurance levels with the participant perception of whether XBRL is included in the current audit report and whether the participants own shares or not. We report this data for the 126 participants that complete all questions in the instrument. Recall that each participant rates the results for three settings. When we are down at the level of individual cells, the number of responses is relatively small and the results should be viewed with caution.

The traditional audit report in the Dutch setting is ranked much higher than in the US environment – identical, in fact, to a separate assurance report on XBRL stapled to a standard audit report and

reasonable assurance on its own. Conversely, the perceptions on the level of assurance in an audit report that explicitly includes XBRL is much lower (55.5 cf 81.5, for those participants owning shares. We can only speculate that changes in the form of the report unsettled the respondents, leading to a lower rating. This will bear further research and explanation. The second result is the level of assurance placed on traditional audit reports with an emphasis of matter paragraph that places XBRL out of scope of the engagement. The relative ranking of this form of report is the same as the US – lowest, as we predict. Dutch participants give a distinctly lower level of assurance than in the US (18.1 cf 42.8, for participants that own shares). This indicates that the more experienced and educated Dutch participants reacted more strongly to the implications of this type of emphasis of matter paragraph. Finally, the perceptions on the level of assurance coming from limited assurance engagements is noticeably more marked than in the US environment.

Table 38: Levels of Assurance by Report Type, Ownership of Shares and Beliefs on Audit and XBRL

Report	Stat	Own Shares								Total
		No			Yes			Both		
		Audit Inc XBRL			Audit Inc XBRL			Audit Inc XBRL		
		No	Yes	Total	No	Yes	Total	No	Yes	
Audit Report	N	7	9	16	15	7	22	22	16	38
	Mean	88.7	74.3	80.6	79.3	86.0	81.5	82.3	79.4	81.1
	SD	11.5	12.3	13.7	25.7	10.2	21.9	22.3	12.5	18.7
Audit Report with XBRL	N	9	3	12	18	11	29	27	14	41
	Mean	89.4	47.0	78.8	55.4	55.6	55.5	66.8	53.8	62.3
	SD	7.3	42.0	27.0	35.4	36.0	35.0	33.2	35.8	34.2
Audit Report excluding XBRL	N	12	6	18	15	6	21	27	12	39
	Mean	37.6	27.8	34.3	18.9	16.3	18.1	27.2	22.1	25.6
	SD	40.3	30.6	36.8	37.0	22.6	33.0	39.0	26.4	35.3
Audit Report and Reasonable Assurance	N	11	8	19	28	12	40	39	20	59
	Mean	85.0	70.3	78.8	80.9	77.9	80.0	82.1	74.8	79.6
	SD	14.8	25.2	20.6	15.4	16.1	15.5	15.2	20.0	17.1
Reasonable Assurance	N	11	8	19	28	11	39	39	19	58
	Mean	86.9	81.4	84.6	78.6	75.7	77.8	80.9	78.1	80.0
	SD	15.1	13.0	14.1	21.5	18.2	20.4	20.1	16.0	18.8
Audit Report and Limited Assurance	N	19	10	29	20	13	33	39	23	62
	Mean	67.9	71.6	69.2	69.6	69.1	69.4	68.8	70.2	69.3
	SD	25.0	15.4	21.9	20.2	24.7	21.7	22.4	20.7	21.6
Limited Assurance	N	19	10	29	20	14	34	39	24	63
	Mean	55.7	61.3	57.6	68.1	52.7	61.7	62.0	56.3	59.8
	SD	24.3	19.0	22.4	21.4	29.1	25.6	23.4	25.3	24.1
Total	N	88	54	142	144	74	218	232	128	360
	Mean	69.5	65.2	67.9	67.3	63.7	66.1	68.1	64.3	66.8
	SD	29.1	25.1	27.6	30.6	29.7	30.3	30.0	27.7	29.2

For each of the presented scenarios discussed above, we ask the participants to respond to the statement: "There will be errors in the XBRL version of Offshore Tooling NV.'s 2010 financial statements that will have a negative impact on the reliability of the XBRL report as compared to the traditional version of the financial statements." Unlike the US setting, we ask participants to respond only on a seven point Likert scale, ranging from "Strongly disagree" to "Strongly agree." Table 39 shows that the results are broadly in line, although the impact of the alternative forms of assurance is much less distinct. For example, the perceived level of errors is essentially identical for reasonable and limited assurance engagements.

Table 39: Expected Error Rates by Report Type, Ownership of Shares and Beliefs on Audit and XBRL

Report	Stats	Own Shares								Total
		No			Yes					
		Audit Includes XBRL			Audit Includes XBRL			Audit Includes XBRL		
		No	Yes	Total	No	Yes	Total	No	Yes	
Audit Report	N	8	10	18	16	7	23	24	17	41
	Mean	2.9	3.3	3.1	2.9	2.3	2.7	2.9	2.9	2.9
	SD	1.5	1.3	1.4	1.9	1.3	1.7	1.7	1.4	1.6
Audit Report with XBRL	N	10	3	13	18	12	30	28	15	43
	Mean	2.1	4.3	2.6	3.9	3.8	3.9	3.3	3.9	3.5
	SD	1.4	2.1	1.8	1.9	2.1	1.9	1.9	2.0	2.0
Audit Report excluding XBRL	N	13	6	19	15	8	23	28	14	42
	Mean	4.2	3.5	3.9	2.9	3.5	3.1	3.5	3.5	3.5
	SD	1.8	1.8	1.7	1.7	1.4	1.6	1.8	1.5	1.7
Audit Report and Reasonable Assurance	N	11.0	9	20	29	13	42	40	22	62
	Mean	2.1	4.1	3.0	3.0	2.8	2.9	2.8	3.3	3.0
	SD	1.0	1.5	1.6	1.7	1.4	1.6	1.6	1.6	1.6
Reasonable Assurance	N	11	9	20	29	13	42	40	22	62
	Mean	2.1	4.0	3.0	2.9	3.2	3.0	2.7	3.5	3.0
	SD	1.0	1.7	1.6	1.7	1.6	1.6	1.6	1.6	1.6
Audit Report and Limited Assurance	N	20	10	30	20	14	34	40	24	64
	Mean	3.2	3.0	3.1	2.8	3.0	2.9	3.0	3.0	3.0
	SD	1.5	1.6	1.5	1.5	1.4	1.5	1.5	1.4	1.5
Limited Assurance	N	20	10	30	20	14	34	40	24	64
	Mean	3.3	3.1	3.3	3.1	3.3	3.2	3.2	3.2	3.2
	SD	1.5	1.7	1.6	1.7	1.6	1.6	1.6	1.6	1.6
Total	N	93	57	150	147	81	228	240	138	378
	Mean	3.0	3.5	3.2	3.1	3.1	3.1	3.0	3.3	3.1
	SD	1.6	1.6	1.6	1.7	1.6	1.7	1.7	1.6	1.6

Multivariate results

We now test the experiment using repeated-measures ANCOVA (self-perceived level of knowledge as a covariate). The results shown in Table 40 indicate that, contrary to our expectations, participant beliefs on whether the audit includes XBRL are not a significant factor in perceptions of the levels of assurance. As with the US, the report format is strongly significant. We

also show the significance of the contrasts on each of the levels of report. It shows that several of the interactions of other forms of assurance with an audit that excludes XBRL are significant (case 3). None of the interactions of separate forms of reasonable or limited assurance are significant.

Table 40: Levels of Assurance – ANOVA

Source	Partial SS	df	MS	F	Prob > F
Model	138341.33	85	1627.55	3.55	0.000
Report	10506.00	6	1751.00	3.81	0.002
Audit inc XBRL	106.36	1	106.36	0.23	0.631
Report * Audit inc XBRL	1777.99	6	296.33	0.65	0.694
Level of Knowledge	58702.98	61	962.34	2.10	0.000
Participant	8295.11	11	754.10	1.64	0.094
Residual	60588.35	132	459.00		
Total	198929.67	217	916.73		
R^2	0.695				
Adj R^2	0.499				

Significance of inter-report Contrasts

Report		1	2	3	4	5	6	7
1	Audit Report							
2	Audit Report with XBRL	**						
3	Audit Report excluding XBRL	**						
4	Audit Report + Reasonable Assurance		**					
5	Reasonable Assurance		*	**				
6	Audit Report + Limited Assurance			**				
7	Limited Assurance							

* < .1
** < .05
*** < .01

We also run the regression only for those participants passing the quality screen and find essentially identical results:

Source	Partial SS	df	MS	F	Prob > F
Model	87892.70	54	1627.64	2.87	0.000
Report	7468.54	6	1244.76	2.19	0.054
Audit inc XBRL	324.50	1	324.50	0.57	0.452
Report * Audit inc XBRL	2060.39	6	343.40	0.60	0.725
Level of Knowledge	33970.76	39	871.05	1.53	0.059
Participant	3833.72	2	1916.86	3.38	0.040
Residual	39734.05	70	567.63		
Total	127626.75	124	1029.25		
R^2	0.689				
Adj R^2	0.443				

The results on levels of errors vary from the pattern seen in the US. As might be expected, given the descriptive statistics reported above in Table 39, the effect of report type on error rates was not significant (Table 42). Interestingly, whether the audit report is perceived to be part of the audit is significant. As can be seen in Table 39, when participants believe that the standard audit already includes XBRL they perceive considerably higher error levels in cases when XBRL is excluded and lower levels of errors when XBRL assurance is included, as compared with the other participants.

Table 42: Expected Error Rates – ANOVA

Source	Partial SS	df	MS	F	Prob > F
Model	90938.42	87	1045.27	3.93	0.000
Report	2065.63	6	344.27	1.29	0.264
Audit inc XBRL	1572.21	1	1572.21	5.91	0.016
Report * Audit inc XBRL	883.08	6	147.18	0.55	0.767
Level of Knowledge	71643.96	62	1155.55	4.34	0.000
Participant	13499.68	12	1124.97	4.23	0.000
Residual	37274.97	140	266.25		
Total	128213.40	227	564.82		
R^2	0.709				
Adj R^2	0.529				

Significance of inter-report Contrasts

Assurance Levels - No quality screen

Report		1	2	3	4	5	6	7
1	Audit Report							
2	Audit Report with XBRL							
3	Audit Report excl XBRL							
4	Audit Report and Reasonable Assurance		**					
5	Reasonable Assurance							
6	Audit Report and Limited Assurance							
7	Limited Assurance							

* < .1 ** < .05 *** < .01

This result does not hold, however, when we test only those participants that both own shares and pass our quality screen as shown in Table 43.

Table 43: Expected Error Rates – ANOVA with Quality Screen

Source	Partial SS	df	MS	F	Prob > F
Model	57953.65	54	1073.22	4.69	0.000
Report	1478.14	6	246.36	1.08	0.384
Audit inc XBRL	386.44	1	386.44	1.69	0.198
Report * Audit inc XBRL	583.85	6	97.31	0.43	0.860
Level of Knowledge	47394.69	39	1215.25	5.31	0.000
Participant	130.13	2	65.06	0.28	0.753
Residual	16923.75	74	228.70		
Total	74877.40	128	584.98		
R^2	0.774				
Adj R^2	0.609				

Other variables

As with the US setting, we ask Dutch participants to provide their perceptions on which audit procedures auditors will undertake on XBRL engagements. Table 44 provides descriptive statistics for the audit procedures Dutch participants believed the auditor performed. Once again, we find significant differences between procedures that require complete or sample investigations on tag correctness and verification to underlying facts. Interestingly, Dutch participants see a noticeably higher absolute level of procedures being undertaken than for their US counterparts.

Audit Procedures	All		Own Shares				Quality Screen	
			No		Yes			
	Mn	Std Dev	Mn	Std Dev	Mn	Std Dev	Mn	Std Dev
Verified correct taxonomy use	6.06	1.28	5.96	1.38	6.12	1.21	6.12	1.37
Tested sample tags for consistency	5.47	1.53	5.32	1.62	5.57	1.47	5.86	1.23
Tested all tags for consistency	4.52	1.74	4.44	1.64	4.57	1.81	4.56	1.84
Evaluated necessity of extension	5.12	1.70	5.08	1.59	5.14	1.78	5.23	1.74
Verified facts correctly tagged	5.07	1.75	4.82	1.80	5.24	1.71	5.44	1.50
Evaluated internal control	5.81	1.27	5.64	1.35	5.92	1.21	5.93	1.33
Tested sample of tags accuracy	5.53	1.54	5.46	1.61	5.58	1.51	5.79	1.28
Tested all tags accuracy	4.66	1.82	4.56	1.76	4.72	1.87	5.00	1.70
Tested sample tags to correct fact	5.50	1.57	5.34	1.75	5.61	1.44	5.70	1.24
Tested all tags to correct fact	4.65	1.85	4.68	1.82	4.63	1.88	4.93	1.78
Reviewed guidance	5.70	1.41	5.52	1.43	5.82	1.39	5.84	1.34
Interviewed OT staff	5.81	1.31	5.54	1.45	5.99	1.18	6.02	1.16
Checked validity	5.49	1.40	5.32	1.50	5.61	1.33	5.49	1.42
N	126		50		76		43	

Combined Results

We now compare and contrast the results for both the US and Netherlands settings for levels of assurance and error levels. In Table 45, we summarize the perceived levels of assurance and expected residual error rates for both the US and the Netherlands, for those participants owning shares. The table highlights both the similarities (e.g., participants respond strongly when explicitly advised that the audit excludes XBRL (Case 3) and rate the level of assurance for reasonable assurance engagements higher than they do for limited assurance engagements) and differences (e.g., the standard audit report seems sacrosanct to Dutch participants and not for US participants) between the US and Dutch settings.

Table 45: Levels of Assurance and Expected Error Rates by Country

Audit Report	Statistics	Levels of Assurance			Errors		
		NL	US	All	NL	US	All
Audit Report	N	38	95	133	41	111	152
	Mean	81.1	57.4	64.1	41.1	61.3	55.9
	Std Dev	18.7	29.7	29.0	22.4	21.1	23.2
Audit Report with XBRL	N	41	92	133	43	114	157
	Mean	62.3	65.4	64.5	49.8	55.1	53.6
	Std Dev	34.2	26.4	29.0	28.1	22.8	24.4
Audit Report excluding XBRL	N	39	88	127	42	108	150
	Mean	25.6	42.8	37.6	50.0	65.2	61.0
	Std Dev	35.3	33.3	34.7	24.3	17.5	20.7
Audit Report and Reasonable Assurance	N	59	117	176	62	135	197
	Mean	79.6	64.2	69.3	42.2	55.0	51.0
	Std Dev	17.1	26.2	24.6	22.8	23.2	23.8
Reasonable Assurance	N	58	112	170	62	128	190
	Mean	80.0	65.8	70.7	42.2	55.6	51.2
	Std Dev	18.8	26.8	25.2	23.2	24.4	24.8
Audit Report and Limited Assurance	N	62	110	172	64	137	201
	Mean	69.3	67.4	68.1	43.1	60.2	54.7
	Std Dev	21.6	25.6	24.2	21.2	22.4	23.4
Limited Assurance	N	63	75	138	64	90	154
	Mean	59.8	67.0	63.7	46.0	61.3	55.0
	Std Dev	24.1	26.0	25.3	22.7	20.8	22.8
All	N	360	689	1,049	378	823	1,201
	Mean	66.8	61.8	63.5	44.6	58.9	54.4
	Std Dev	29.2	28.7	29.0	23.4	22.2	23.5

In Table 46 and Table 47 we report the multivariate ANOVA repeated measures analysis for both perceived levels of assurance and expected residual error rates in the XBRL instance documents for both the Netherlands and the USA. These results are for those participants that own shares. We report the interaction effects of country and report type. We also report the statistical significance of the various categories of reports. The primary effect of country is not significant but the interaction effect of country and report is strongly significant for levels of assurance (p = 0.000) and moderately significant for expected error levels (p = 0.068). The form of report is moderately significant for levels of assurance (p = 0.068) and strongly significant for expected error rates (p = 0.020).

The pattern of significance of the different forms of audit and assurance is similar for both levels of assurance and residual errors. Where the audit report explicitly excludes XBRL, there are significant differences with essentially all the other forms of report. As we predict, stapling an audit report to a reasonable (Case 4 cf 5) or limited assurance report (Case 6 cf 7) does not give rise to significant differences. Adding an audit report does not change the perceptions of investors. And only in the case of errors, is there a significant difference between limited and reasonable levels of assurance.

Table 46: Levels of Assurance – Combined ANOVA

Source	Partial SS	df	MS	F	Prob > F
Model	544375.98	346	1573.34	3.93	0.000
Report	4720.51	6	786.75	1.97	0.068
Country	75.72	1	75.72	0.19	0.664
Report * Country	19423.97	6	3237.33	8.10	0.000
Participant	427862.91	333	1284.87	3.21	0.000
Residual	223937.08	560	399.89		
Total	768313.07	906	848.03		
R^2	0.785				
Adj R^2	0.528				

Significance of inter-report contrasts

Report		1	2	3	4	5	6	7
1	Audit Report							
2	Audit Report with XBRL	*						
3	Audit Report excluding XBRL	*	*					
4	Audit Report and Reasonable Assurance		**	**				
5	Reasonable Assurance		*	*				
6	Audit Report and Limited Assurance			**				
7	Limited Assurance			**				.

* $p < .1$ ** $p < .05$ *** $p < .01$

Table 47: Expected Error Rates - – Combined ANOVA

Source	Partial SS	df	MS	F	Prob > F
Model	432417.28	379	1140.94	5.46	0.000
Report	3154.46	6	525.74	2.52	0.020
Country	0.45	1	0.45	0.00	0.963
Report * Country	2463.95	6	410.66	1.97	0.068
Participant	377640.72	366	1031.81	4.94	0.000
Residual	140170.84	671	208.90		
Total	572588.12	1050	545.32		
R^2	0.755				
Adj R^2	0.617				

Significance of inter-report contrasts

Report		1	2	3	4	5	6	7
1	Audit Report	.						
2	Audit Report with XBRL		.					
3	Audit Report excluding XBRL	**	*	.				
4	Audit Report and Reasonable Assurance		*	***	.			
5	Reasonable Assurance			***		.		
6	Audit Report and Limited Assurance			***	**		.	
7	Limited Assurance	*		**				.

* $p < .1$ ** $p < .05$ *** $p < .01$

Conclusion

In this chapter, we expand and adjust the experiment conducted with investors, this time in the Netherlands context. The Netherlands is well advanced with its use of XBRL. This usage is reflected in the dramatically higher levels of the Dutch participants' self-expressed knowledge about XBRL. The Netherlands essentially uses complete IAASB standards, allowing us to test our core questions in an IAASB environment.

Building upon our experience with the experiment in the US setting, we change our focus to address the key question: do investors believe that the financial statement currently includes an audit of disclosures in the XBRL format. And if they do so believe, does this influence their view of perceived levels of assurance arising from alternative forms of assurance engagement on XBRL and the expected residual errors in XBRL instance documents that represent financial statements. We find that 18% of the Dutch participants "strongly agree" that the financial statement audit currently includes XBRL and a further 12% "somewhat agree" or "agree" with this proposition. Some 5% are neutral. In other words, 35% of the participants either had no view or considered that XBRL is currently part of the audit, indicating a perhaps unsurprising expectation gap. However, when we incorporate this belief as an independent variable in our multivariate analysis, it does not influence investor perceptions of the level of assurance or errors (with one minor exception).

The pattern of investor perception of the level of assurance and errors are broadly in line with our expectations with some important exceptions. First, standard audit reports are seemingly valued higher than in the US context and higher than we expect, *a priori*. Second, while the general ranking (reasonable assurance audit with and without explicit reporting on XBRL and reasonable and limited assurance engagements), the absolute values are markedly different from the US setting. For example, when presented with an emphasis of matter paragraph that *excludes* XBRL, Dutch participants report perceived assurance levels significantly lower than their US counterparts – perhaps reflecting the higher level of experience and qualifications and knowledge of XBRL. In essence, Dutch participants report levels of assurance that correlate to the alternative reports we present to them. Their perception of expected levels of residual errors does not, however, flow as strongly. Again, we can only speculate on the reason for this difference between the Dutch and the US participants (whose response patterns are more aligned between levels of assurance and outcomes – in this case, residual levels of errors in the XBRL instance documents).

We test the levels of assurance and errors in a multivariate analysis. The different report formats significantly influence the perceived levels of assurance. We see significant contrasts between, for example, audit reports with XBRL emphasis of matter paragraphs and separate XBRL reasonable and, interestingly, limited assurance engagements. In line with our earlier discussion, we do not find that report format significantly influence investor perception of error rates.

We also test investor perceptions of desired audit and assurance reports on XBRL versions of financial statements whether those versions supplement traditional print, PDF or HTML formats or replace them. In either case, nearly 90% of the investors want assurance on XBRL. When XBRL

supplements traditional forms of disclosure, investors express a clear desire for integration into the existing audit. When XBRL *replaces* other forms of disclosure, investors are more nuanced in their view of how the assurance on XBRL that they desire is communicated, perhaps reflecting the increased importance in this case of the XBRL disclosures. Integrating XBRL into the current audit drops from 75% to 59% and separate assurance to shareholders increases from 7% to 26%.

Aligned to the issue of mandating that audits include XBRL is the question of cost. We asked the Dutch participants to assume that XBRL replaces traditional forms of disclosure and that audit of XBRL became mandated. In such an environment, a quarter of the participants thought that fees would go *down* and nearly 30% considered that there would be no change. Again, we can only speculate but perhaps the Dutch investors consider that an XBRL-only environment would bring efficiencies to the reporting process and to the audit.

Finally, we brought the US and Netherlands experimental results together in a single multivariate analysis. In this analysis we find that both the primary effect of report *and* its interaction with country (USA cf Netherlands) were significant for both the perceived levels of assurance and expected residual error levels. We find significant contrasts between similar pairs of reports as we discuss above for the Dutch result (e.g., distinct reasonable assurance reports cf audit reports that both exclude *and* include XBRL in emphasis of matter paragraphs). We do not, however, find significant contrasts between separate reasonable and limited assurance reports, except in one case of error levels. In essence, we can conclude that investors do respond to different audit and assurance reports on XBRL and, broadly speaking, do so in a way that is consistent with our expectations based on the general thrust of audit standards set by the IAASB.

8 STUDY 4 –CASE STUDIES ON CONDUCTING ASSURANCE ON XBRL INSTANCE DOCUMENTS

Introduction

In this section we detail two case studies on conducting XBRL assurance engagements. In the first case study we examine the experience of Ernst and Young Netherlands in providing assurance on XBRL instance documents for Deloitte Netherlands. This engagement is one of very few examples of the actual conduct of assurance on XBRL. In the second case study we provide background on SEC XBRL reporting requirements, discuss existing assurance guidance, and provide details of the assurance engagements that have been provided to US SEC Registrants from the viewpoint of both providers and consumers of the AUP reports.

Case Study 1 – E&Y Assurance on Deloitte Holding BV Netherlands

Introduction

For the three fiscal years 2008-2009, 2009-2010, and 2010-2011 Deloitte Holding BV Netherlands (hereinafter, Deloitte) has published financial information from its annual accounts in XBRL format on their Website. The annual accounts of Deloitte were prepared on paper and audited by Ernst & Young Accountants LLP (hereinafter Ernst & Young). An unqualified auditor's report has been issued on those annual accounts. Ernst & Young issued an assurance engagement report under ISAE 3000 Assurance engagements other than audits or reviews of historical financial information on the financial information in XBRL format. Great progress has been made in the compilation of the financial information in XBRL format and the tenor of the auditor's report.

Financial information in XBRL format 2008-2009 and 2009-2010

Below the two published auditor's reports based on ISAE 3000 are presented. The differences between those two reports are:

1. The use of an inherent limitations paragraph only in the 2008-2009 auditor's report.

2. Due to the fact that it was unclear what data elements should be filed with the Chamber of Commerce, only assurance is given to the correctness and not to the completeness of the data in the 2008-2009 auditor's report.

By the time the 2009-2010 financial information was filed it was clear what data elements should be included in the report and in the auditor's report assurance was given to correctness, as well as, completeness. In both auditor's reports it was not very clear which criteria were used in the audit.

The assurance report for 2008-2009 was:

Figure 11: Ernst & Young Netherlands Assurance Report on Deloitte Netherlands 2008-2009

Introduction

Deloitte Holding B.V. has converted data from the financial statements 2008/2009 of Deloitte Holding B.V., which were audited by Ernst & Young Accountants LLP, into a XBRL instance document and intends to publish this instance document on its website. Deloitte Holding B.V. has used the Chamber of Commerce report 'Balansmodel B, W&V model E (categoriale indeling), kasstroomoverzicht indirect' (rpt-kvk-balansb-wve-kasstroomi-2008.xsd), which is part of the 2009 version of the Dutch Taxonomy.

We have examined whether the data contained in the instance document 'Deloitte_Annual_Report_2008-2009_XBRL.xml', was correctly derived from the financial statements 2008/2009 of Deloitte Holding B.V. For this purpose we also have examined whether the data contained in the instance document was correctly tagged in accordance with the Chamber of Commerce report mentioned above.

Management is responsible for the preparation of the instance document. Our responsibility is to provide an assurance report on the instance document.

Inherent limitations

The instance document contains part of the data which is incorporated in the financial statements of Deloitte Holding B.V. For a better understanding of the company's financial position and results and the scope of our audit of the financial statements, we emphasize that the data contained in the instance document should be used in conjunction with the unabridged financial statements, from which the instance document was derived, and our unqualified auditor's report thereon dated 29 July 2009.

An important characteristic of XBRL is the fact that multiple presentations of a XBRL instance document are possible, without a single one presentation being the 'normative' or 'default' presentation. The Chamber of Commerce report mentioned above (although part of the Dutch Taxonomy) is only one of many possible presentations of the data contained in the instance document. Our audit and our conclusion are limited to this presentation.

We want to draw your attention to the fact that the 2009 version of the Dutch Taxonomy is a so called 'authoritative' taxonomy, because the governmental agencies involved with this taxonomy have stated this taxonomy is compliant with Dutch legislation. For this reason, we have used the 2009 version of the Dutch Taxonomy and the Chamber of Commerce report mentioned above as suitable criteria for this assurance engagement.

Scope

We conducted our examination in accordance with Dutch law, including Standard 3000 'Assurance engagements other than audits or reviews of historical financial information'.

This law requires that we plan and perform our examination to obtain reasonable assurance whether the data contained in the instance document, in all material respects, has been correctly derived from the unabridged financial statements and correctly tagged in accordance with the Chamber of Commerce report. An assurance engagement includes examining appropriate evidence on a test basis.

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Conclusion

Based on our examination, we conclude that the data contained in the instance document 'Deloitte_Annual_Report_2008-2009_XBRL.xml' was correctly derived from the financial statements 2008/2009 of Deloitte Holding B.V. and that the data contained in the instance document was correctly tagged in accordance with the Chamber of Commerce report

'Balansmodel B, W&V model E (categoriale indeling), kasstroomoverzicht indirect' (rpt-kvk-balansb-wve-kasstroomi-2008.xsd).

Other matters

The instance document contains additional data that is not part of the Chamber of Commerce Report 'Balansmodel B, W&V model E (categoriale indeling), kasstroomoverzicht indirect'. This data is contained in so-called 'footnotes' and explains specific fact values and gives additional information on the tagging performed. The way these footnotes are used, is allowed by the Chamber of Commerce rules regarding the way that an instance document should be constructed for maximum interoperability (the 'KvK-FRIS' guidelines). However, FRIS guidelines indicate data in footnotes may be ignored. Therefore using the instance document in a 'KvK-FRIS compliant' environment may result in losing the information contained in footnotes. Our opinion is not qualified in respect of this matter: we have verified that the data contained in footnotes is not contra dictionary to the financial statements 2008/2009 of Deloitte Holding B.V.

We have pre-computed a MD5 checksum to uniquely identify the version of the instance document 'Deloitte_Annual_Report_2008-2009_XBRL.xml' we have examined. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksum of the downloaded XBRL file with the following pre-computed MD5 checksum: 3b55f8cbf57e41f04c04240bf0c2e31a.

The assurance report for 2009-2010 was:

Figure 12: Ernst & Young Netherlands Assurance Report on Deloitte Netherlands 2009-2010

Introduction

We have examined whether the data 2009/2010 contained in the instance documents 'Deloitte_annual_report_2009-2010_CJR_consolidated.xbrl' and 'Deloitte_annual_report_2009-2010_CJR_non_consolidated.xbrl' are, in all material respects, in accordance with the criteria on which the Commercieel Jaarrapport Groot – Geconsolideerd (rpt-cjr-geconsolideerd-jaarrekening-groot-2009) and the Commercieel Jaarrapport Groot – Enkelvoudig (rpt-cjr-enkelvoudig-jaarrekening-groot-2009) reports, which are part of the Dutch Taxonomy 2010.1, are based.

Management responsibility

Management is responsible for the preparation of the instance documents, using the same accounting principles and accounting estimates applicable to the financial statements. This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and tagging of the data that are free from material misstatement, whether due to fraud or error.

Scope

We conducted our examination in accordance with Dutch law, including Standard 3000 'Assurance engagements other than audits or reviews of historical financial information'. This law requires that we comply with ethical requirements and plan and perform our examination to obtain reasonable assurance whether the data are free from material misstatement, whether due to fraud or error. An assurance engagement includes, on a test basis, examining the correctness and completeness of the data reported and the correctness of the tagging of the data contained in the instance documents, based on appropriate evidence.

An important characteristic of XBRL is the fact that multiple presentations of the XBRL Instance documents are possible, without a single one presentation being the 'normative' or 'default' presentation. The 'Commercieel Jaarrapport' reports mentioned above are only one of many possible presentations of the data contained in the instance document. Our examination and our conclusion are limited to this presentation.

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Conclusion

Based on our examination, we conclude the data contained in the instance documents 'Deloitte_annual_report_2009-2010_CJR_consolidated.xbrl' and 'Deloitte_annual_report_2009-2010_CJR_non_consolidated.xbrl' are, in all material respects, in accordance with the criteria on which the 'Commercieel Jaarrapport – Groot' reports, which are part of the Dutch Taxonomy 2010.1, are based.

Other matter paragraph

We have pre-computed MD5 checksums to uniquely identify the version of the instance documents 'Deloitte_annual_report_2009-2010_CJR_consolidated.xbrl' and 'Deloitte_annual_report_2009-2010_CJR_non_consolidated.xbrl' we have examined. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksums of the downloaded XBRL files with the following pre-computed MD5 checksums: '6f f6 77 a7 37 80 f3 0d b8 a2 b9 85 3b e6 6f a6' respectively '6f 27 01 fa 99 91 0d 44 63 58 ba 5c 82 97 3e f6'.

If a traditional (paper version) financial statement is converted into financial information in an XBRL version and the auditor is asked to issue an auditor's report on it he has to perform some audit procedures. First of all he has to decide if he can use a control based audit approach or a substantive audit approach. Because the currently available procedures and tools to create an XBRL instance document are not adequate and robust the auditor has to choose a substantive auditing approach.

The following approach can be followed if the instance document is the object of the audit (in bold and cursive: the terminology consistent with the terminology used in the Exposure Draft "Proposed Principles and Criteria for XBRL-formatted Information" of the AICPA's Assurance Service Executive Committee XBRL - Assurance Task Force (AICPA ASEC 2011):

- *Structure*: first of all a core XML / XBRL validation should be performed using generic XBRL tools to verify if the instance document is syntactically correct and validates to the schema and other technical structures in the Dutch Taxonomy.

- A report, presenting all concepts, their values and their contexts, should be generated from the XBRL instance document using generic XBRL tools. All data on this report should be reconciled with the data presented on the rendered version of the instance document. By doing so the consistency has been guaranteed of the renderings and the factual content of the instance document.

- Using the paper based financial statement and the rendered version of the instance document, the audit team should verify:

    o *Mapping*: all data reported are correctly tagged (concept label name is consistent with the naming in the financial statement and the generally available "paper based" dummy financial statement)?

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- o *Accuracy*: all values of the data reported are identical with the values in the financial statement?

- o *Accuracy*: all data reported is reported using the correct contexts (for example consolidated/non consolidated; period; currency)?

- o *Completeness*: information contained in the financial statement that has been omitted in the instance document is only not legally required information and not required for a true and fair view?

- o *Mapping*: all data mapped in accordance with the "best fitting" rule is mapped to the best available or a "generic" concepts and properly explained using the concept in which explanatory information on this situation can be provided?

- Compliance has been verified with requirements imposed by the Dutch Government on the *structure* of the XBRL instance document. These requirements are formalized in a number of documents "Generic Dutch Taxonomy FRIS", "Chamber of Commerce FRIS" and the "Generic Instructions for preparing financial reports based on the Dutch Taxonomy". The requirements include (amongst others) rules on:

  - o the naming and consistency of periods (instances and durations).

  - o the naming of contexts (for example consolidated / non consolidated).

  - o the use of currencies (only one currency allowed in one instance document).

  - o The instance document has been verified that the document does not contain footnotes (**structure**: footnotes are not allowed in the Dutch Taxonomy) or potential contra dictionary non tagged information (**accuracy**: for example comment lines).

Finally, as was the case with the 2010-2011 audit report shown in Figure 13, the auditor can draft an auditor's opinion in a format and sign off electronically on the instance document for identification only, making sure that the user does not interpret his opinion and electronic signature as issuing data level assurance.

Figure 13: Ernst and Young Netherlands Assurance Report on Deloitte Netherlands 2010-2011

Assurance report

Introduction

We have examined the completeness, accuracy, mapping, and structure of the XBRL-formatted information contained in the accompanying instance document Deloitte_NL_annual_report_2011.xbrl electronically signed by us for identification purposes. The XBRL-formatted information is related to the financial statements for the year ended May 31, 2011 of Deloitte Holding B.V. and based on the Dutch Taxonomy 2011.

Management responsibility

Management of Deloitte Holding B.V. is responsible for the preparation of the instance document based on the Dutch Taxonomy 2011. This responsibility includes the design, implementation and maintenance of internal control necessary to enable the preparation of the XBRL-formatted information that is free from material misstatement, whether due to fraud or error.

Scope

We conducted our examination in accordance with Dutch law, including Standard 3000 'Assurance engagements other than audits or reviews of historical financial information'. This law requires that we comply with ethical requirements and plan and perform our examination to obtain reasonable assurance whether the XBRL-formatted information is free from material misstatement, whether due to fraud or error. An assurance engagement includes, on a test basis, examining the completeness, accuracy, mapping and structure of the XBRL-formatted information contained in the instance documents, based on appropriate evidence.

An important characteristic of XBRL is the fact that multiple presentations of the XBRL Instance documents are possible, without a single one presentation being the 'normative' or 'default' presentation. The presentation link base of the Dutch Taxonomy contains a hierarchical order of all data elements that companies can report. This hierarchical order is the basis for rendering the XBRL-formatted information into presentations that are similar to the financial statements. Our examination and our opinion are limited to this hierarchical order.

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, the XBRL-formatted information contained in the instance document Deloitte_NL_annual_report_2011.xbrl is based on the Dutch Taxonomy 2011 and, in all material respects, complete, accurate, correctly mapped and correctly structured.

By examining the financial information in the XBRL format, derived from the annual accounts over the last three years much progress was made in the audited procedures and the conclusions in the ISAE 3000 reports. Commencing in the first year with a standalone assurance report based on ISAE 3000 giving reasonable assurance only on the correctness of the data in the instance document coupled with the expression of some inherent limitations. In the second year the inherent limitations were partly part of the scope paragraph and in the conclusion, reasonable assurance was given on the instance document as a whole. Reference was made to the presentation linkbases that are part of the Dutch Taxonomy. In the third year a much more mature assurance report was issued. The conclusion in the assurance report in the last year gives reasonable assurance on the completeness, accuracy, correctly mapping of the data in the instance document and the correctness of the structure of that document. This is in line with the terminology consistent with the

terminology used in the Exposure Draft "Proposed Principles and Criteria for XBRL-formatted Information" of the AICPA's Assurance Service Executive Committee XBRL - Assurance Task Force (AICPA ASEC 2011). The link between the conclusion paragraph in the assurance report in the first two years of the engagement was guaranteed by using a MD5 checksum. In the last year the instance document was electronically signed off for identification only. The next step will be an integration of the assurance report in the instance document.

Conclusion

The examination of the instance document containing financial information of Deloitte by Ernst & Young Netherlands was started to explore the adequacy of the audit procedures normally used by auditors and the boundaries of the scope of an audit or assurance engagement with respect to the well-known levels of assurance, namely reasonable and limited. It was concluded that there is a need for new and different audit procedures, a very clear definition of the scope of the engagement and a specific description of the element on which the examination should be performed to be able to express reasonable or limited assurance on the instance document as a whole.

Another problem is the way the linkage will be guaranteed between the instance document, the data included in that instance document and the audit or assurance report. Further research should be focused on this issue taken into account the risk of widening the expectation gap. Users might get the impression of issuing data level assurance which is, unless it is specifically and transparent disclosed, not the case.

Case Study 2 – US SEC Filings

In this case study, we paint the history of conducting assurance on SEC filings in XBRL. As we will discuss in more detail shortly after we have set the scene, the only formal guidance on the SEC filings is a release by the AICPA's Auditing Standard Board (ASB) on conduct of Agreed-Upon Procedures (AUP) engagements. These engagements do not provide formal assurance. Lessons from these engagements do afford pointers to potential audit or assurance engagements.

The first major use of XBRL in the United States was by the Federal Financial Institutions Examination Council (FFIEC), led by Federal Deposit Insurance Corporation (FDIC) (Hannon and Trevithick 2006). The members of the FFIEC looked to XBRL as a means by which to improve the collection of financial institution data. Their resulting product, the Central Data Repository (CDR), allows banks to submit required reports in a tagged XBRL format in contrast to the traditional method of a PDF or MS Office document. The project was a success, with significant leaps in terms of data accuracy, filing and processing speed, and staff productivity.

The second large implementation of XBRL in the US was in 2005, when the SEC adopted its Interactive Data Voluntary Program that allowed public companies to voluntarily submit their financials in XBRL (Debreceny et al. 2005; Kernan 2009). In 2009, this was made mandatory by Release No. 33-9002 "Interactive Data to Improve Financial Reporting" which prescribed a three year timeframe in which to phase in the requirement of XBRL-based reporting by public

companies (SEC 2009). Commencing in 2009, large accelerated filers with a public float above $5 billion were required to file in XBRL, followed by other large accelerated filers in 2010, and culminating with all remaining filers and foreign entities who file in IFRS in 2011. The XBRL files are furnished in addition to the HTML version financial statements.

The SEC's program is particularly significant due to the economic scope of those involved and its open nature. Compared to the FFIEC program, in which participants file standardized templates, participants in the SEC program file deep and complex financial reports which are defined by significant inter-industry and inter-company variation. A large product created from the program has been the UGT, created by XBRL US at the direction of the SEC. The UGT contains over 15,000 elements to account for the great variation inherent in US reporting. Apart from the SEC's rule, the primary compliance requirement that filers must consider is the SEC's EDGAR Filer Manual Volume II (hereafter, EFM). A new Chapter 6 of the EFM covers interactive data (SEC 2010a). There are more than 200 rules, several of which bear on computational errors. The EFM requires that filers must submit their own calculation linkbase rather than re-using and extending the standard UGT (rule 6.15.1). Further, every calculation in the original HTML filing must have a corresponding XBRL calculation relationship.

An important concession to filers was the provision of a two year limited liability window, commencing in 2009, in which they were not penalized for errors that occurred if the filers made a good-faith effort. The SEC does not currently require that filers obtain assurance on their XBRL filing nor is there a plan to require assurance in the near future. However, informal discussions suggest that approximately 40% of the tier 1 and tier 2 filers have obtained voluntary assurance. Assurance has been obtained either as an Agreed-Upon Procedures engagement conducted with guidance proceeded by SOP 09-1 or a consulting engagement with a findings and recommendations report according to interview participants. Often times the desire for assurance coincided with the first filing or the first detail-tagged filing.

The regulator of the auditors of SEC registrants is the Public Accounting Companies Oversight Board (PCAOB). The PCAOB has been silent on XBRL with the exception of a single statement made by the Board's staff ("staff questions and answers") on attest engagements on filings under the VFP (PCAOB 2005).

The staff advised that auditors could undertake attest (assurance) engagements under the examination under AT 101 of the PCAOB's interim attestation standards. The staff provided guidance on appropriate criteria for the engagement (XBRL specifications and then existing UGT), and appropriate procedures. The staff guidance provided an example examination report for such an engagement, shown in **Error! Reference source not found.**

Figure 14 Example Examination Report – PCAOB Staff Guidance

Report of Independent Registered Public Accounting Firm on XBRL-Related Documents
We have examined the accompanying XBRL-Related Documents of Sample Volunteer
Company, presented as Exhibit *[number]* to the Company's *[Identify EDGAR filing, such as Form 10-K],* which reflect the data presented in the *[Identify corresponding information in the*

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official EDGAR filing] as of *[Month and Day]*, *[Year]* and *[Year]* and for each of the years in the *[number]*-year period ended *[date]*. Sample Volunteer Company's management is responsible for the XBRL-Related Documents. Our responsibility is to express an opinion based on our examination. We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the financial statements of Sample Volunteer Company as of *[Month and Day]*, *[Year]* and *[Year]* and for each of the years in the *[number]*-year period ended *[date]*, and in our report dated *[date]*, we expressed an unqualified opinion on those financial statements. In addition, we have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Sample Volunteer Company's internal control over financial reporting as of *[Month and Day]*, [Year], based on [Identify control criteria], and our report dated [date], expressed [Include nature of opinion].9/, 10/, 11/, 12/ Our examination was conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States) and, accordingly, included examining, on a test basis, evidence supporting the XBRL-Related Documents. Our examination also included evaluating the XBRL-Related Documents for conformity with the applicable XBRL taxonomies and specifications and the content and format requirements of the Securities and Exchange Commission. We believe that our examination provides a reasonable basis for our opinion. In our opinion, the XBRL-Related Documents of Sample Volunteer Company referred to above accurately reflect, in all material respects, the data presented in the *[Identify corresponding information in the official EDGAR filing]* in conformity with *[Identify the criteria—for example, the taxonomy, such as "US GAAP – Commercial and Industrial Taxonomy," and where applicable, the Stand Alone Add-on Taxonomy such as "US Financial Reporting – Management Report Taxonomy," and the specifications, such as "XBRL Specifications (Version 2.1)"].*
[Signature]
[City and State or Country]
[Date

When the SEC considered mandatory filings of XBRL data the question of the role of the auditor came into question. In the final rule, the SEC did not require an audit of the XBRL filing. A principal concern was whether auditors had a responsibility to consider the XBRL filing as part of their responsibilities under AU Section 550, Other Information in Documents Containing Audited Financial Statements (equivalent to ISA 720). Para 4. of AU 550 states:

> *Other information in a document may be relevant to an audit performed by an independent auditor or to the continuing propriety of his report. The auditor's responsibility with respect to information in a document does not extend beyond the financial information identified in his report, and the auditor has no obligation to perform any procedures to corroborate other information contained in a document. However, he should read the other information and consider whether such information, or the manner of its presentation, is materially inconsistent with information, or the manner of its presentation, appearing in the financial statements. If the auditor concludes that there is a material inconsistency, he should determine whether the financial statements, his report, or both require revision. If he concludes that they do not require revision, he should request the client to revise the other information. If the other information is not revised to eliminate the material inconsistency, he should consider other actions such as revising his report to include an explanatory paragraph describing the material inconsistency, withholding the use of his report in the document, and withdrawing from the engagement. The action he*

takes will depend on the particular circumstances and the significance of the inconsistency in the other information.

The SEC saw the need for assurance as essentially an empirical question. The evidence the Commission saw leading to their conclusion included:

- *the availability of a comprehensive list of tags for U.S. financial statement reporting from which appropriate tags can be selected, thus reducing a filer's need to develop new elements;*

- *the availability of user-friendly software with which to create the interactive data file;*

- *the multi-year phase-in for each filer, the first year of which entails the relatively straightforward process of tagging face financial statements, as was done during the voluntary program, and block tagging footnotes and financial statement schedules;*

- *the availability of interactive data technology specifications, and of other XBRL U.S., XBRL International, and Commission resources for preparers of tagged data*

- *the advances in rendering/presentation software and validation tools for use by preparers of tagged data that can identify the existence of certain tagging errors;*

- *the expectation that preparers of tagged data will take the initiative to develop practices to promote accurate and consistent tagging; and*

- *the filer's and preparer's liability for the accuracy of the traditional format version of the financial statements.* (SEC 2009, 94-95)

There is considerable doubt that this view can be sustained after the errors found in filings that we discuss in Chapter 2, the loss of liability and, particularly, should the SEC move to iXBRL which would incorporate XBRL tagging into the same HTML document that is available on EDGAR.

Putting aside the question of whether the auditor must consider the XBRL filings in the course of the audit, the only guidance on audit and assurance on XBRL in the US setting comes from the AICPA's Center for Audit Quality in their Alert #2009-19 and Alert #2009-55 (CAQ 2009a, 2009b). The CAQ notes that a range of services can be provided by audit firms for registrants including:

- *Advisory Services*

- *Assurance Services*

- *Agreed-Upon Procedures*

- *Examination of an Assertion About XBRL-Tagged Data*

- *Examination of Controls Over the Preparation of the XBRL-Tagged Data*

- *AT Section 601, Compliance Attestation*

- *Review of an Assertion About XBRL-Tagged Data* (CAQ 2009a)

While there are a number of possible alternatives, the only formal guidance on XBRL that has been issued is the AICPA's Auditing Standards Board's Statement of Position 09-1 that provides guidance on conducting Agreed-Upon Procedures on the XBRL filings, to which we now turn.

Auditing Standards Board Statement of Position 09-1 [6]

In response to the SEC's decision in 2009 to adopt "Interactive Data to Improve Financial Reporting," the ASB issued Standards Board Statement of Position (SOP) 09-1 "Performing Agreed-Upon Procedures Engagements that Address the Completeness, Accuracy or Consistency of XBRL-Tagged Data" (ASB 2009). This SOP is designed to provide guidance on Agreed-Upon Procedures engagements, covered by AT 201 "Agreed-Upon Procedures Engagements," related to XBRL-tagged data.

A practitioner should meet certain conditions before performing the engagement. Relevant among these include that the practitioner should be independent, management should provide written assertions on the XBRL-tagged data, and the procedures to be performed and criteria for findings are agreed upon among all parties. It is also required that the practitioner and client have a written understanding of the engagement, including responsibilities of the parties, the procedures to be performed, and the identification of the subject matter. The client's management is responsible for the XBRL-tagged data itself, and for ensuring that it is complete and accurate, while the practitioner is responsible for carrying out the engagement in accordance with AT 50 "SSAE Hierarchy" attestation standards.

The procedures of the engagement are left to the discretion of the parties involved. However, the SOP makes note that certain procedures are not sufficient enough to qualify for being reported as part of an Agreed-Upon Procedures engagement. These insufficient procedures include reading through the work to produce the XBRL-tagged data, evaluating competence of the preparer, and simply gaining and understanding of the requirements.

The resulting report for the engagement considers primarily the procedures and findings. It should not provide any negative assurance, and materiality is not a factor unless materiality thresholds were otherwise agreed upon by the parties. Basic elements that should be included in the report are identification of the parties and subject matter, statements regarding responsibilities, and a list of the procedures and findings.

Appendix D of the SOP includes a number of example management assertions. These include taxonomy identification; accurate and consistent tagging; extension creation and management' completeness; and management of tagging note disclosures, labels, calculation relationships and

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[6]   The next five paragraphs are paraphrased from XBRL Planet (2011b).

presentation structures. Each assertion is associated with sample procedures. For example, the second sample management assertion is that "Tagging is Accurately and Consistently Applied" (ASB 2009). The assertion includes requirements for standard tags and extensions and related "contextual structuring attributes (for example, context, units, footnotes)" that accurately reflects the "corresponding data in the source document ... and are consistently applied." Eight procedures are suggested to address this assertion, including determining "whether the same identifier and scheme are used in all contexts related to that entity," comparing "the context segments, scenarios (including dimensional information), and date(s) used for each tag," aligning "the information in each tag contained in the XBRL instance document to the corresponding data element in the source document, including (1) attributes of element (2) context reference ("contextRef"), (3) unit reference ("unitRef"), (4) decimals/precision, and (5) amount." "Compare the units and contexts identified in the XBRL instance document to the underlying source document to identify duplications as well as units and contexts that do not reflect information contained in the source document."

Version control is addressed by the procedure which suggests the assurance services provider "Obtain from management a detailed list of changes in the tags used from the prior period to the current period and inquire of management about why the changes were made. Compare the tags used for current period amounts and disclosures to the tags used for the related prior period amounts and disclosures in the XBRL instance document and with those in the corresponding prior period XBRL instance document(s) ... and to the detailed list obtained from management."

Agreed-Upon Procedures Interviews

Agreed-Upon Procedures (AUP) engagements are a private matter; however, we are aware informally that approximately 40 percent of US SEC filers have obtained one or more AUP engagements. Given the nature of AUP engagements we conducted interviews with relevant parties at BDO (Kim 2011; Valpey 2011), Deloitte (Larson 2011; Newman 2011), Ernst and Young (Penler 2011; Slavin 2011), Grant Thornton (Denham 2011; Phillips 2011), KPMG (Luczka 2011), Parente Beard (Swirsding 2011), PwC (Neglia 2011) and United Technologies Corporation (Patterson 2011). It is our agreement with those interviewed that no individually identifiable information other than the names and affiliations of those interviewed will be provided. All findings will be discussed in the aggregate. A list of the interview questions is provided in Appendix 1.

As might be expected Big 4 auditors have clients that were required to file under the SEC mandate beginning in 2009 and 2010.;while auditors in the second tier have more clients that began filing in 2011. Thus, the client-base has some impact on the number of engagements performed. The majority of the phase 1 (2009) and phase 2 (2010) began XBRL compliance using an outsource agent; however, there has been a significant trend for these companies to bring the process in-house. The decision to bring the XBRL process in-house is often driven by the need to gain better control over the process and to eliminate the "pencils down" period imposed by outsource agents.

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In general, clients are aware that XBRL assurance is not required. However, at least one firm has revised the audit engagement letter to specify that the XBRL instance document is not included as part of the engagement. Other firms have communicated with audit staff to make them aware of their role in regard to the XBRL files. Client education materials often lead to the discussion of XBRL assurance services between management and the auditors. Several firms noted that for phase 1 filers there has been an increase in Audit Committee/Board of Directors inquires although primary interest still comes primarily from financial reporting management.

A couple of issues seem to drive the management need for an AUP engagement. Often the firm does not have the requisite XBRL knowledge in-house to adequately evaluate the results of their outsource agent. There has been some concern among clients with regard to the loss of limited liability which caused an uptick in the request for assurance. However, many clients sought to obtain assurance with "milestone" filings (first Q, first K, first detailed tagging) to improve their process during the limited liability window rather than wait until limited liability expired.

There is no predictable pattern to who and at what intervals assurance is requested. Some clients have continued to obtain an AUP at each filing date while others have obtained a one-time engagement or milestone event engagements. However, those clients seeking repeated engagements are not likely to have the full set of procedures completed at each engagement. In general, audit firm procedures closely followed those specified in the appendix to SOP 09-1.

The staffing of XBRL engagements in general had a limited core-set of XBRL experts within a particular firm. In most cases the XBRL team worked closely with the existing audit staff, in particular, because the existing audit staff was familiar with the client's accounting system. However, the core-team which in general averaged less than a dozen people performed the majority of the engagement tasks. In one Big 4 firm they had taken the approach to provide broad XBRL education to the audit staff so that they could be more involved in the process. It is obvious that if XBRL were immediately mandated there would be a significant shortage of qualified auditors.

There were differences within the Big 4 as to when the AUP engagement was happening thus impacting the ability of management to incorporate changes based on the findings into the current filing. Depending on the time-frame for the engagement it is possible for the auditor to complete a review of mapping and extension decisions based on prior period or preliminary current period mapping reports. However, other tasks must be completed after the instance document is finalized. Thus, management must prioritize any changes which is seeks to make in the instance document.

In general, auditors are finding errors that are consistent with the overall findings published by the SEC. Clients have sign errors which result from failure to consider whether the element is a debit or credit in the taxonomy, extension elements created when a valid taxonomy element exists and, the presence of calculation inconsistencies. The move to detailed tagging has increase the volume of errors but this is understandable because the number of elements being reported increased significantly. However, new types of errors are being seen in detailed tagging, in particular the use of incorrect contexts for the dates which appear in the notes.

There was disagreement among the interviewees as to whether there was sufficient guidance for conducting XBRL assurance engagements. Some felt that the existing AUP was not sufficiently detailed and suggested that the AICPA's draft Principles and Criteria was a step in the right direction. In addition, the interviewees were divided over whether the AUP criteria and existing audit standards were sufficient for conducting XBRL audits. An interesting pattern emerged in that most interviewees who felt that assurance should be mandated did not feel that there was sufficient guidance. In particular, interviewees expressed concern over the definition of materiality given that a particular financial statement fact might be taken out of context from the financial statement taken as a whole. Further, was the issue of how to communicate assurance and in particular the level of assurance attributed to a particular financial statement element.

The majority of interviewees suggested that XBRL assurance would be necessary if XBRL is going to live up to its potential. Currently, data aggregators are performing many of the rule-based validations on XBRL files that were necessary on transcribed financial data to ensure its validity. However, most interviewees did not believe that it was necessary for the auditor to disclaim association with the XBRL files. It was a widely held belief that because the SEC rule states that assurance is not required there is no need to disclaim involvement.

Conclusion

In this section we discussed the views of auditors that have or are preparing to conduct AUP engagements for clients reporting to the US SEC. The insights provided indicate that companies are willing to pay for voluntary assurance. Companies are concerned with producing high-quality XBRL reports even when afford limited liability provisions. The decision to obtain voluntary assurance was independent of the decision to insource or outsource the production of XBRL reports. The audit firms were comfortable with the guidance provided by SOP 09-1 as a starting point but several felt it could be improved. While the SOP might be a starting point for the development of an auditing standard, additional guidance would be necessary to address questions of presentation, materiality and communicating the audit opinion.

9 CONCLUSIONS AND RECOMMENDATIONS

XBRL is now in wide use around the world. Many of those implementations involve the transmission of XBRL-formatted financial statements that have been subject to audit. The initial reaction of the IAASB and other auditing standards setters has been to conclude that XBRL formatted financial statements do not fall within the scope of the traditional financial statement audit. The SEC and the PCAOB in the US setting have come to similar conclusions while, at least in the context of the SEC, recognizing that this may well change as XBRL becomes more integrated into the full extent of the financial reporting supply chain – including production by the corporation and use by information consumers. The increasing pace of XBRL adoption has led, understandably, to XBRL being placed on the long term agenda of the IAASB. The question that the IAASB must answer is what, if anything, should the role of the IAASB be as far as XBRL-enabled financial reporting supply chains that incorporate financial statements that have been traditionally audited? Or, for that matter, for financial information flows that have not been subject to assurance?

Our study

To provide input into the IAASB's process we have undertaken a multi-component study. The primary objectives of this study were twofold. First, we wanted to understand the implications of XBRL for the financial statement audit. Second, we sought to understand investor perceptions of alternative forms of XBRL assurance. To address these objectives, we undertake a range of enquiries. First, we complete a desk review of the current state of XBRL adoptions internationally and the implications of those adoptions for audit, assurance and Agreed-Upon Procedures engagements. This desk review includes an analysis of the elements of an assurance engagement from an XBRL perspective.

In the first study, we undertook several focus groups with participants in the financial information supply chain. We sought to understand the demand for and implications of providing alternative forms of assurance and audit on XBRL-formatted statements. Then in the second and third studies we undertook experiments with investors from the US and the Netherlands, respectively. We sought to understand whether investors respond to alternative forms of audit and assurance on XBRL-formatted financial statements. We investigated a number of additional environmental and policy questions with these investors. In the fourth study, we analyzed the conduct of assurance on XBRL-formatted financial statements in two case studies – providing assurance on the financial statements of a "Big Four" professional services firm in the Netherlands and the conduct of Agreed-Upon Procedures in the US setting. We interviewed practicing auditors that have undertaken these AUP engagements on XBRL-formatted financial statements. Undertaking the desk review and these four studies allow us to come to some key conclusions and provide the foundation for the recommendations for the IAASB.

It is clear from our investigation that there is considerable international adoptions of XBRL that incorporates information that reflect either the complete set of audited financial statements or

considerable portions thereof. While the extent of national regulatory requirements for assurance or audit on these XBRL-formatted financial statements

It is apparent that the need for assurance or audit on XBRL will be driven, to some large extent, by the interaction of a number of implementation considerations. If regulators consider the implications of implementation choices when designing the XBRL reporting scheme on the need for XBRL assurance and their willingness to mandate XBRL assurance to support user needs. These implementation choices include the extent of coverage of the XBRL tagging (e.g., only the "face" of the financial statements or including the notes and additional or other disclosures), the complexity of the foundation taxonomy and the ability by corporations to extend the taxonomy. The form of XBRL reporting is also important. For example, production of financial statements in an iXBRL format that integrates human-readable HTML and XBRL, or by a "viewer" provided by an intermediary may be perceived as different by investors and corporations than in those cases where XBRL reports are distinct from other forms. Where the production of XBRL reports comes in the financial reporting process is also important. Perceptions may differ if the production of XBRL precedes other forms of financial reporting as compared to following other forms of reporting. Another factor is the degree to which the production of XBRL is integrated into the financial statement close process. Similarly, when XBRL becomes directly integrated into the decision making models of information consumers, perceptions of investors, corporations and auditors may change requiring regulators to continuously consider the costs and benefits of mandatory assurance.

We show that, by taking auditing standards as they currently exist (not, of course, with XBRL in mind when promulgated) there are a number of combinations of the factors that we set out in the previous paragraph that give rise to consideration of XBRL, either as a fundamental element of the financial statements or as "other information" that the auditor must consider, given their obligations under ISA 720. For example, in circumstances where a primary method of distributing financial statements is in the iXBRL format it is difficult to see how the XBRL that explicitly tags the human readable content can be separated from that content. Again, when XBRL is pushed up the financial reporting supply chain so that it becomes integrated in the financial close or consolidation processes, it becomes clear in our view that the financial statement audit must now consider XBRL.

In our analysis of international developments we find that there are essentially two forms of national standard setter activity. The first seeks to provide management and the Board with guidance on the quality of XBRL instance documents through Agreed-Upon Procedures that, by definition, do not provide formal assurance. This is the current approach in the USA, UK and Japan. A second national approach is to either currently require assurance on XBRL, as is now the case in India, or to require it in the future as seems to be the direction in countries such as Sweden and the Netherlands. These latter countries are in a transition phase, with XBRL taking on a central rather than supporting role in the financial reporting supply chain. These latter developments are

quite new. In the US setting, however, we now have over three years of experience with AUP engagements under the AICPA's SOP 09-1. While these engagements do not technically provide assurance, our extensive interviews with auditors conducting SOP 09-1 engagements reveal that these engagements bear all the hallmarks of a typical audit or assurance engagement. The experience of the AICPA in establishing criteria and mapping typical procedures will be vital in whatever IAASB consideration of XBRL that follows. Given the complexity of the typical XBRL report to the SEC, particularly those made by filers in their second year of XBRL filings when the notes and additional disclosures are tagged, these engagements are significant by any standard – at least in their first iteration. It is clear that as XBRL becomes a standard part of the close process and the inadequacies revealed in the first engagement are fixed, subsequent engagements involve significantly less audit effort..

In our focus groups, we obtained the views of a cross-section of producers, consumers and regulators on the need for and issues surrounding the production of XBRL assurance. A majority of the participants felt that XBRL assurance should be mandatory regardless of whether XBRL was provided as the sole method of financial reporting or as a supplement to current reporting models (i.e., PDF, HTML, etc.). Further, nearly all participants, including those that did not believe that XBRL assurance should be mandatory, felt it was imperative that the IAASB move forward with XBRL assurance guidance. It was suggested by multiple participants that the IAASB might move first toward guidance similar to the AICPA's Agreed-Upon Procedures guidance (SOP 09-1) while moving forward on a specific assurance standard. Participants felt it was important to establish the IAASB as leading in the development of a standard rather than trying to develop a standard in haste after XBRL assurance has been mandated in the first reporting environment.

As the focus group analysis shows, separate assurance on XBRL is also a possibility conducted under ISAE 3000 with reasonable or limited levels of assurance. We distinguish between seven forms of audit and assurance on XBRL-formatted financial statements. We show them in the descending order we believe they provide assurance:

Figure 15: Expected Investor Perception of Level of Assurance of Alternative Reports

Level of Assurance	Audit or Assurance Report
1	Standard audit report with explicit inclusion of XBRL in an emphasis of matter paragraph.
2	Standard audit report "stapled" to a separate reasonable assurance report on XBRL.
3	Reasonable assurance report on XBRL, in isolation
4	Standard audit report "stapled" to a separate limited assurance report on XBRL.
5=	Standard audit report, with no mention of XBRL. This is the base case.
5=	Limited assurance report on XBRL, in isolation
7	Standard audit report with explicit exclusion of XBRL in an emphasis of matter paragraph.

In our second and third studies, we test the effect of these alternative forms of assurance experimentally in two experiments conducted with investors in the USA and the Netherlands. We provide the participants with background on XBRL and the nature of assurance and, then, extracts of audit or assurance reports that contain the essence of the audit or assurance report. We ask the investors two questions. First, we ask them to rate their perceptions of the level of assurance provided by the report. Second, we ask them to assess the level of errors in the final XBRL instance document. While there are differences between the US and the Netherlands, investors rate the traditional audit report stapled to an ISAE 3000 reasonable assurance report, an ISAE 3000 reasonable assurance report that stands alone and traditional audit report stapled to an ISAE 3000 limited assurance report as providing the greatest degree of assurance. Interestingly, an audit report with an emphasis of matter paragraph that provides explicit recognition of XBRL, a traditional audit report with no mention of XBRL and a standalone ISAE 3000 reasonable assurance report broadly comparable. Investors rate the level of assurance on XBRL provided by audit report with an emphasis of matter paragraph that explicitly exclude XBRL significantly lower than any other form of reporting. When asked to assess the extent of errors, we do not see the same level of distinction between the different forms of report, with the exception of the report that excludes XBRL, which is significantly higher than most other forms of reports.

We also investigate what investors in the USA and Netherlands perceive should be appropriate assurance on XBRL under circumstances where XBRL is supplementary to traditional forms of distribution or in addition. The results are very similar. Investors rank assurance on XBRL either as part of the audit or in a separate report the highest. For example, 90% of Netherlands investors state that there should be assurance on XBRL. This result does not vary under either assumption

about the nature of XBRL production. Essentially, they see that the form of assurance should be mandated as part of the audit.

In our fourth study, we investigate the practical applications of conducting assurance engagements on XBRL versions of financial statements. We undertake two case studies. In the first case study, we review Ernst and Young Netherlands assurance and audit processes on three years of Deloitte Netherlands XBRL instance documents. The examination of the instance document containing financial information of Deloitte by Ernst & Young Nederland over three consecutive years was started to explore the adequacy of the audit procedures and the boundaries of the scope of an audit or assurance engagement. In the last year the Exposure Draft "Proposed Principles and Criteria for XBRL-formatted Information" of the AICPA's Assurance Service Executive Committee XBRL - Assurance Task Force (AICPA ASEC 2011) was used as a guiding principle to perform the examination and structure the assurance engagement report based on ISAE 3000. It was concluded that there is a need for new and different audit procedures, a very clear direction to the scope of the engagement and the elements of the object of the engagement being examined.

We canvassed the views of auditors that have or are preparing to conduct AUP engagements for clients reporting to the US SEC under the AICPA's SOP 09-1. The insights provided indicate that companies are willing to pay for voluntary assurance. Companies are concerned with producing high-quality XBRL reports even when afford limited liability provisions. The decision to obtain voluntary assurance was independent of the decision to insource or outsource the production of XBRL reports. The audit firms were comfortable with the guidance provided by SOP 09-1 as a starting point but several felt it could be improved. While the SOP might be a starting point for the development of an auditing standard, additional guidance would be necessary to address questions of presentation, materiality and communicating the audit opinion.

Recommendations to the IAASB

The results of our research have implications for a wide-range of constituents: regulators, standard setters, auditors, investors, corporations and future researchers. It is through the understanding of the inherent risks in the production of XBRL reports within a given reporting scheme that actions can be taken to reduce the risks to an acceptable level to facilitate transparency in financial reporting and allow information consumers (e.g., regulators and investors) to have full-faith in the XBRL instance document.

First, we see that there are sufficient adoptions of XBRL around the world and countries that are considering assurance thereon to re-invigorate the IAASB's consideration of XBRL attestation. The IAASB should communicate this without any restraint. We believe that this is the first step because it will provide the impetus for change for other constituents.

Second, much work is required to fully consider the implications of each of the aspects of an assurance engagement that we consider in Chapter 3. Key questions that must be answered include: What are the engagement criteria? What is materiality within the context of an XBRL instance document? How should assurance be conveyed (i.e., individual data level or the rendered financial

statement taken as a whole)? Can there be different levels of assurance provided on a single instance document?

Third, although investors would like to have assurance on XBRL it will not be uni-dimensional. The way in which XBRL is implemented within a reporting scheme by regulators impacts the form and necessity of assurance on the instance document. Regulators should consider this at the onset of decision-making in the implementation of XBRL. In case C, D and E, (Figure 1) where the instance document is or might be seen as the statutory financial statements an auditor's opinion should be developed to express reasonable assurance (e.g., along the line the assurance is given in the Deloitte case study). In cases A and B, at this moment the most common used, the user of the instance document can decide on the level of assurance to be delivered. For example, in some settings it may well be that the user of the instance document concludes that an Agreed-Upon Procedures (AUP) may be the acceptable solution to ensuring the quality of the XBRL reports. In other settings an assurance engagement based on ISAE 3000 (with either reasonable or limited assurance) on different XBRL elements may well be appropriate. This would allow auditors to report similarly on quarterly or semi-annual XBRL-formatted disclosures. By considering the impact of implementation choices during the design of the XBRL implementation project regulators can appropriately consider the risks of each decision (e.g., open versus closed taxonomy) and its impact on the need for separate instance document assurance.

Fourth, considerable effort must be undertaken to provide clear and transparent directions to the auditor community to develop new audit and review procedures on which the auditor can form an appropriate opinion or conclusion.

Fifth, development of interactive, intelligent tools that make it possible for auditors to perform quality audits in line with the ISA 200.

Sixth, corporations must be aware of the risks for errors in the production of XBRL reports given their ultimate responsibility for the production of timely and accurate XBRL reports. Companies must develop internal controls surrounding the production of the instance document. Further, the company must remain abreast of changing standards regarding XBRL assurance.

Seventh, as with other forms of assurance it is necessary to educate the investing public about the level of assurance that is being provided on the XBRL instance document regardless of whether the level of assurance is none, negative or positive.

Eighth, the IAASB should look into the relation between continuous monitoring, continuous assurance, just in time assurance and assurance by default, to be prepared for the developments that takes place in the audit firm's client's environments.

Future research

There are a number of questions that this study raises but cannot answer. These questions should be explored in future research.

First, we have only scratched the surface of understanding national implementations and the interaction between local regulatory environment, auditing standards and the nature of XBRL adoption.

Second, while we focus on the views and perspective of investors in this study, there are other stakeholders and participants in the financial reporting supply chain. For example, how do analysts see assurance on XBRL?

Third, there are a number of issues that relate to the implications of conduct of assurance and audit engagements on XBRL. For example, in Chapter 3 we discuss the role of materiality in the conduct of an XBRL engagement. There are a number of alternative perspectives on materiality that require research and resolution.

Fourth, in Chapter 3 we point to the many challenges of communicating the audit report. Additional policy and design-science research is necessary to address the many alternative methods of communicating audit or assurance results. How would information consumers view (in both senses of the word) audit or assurance reports that are incorporated into electronic XBRL disclosures? How might these views change when the audit or assurance report is associated not with a complete set of financial statements but elements thereof?

Fifth, moving beyond the constraints of the financial statement audit, there are linkages to other areas of research. How does an audit or assurance engagement on XBRL relate to data level assurance or continuous assurance? How might assurance of a continuous nature or on continuous disclosures relate to audit or assurance on annual financial statements? How would assurance on quarterly or semi-annual disclosures in XBRL form be differentiated from XBRL that was incorporated into the financial statement audit? Is there a possibility to report on assurance in a continuous way?

Sixth, how can the linkage between an instance document and the related auditor's report or assurance report be guaranteed over time? Several countries' requirements speak about the necessity for several years over which an entity's financial statements must be available. Similarly, analysts and researchers need access to financial statement data for many years.

Seventh, how can we reduce the expectation gap? Users may get the impression of data level assurance in cases as depicted in Figure 1 in at least cases C and D.

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11 APPENDICES

Appendix 1 - Focus Group Materials

Script for focus group discussions:

The Implications of XBRL for the Financial Statement Audit

Focus Group Questions

An ACCA/IAAER Research Program to support the work of the IAASB

Opening script

Thank you for joining this focus group on the role of XBRL and the financial statement audit. I am Hans Verkruijsse from Tilburg University in the Netherlands and recently retired from the Ernst and Young partnership. I am accompanied by my colleague, Dr. Stephanie Farewell from the University of Arkansas at Little Rock. As you may be aware, this research is funded by the ACCA and is in support of the work of the IAASB. We are working closely with the IAASB task force and staff as we move this research forward. What we plan to do in this focus group is very quickly introduce the concept of XBRL in a non technical manner and then proceed to ask you some questions on a couple of hypothetical situations.

First, I would to go around the room. Please give us your name and the organization you represent.

XBRL is straightforward to understand at a nontechnical level. For the purposes of this focus group we do not need to delve into all of the many complexities of the technology. XBRL is a computer-based method for encoding accounting and other information in a way that computers can read and understand. When companies report their financial information, they tag individual facts or blocks of text against a standard dictionary or taxonomy. For example, if a company reports *cash and cash equivalents* on the face of the financial statements, the company officers will line that fact up against the equivalent element in the dictionary. So when a computer reads off the financial statements, the computer interprets the fact as *cash and cash equivalents*. It does not matter whether the fact was reported in English, Spanish, Portuguese or Chinese or whether the label was *cash*, *cash and current cash equivalents*, *cash with banks* or any of the many other variants found in the real world.

Using XBRL means that the information in a set of financial statements can quickly be folded into a variety of different databases and other applications. There are well developed dictionaries for IFRS, US GAAP and other jurisdictions. Implementations vary from country to country, but in many cases companies are also allowed to build their own company-specific dictionary elements. They do this when they cannot find the necessary element in the taxonomy for concepts reported in the financial statements. XBRL is in use in a number of countries for different purposes. Some implementations are for small and medium size enterprises, such as in the Netherlands. Other implementations are for full scale financial reporting by public companies, such as in the U.S.

Again, implementations vary by country, but to use the U.S. as an example, the SEC is now requiring that every fact on the face of the financial statements and in the notes and additional disclosures will eventually need to be individually tagged. Extensions for company-specific information are required in the U.S.

There is considerable judgment involved in the production of XBRL reports. Entities have to line up their reports with a standard taxonomy. Many of these taxonomies are large, complex and difficult to understand. How or whether a particular disclosure in a company's report lines up to a standard taxonomy is often not straightforward and requires considerable assessment of alternatives. For example, several items may seem quite similar or it may be difficult to find a definition because of the size of the taxonomy. The company must decide whether to align their reporting to the standard taxonomy? Or, should it create additional company-specific tags? These can be difficult judgments. In addition, there are other more technical aspects of the reporting process that can be complex and involve considerable judgments within the company.

We are going to present you with a hypothetical situation and ask you to respond. Later in the focus group we will come back and ask you more general questions on where you see that XBRL adoption is headed and the implications of that adoption for the IAASB staff.

Palladia Phase 1

Let me introduce the country of Palladia. Palladia has a well-developed regulatory environment and capital market. Here is some background on Palladia:

- Audit of all companies both private and public, where assets exceed €50m.

- Full IFRS is in use.

- The legal environment is essentially common law in nature.

Palladia is adopting XBRL to increase transparency of capital markets. is taking a somewhat different approach. In the first phase of adoption companies must file their financial reports with the Palladian stock exchange and the Palladian companies' office in Adobe Acrobat **and** in XBRL. Companies must use the IFRS XBRL taxonomy. Extensions to the taxonomy are allowed but discouraged Companies must tag the full set of financial statements, notes and explanatory statements in XBRL. The Acrobat and XBRL content must be identical.

Questions

- Should the XBRL reports be audited?

- Should any audit requirements on XBRL reports be part of the financial statement audit or as part of separate assurance engagements? Or is there a need for both?

- What should the level of assurance on any XBRL-related engagement?

Palladia Phase 2

In the second stage of Palladia, all companies must report the full set of financial statements, notes and explanatory statements in XBRL as the primary reporting mechanism. Filings with the Palladian stock exchange and the Palladian companies' office, must *only* be in XBRL. The stock exchange and the companies' office will generate on the fly any reports consumers need *from* the XBRL filings.

Questions

- Should the XBRL component of the report be audited?

- Should any audit requirements on XBRL reports be part of the financial statement audit or as part of separate assurance engagements? Or is there a need for both?

- What should the level of assurance on any XBRL-related engagement?

Questions that must be picked up at some point in the focus group:

- Were an audit of an XBRL filing be required, should it have the same level of assurance as a financial statement audit or should it be at some other level?

- Does the IAASB need to devise specialist assurance standards for XBRL for companies that wish to voluntarily attest to their XBRL filings.

- If the audit of the financial statements were not to cover the XBRL filing, should the audit report make that clear?

- How should auditing standards that are set internationally by the IAASB reflect different national requirements

- Do you feel comfortable if there is no or less assurance on the XBRL report when you have to make use of the data in your own profession?

- XBRL reports are designed to be pulled apart down to individual data points as they move across the information value chain. How should the audit profession handle this issue?

- What do you believe the views of investors and analysts are on these questions?

- What do you see as the direction for XBRL? What are the implications of this direction for audit and assurance?

- What country are you from? How does that background impact your decision? Name of the person .. and the country ..

Questions for Auditors on SOP 09-1 Engagements

Roger Debreceny - University of Hawai'i at Mānoa

Stephanie Farewell - University of Arkansas at Little Rock

Hans Verkruijsse - Tilburg University, the Netherlands

Part of research on "The Implications of XBRL for the Financial Statement Audit" funded by ACCA and IAAER in support of the work of the IAASB

I. Client factors:

Did the client insource or outsource the XBRL tagging?

Did the auditor or client initiate the discussion of XBRL assurance?

Typically, if the client initiated discussion, where in the firm did interest come from (Management, Audit Committee, Board of Directors)?

What was the client's motivation in seeking SOP 09-1 attestation?

Are clients expressing concern over the loss of limited liability? Are current engagements a lead-in to loss of liability? Will we see a drop off as firms become more confident?

II. Engagement factors:

Which filings were clients seeking assurance on? Q or K? Block or Detailed? (Trying to assess a pattern on the desire for assurance services)

Was the engagement a single engagement? If so, what type of filing (Q or K)? Block or detailed tagging?

If it was multiple engagements for the client, was it for each Q and K? Block or detailed tagging?

Depth of procedures? Did the depth of procedures change over time (either within or between clients)?

How does the number of hours compare First 10-K versus second 10-K. First 10-Q versus second, third etc. 10-Q?

III. Auditor factors

Who was on the engagement team? How were they chosen (XBRL skills, audit skills)?

On-site engagement? Remote engagement? (Trying to get at the depth of XBRL training in the firm. How prepared would the firm be for mandatory XBRL assurance?)

IV. Procedures

How much guidance/collaboration did the audit firm provide on the assertions and procedures that should be performed?

Was the focus on controls? Tests of tagging? Consistency?

How closely did the assertions and procedures follow the SOP 09-1?

How much of the procedures were driven by the EFM?

What types/categories of errors did you find? For example, unnecessary extensions.

What did management do with the results? For example, did they change tags or eliminate extensions?

V. Errors

What were the nature of the errors?

How did the pattern of errors change with detailed footnote tagging?

How did the population of errors differ depending on whether the client completed the tagging internally or outsourced?

VII. Future:

Are there currently sufficient audit or attestation standards to cover an XBRL engagement?

Should assurance on XBRL be mandated?

If the audit of XBRL became mandatory what would change at a practical level? If audit were to be made mandatory, should it be an integral part of the financial statement audit?

If so, should it be integrated into the standard audit report or should it be a separate assurance report?

If the latter, what level of assurance should be provided?

If XBRL assurance is not mandated should the audit report explicitly disclaim auditor association with the XBRL?

XBRL reports are designed to be pulled apart down to the individual data points as they move through the information value chain. How should the audit profession handle this issue?

Appendix 2 – Example XBRL-based Assurance Reports

We show a set of audit and assurance reports based on Offshore Tooling, as used in the experiments discussed in Chapters . The first four are for Offshore Tooling Inc. under US law and auditing standards, with appropriate wording for the relevant use of XBRL. The next four reports show the same reports for the Netherlands in English.

US PCAOB Standard Audit Report – No mention of XBRL

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Offshore Tooling, Inc.:

We have audited the accompanying consolidated statement of financial position of Offshore Tooling, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity, comprehensive income (loss) and cash flows for each of the three years in the period ended December 31, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Offshore Tooling, Inc. and its subsidiaries at December 31, 2010 and 2009, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

Internal Control over Financial Reporting

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Offshore Tooling, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2011, expressed an unqualified opinion thereon.

/s/
Accountants and Auditors LLP
Houston, Texas March 1, 2011

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Offshore Tooling, Inc.:

We have audited the accompanying consolidated statement of financial position of Offshore Tooling, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity, comprehensive income (loss) and cash flows for each of the three years in the period ended December 31, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Offshore Tooling, Inc. and its subsidiaries at December 31, 2010 and 2009, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

XBRL

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), whether the financial information contained in the XBRL report ('ot-20101231.xml' and associated files) filed with the SEC and on the Offshore Tooling, Inc. website, in all material respects, has been correctly derived from the 2010 financial statements of Offshore Tooling, Inc. and correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US. Consistent with those standards, we planned and performed the audit to obtain reasonable assurance whether the XBRL report was derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries and correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US.

Our audit included understanding and testing the processes employed by management in mapping the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries to the UGT, creation of extension XBRL tags and other aspects of the system to produce the XBRL report to ensure it

complied with appropriate XBRL practices and standards. We also tested a sample of the XBRL data in the XBRL report.

In our opinion, the XBRL report ('ot-20101231.xml' and associated files) was derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling, Inc. and correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US.

We have pre-computed a MD5 checksum to uniquely identify the version of the XBRL report we have examined. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksum of the downloaded XBRL report with the following pre-computed MD5 checksum: 3b55f8cbf57e41f04c04240bf0c2e31a.

Internal Control over Financial Reporting

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Offshore Tooling, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2011, expressed an unqualified opinion thereon.

/s/
Accountants and Auditors LLP
Houston, Texas
March 1, 2011

US PCAOB Standard Audit Report – Explicit exclusion of XBRL

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Offshore Tooling, Inc.:

We have audited the accompanying consolidated statement of financial position of Offshore Tooling, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity, comprehensive income (loss) and cash flows for each of the three years in the period ended December 31, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles

used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Offshore Tooling, Inc. and its subsidiaries at December 31, 2010 and 2009, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

XBRL

Our engagement explicitly excludes the representation of the financial information contained in the XBRL instance document 'ot-20101231.xml.' Offshore Tooling, Inc. expects to submit this XBRL report to the Securities and Exchange Commission and post it to its Website.

Internal Control over Financial Reporting

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Offshore Tooling, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2011, expressed an unqualified opinion thereon.

/s/
Accountants and Auditors LLP
Houston, Texas
March 1, 2011

US PCAOB Standard Audit Report with Examination Attestation

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Offshore Tooling, Inc.:

We have audited the accompanying consolidated statement of financial position of Offshore Tooling, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity, comprehensive income (loss) and cash flows for each of the three years in the period ended December 31, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Offshore Tooling, Inc. and its subsidiaries at December 31, 2010 and 2009, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

Internal Control over Financial Reporting

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Offshore Tooling, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2011, expressed an unqualified opinion thereon.

/s/
Accountants and Auditors LLP
Houston, Texas
March 1, 2011

REPORT ON XBRL FILING

To the Board of Directors and Stockholders of Offshore Tooling, Inc.:

Offshore Tooling, Inc. has converted financial information from the 2010 financial statements of Offshore Tooling, Inc., which were audited by Accountants and Auditors LLP, into an XBRL report ('ot-20101231.xml' and associated files), using the 2010 UGT and guidance from the Securities and Exchange Commission and XBRL US. Offshore Tooling, Inc. intends to publish this report on its website and submit it to the Securities and Exchange Commission. Management is responsible for the preparation of the XBRL report. Our responsibility is to provide an assurance report on the XBRL report.

Scope

We have examined whether the financial information contained in the XBRL report was correctly derived from the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries and was correctly tagged using the 2010 UGT in accordance with guidance the from the Securities and Exchange Commission and XBRL US. We conducted our examination in accordance with the attestation standards of the American Institute of Certified Public Accountants as adopted by the Public Company Accounting Oversight Board. Consistent with those standards, we planned and performed the examination to obtain a reasonable basis for an opinion whether the XBRL report

was derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries and correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US.

Our examination included understanding and testing the processes employed by management in mapping the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries to the UGT, creation of extension XBRL tags and other aspects of the system to produce the XBRL report to ensure it complied with appropriate XBRL practices and standards. We also tested a sample of the XBRL data in the XBRL report.

Conclusion

In our opinion, the XBRL report ('ot-20101231.xml' and associated files) was derived consistently, in all material respects, from 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries and correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US.

Other matters

We have pre-computed a MD5 checksum to identify uniquely the version of the XBRL report ('ot-20101231.xml' and associated files) we have examined. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksum of the downloaded XBRL report with the following pre-computed MD5 checksum: 3b55f8cbf57e41f04c04240bf0c2e31a.

/s/
Accountants and Auditors LLP
Houston, Texas
March 1, 2011

US PCAOB Standard Audit Report with Review Attestation

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Offshore Tooling, Inc.:

We have audited the accompanying consolidated statement of financial position of Offshore Tooling, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity, comprehensive income (loss) and cash flows for each of the three years in the period ended December 31, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material

misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Offshore Tooling, Inc. and its subsidiaries at December 31, 2010 and 2009, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

Internal Control over Financial Reporting

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Offshore Tooling, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2011, expressed an unqualified opinion thereon.

/s/
Accountants and Auditors LLP
Houston, Texas
March 1, 2011

REPORT ON XBRL FILING

To the Board of Directors and Stockholders of Offshore Tooling, Inc.:

Offshore Tooling, Inc. has converted financial information from the 2010 financial statements of Offshore Tooling, Inc., which were audited by Accountants and Auditors LLP, into an XBRL report ('ot-20101231.xml' and associated files), using the 2010 UGT and guidance from the Securities and Exchange Commission and XBRL US. Offshore Tooling, Inc. intends to publish this report on its website and submit it to the Securities and Exchange Commission. Management is responsible for the preparation of the XBRL report. Our responsibility is to provide an assurance report on the XBRL report.

Scope

We have examined whether the financial information contained in the XBRL report was correctly derived from the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries and was correctly tagged using the 2010 UGT in accordance with guidance the from the Securities and Exchange Commission and XBRL US. We conducted our examination in accordance with the attestation standards of the American Institute of Certified Public Accountants as adopted by the Public Company Accounting Oversight Board. Consistent with those standards, we planned and

performed the examination to obtain a reasonable basis for an opinion whether the XBRL report was derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries and correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US.

Our examination included understanding and testing the processes employed by management in mapping the 2010 financial statements of Offshore Tooling, Inc. and its subsidiaries to the UGT, creation of extension XBRL tags and other aspects of the system to produce the XBRL report to ensure it complied with appropriate XBRL practices and standards. We also tested a sample of the XBRL data in the XBRL report.

Conclusion

Based on our review, nothing came to our attention that caused us to believe that the XBRL report ('ot-20101231.xml' and associated files) is not derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling, Inc. or that it was not correctly tagged in accordance with the criteria from the Securities and Exchange Commission and XBRL US.

Other matters

We have pre-computed a MD5 checksum to identify uniquely the version of the XBRL report ('ot-20101231.xml' and associated files) we have examined. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksum of the downloaded XBRL report with the following pre-computed MD5 checksum: 3b55f8cbf57e41f04c04240bf0c2e31a.

/s/
Accountants and Auditors LLP
Houston, Texas
March 1, 2011

Netherlands IAASB Standard Audit Report – No mention of XBRL

INDEPENDENT AUDITOR'S REPORT

To the Shareholders and the Supervisory Board of Offshore Tooling NV

Report on the financial statements

We have audited the accompanying financial statements 2010 of Offshore Tooling NV, Rotterdam. The financial statements include the consolidated financial statements and the company financial statements. The consolidated financial statements comprise the consolidated statement of financial position as at December 31, 2010, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of the significant accounting policies and other explanatory information. The company financial statements comprise the company balance sheet as at 31 December 2010, the company profit and

loss account for the year then ended and the notes, comprising a summary of the accounting policies and other explanatory information.

Management's responsibility

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the Report by the Managing Board in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore management is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the Report by the Managing Board as set out on page xx to xx, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the Report by the Managing Board, to the extent we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

/s/
Accountants and Auditors LLP
Rotterdam, March 1, 2011

Netherlands IAASB Standard Audit Report – Explicit inclusion of XBRL

INDEPENDENT AUDITOR'S REPORT

To the Shareholders and the Supervisory Board of Offshore Tooling NV

Report on the financial statements

We have audited the accompanying financial statements 2010 of Offshore Tooling NV, Rotterdam. The financial statements include the consolidated financial statements and the company financial statements. The consolidated financial statements comprise the consolidated statement of financial position as at December 31, 2010, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of the significant accounting policies and other explanatory information. The company financial statements comprise the company balance sheet as at 31 December 2010, the company profit and loss account for the year then ended and the notes, comprising a summary of the accounting policies and other explanatory information.

We have also audited whether the data 2010 contained in the instance document 'Offshore Tooling NV annual report 2010.xbrl' is, in all material respects, in accordance with the criteria on which the Commercieel Jaarrapport Groot report, which is part of the Dutch Taxonomy 2010.1, is based.

Management's responsibility

Management is responsible for the preparation and fair presentation of these financial statements and instance document in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation

of the Report by the Managing Board in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore management is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements and tagging of the data that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements and instance document based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

An important characteristic of XBRL is the fact that multiple presentations of the XBRL Instance document is possible, without a single one presentation being the 'normative' or 'default' presentation. The 'Commercieel Jaarrapport Groot' report mentioned above is only one of many possible presentations of the data contained in the instance document. Our audit and our opinion are limited to this presentation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the XBRL instance document

In our opinion, the data contained in the instance documents 'Offshore Tooling NV annual report 2010.xbrl' is, in all material respects, in accordance with the criteria on which the 'Commercieel Jaarrapport Groot' report, which is part of the Dutch Taxonomy 2010.1, is based.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the Report by the Managing Board as set out on page xx to xx, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the Report by the Managing Board, to the extent we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

Other matter paragraph

We have pre-computed a MD5 checksum to uniquely identify the version of the instance document 'Offshore Tooling NV annual report 2010.xbrl' we have audited. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksums of the downloaded XBRL files with the following pre-computed MD5 checksum: 'B78714AC2D6EA1EFA60869DD97310EED'.

/s/
Accountants and Auditors LLP
Rotterdam, March 1, 2011

Netherlands IAASB Standard Audit Report – Explicit exclusion of XBRL

INDEPENDENT AUDITOR'S REPORT

To the Shareholders and the Supervisory Board of Offshore Tooling NV

Report on the financial statements

We have audited the accompanying financial statements 2010 of Offshore Tooling NV, Rotterdam. The financial statements include the consolidated financial statements and the company financial statements. The consolidated financial statements comprise the consolidated statement of financial position as at December 31, 2010, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of the

significant accounting policies and other explanatory information. The company financial statements comprise the company balance sheet as at 31 December 2010, the company profit and loss account for the year then ended and the notes, comprising a summary of the accounting policies and other explanatory information.

Management's responsibility

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the Report by the Managing Board in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore management is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Our audit explicitly excludes the representation of the financial information contained in the instance document 'Offshore Tooling NV annual report 2010.xbrl' . Offshore Tooling NV expects to submit this XBRL report to the Chamber of Commerce and post it to its Website.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year

then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the Report by the Managing Board, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the Report by the Managing Board as set out on page xx to xx, to the extent we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

/s/
Accountants and Auditors LLP
Rotterdam, March 1, 2011

Netherlands IAASB Standard Audit Report with Examination Attestation

INDEPENDENT AUDITOR'S REPORT

To the Shareholders and the Supervisory Board of Offshore Tooling NV

Report on the financial statements

We have audited the accompanying financial statements 2010 of Offshore Tooling NV, Rotterdam. The financial statements include the consolidated financial statements and the company financial statements. The consolidated financial statements comprise the consolidated statement of financial position as at December 31, 2010, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of the significant accounting policies and other explanatory information. The company financial statements comprise the company balance sheet as at 31 December 2010, the company profit and loss account for the year then ended and the notes, comprising a summary of the accounting policies and other explanatory information.

Management's responsibility

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by the European Union

and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the Report by the Managing Board in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore management is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the Report by the Managing

Board, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the Report by the Managing Board as set out on page xx to xx, to the extent we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

/s/
Accountants and Auditors LLP
Rotterdam, March 1, 2011

INDEPENDENT AUDITOR'S ASSURANCE REPORT

To the Shareholders and the Supervisory Board of Offshore Tooling NV

Report on the XBRL reports

Offshore Tooling NV. has converted financial information from the 2010 financial statements of Offshore Tooling NV, which were audited by Accountants and Auditors LLP, into a XBRL report ('Offshore Tooling NV annual report 2010.xbrl'), using the criteria on which the 'Commercieel Jaarrapport Groot' report, which is part of the Dutch Taxonomy 2010.1, is based. Offshore Tooling NV intends to publish this XBRL report on its website and submit it to the Chamber of Commerce. Management is responsible for the preparation of the XBRL report. Our responsibility is to provide an assurance report on the XBRL report.

Scope

We conducted our examination in accordance with Dutch law, including Standard 3000 'Assurance engagements other than audits or reviews of historical financial information'. This law requires that we planned and performed our examination to obtain reasonable assurance whether the XBRL report is derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling NV and correctly tagged in accordance with the criteria from the Dutch Taxonomy 2010. An assurance engagement includes examining appropriate evidence on a test basis.

An important characteristic of XBRL is the fact that multiple presentations of the XBRL Instance document is possible, without a single one presentation being the 'normative' or 'default' presentation. The 'Commercieel Jaarrapport' report mentioned above is only one of many possible presentations of the data contained in the instance document. Our examination and our conclusion are limited to this presentation.

Conclusion

Based on our examination we conclude that the XBRL report (Offshore Tooling NV annual report 2010.xbrl') is derived consistently, in all material respects, from the 2010 financial statements of

Offshore Tooling NV and correctly tagged in accordance with the criteria on which the 'Commercieel Jaarrapport' report, which is part of the Dutch Taxonomy 2010.1, is based.

Other matter paragraph

We have pre-computed a MD5 checksum to uniquely identify the version of the instance document 'Offshore Tooling NV annual report 2010.xbrl' we have examined. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksums of the downloaded XBRL files with the following pre-computed MD5 checksums: 'B78714AC2D6EA1EFA60869DD97310EED'.

/s/
Accountants and Auditors LLP
Rotterdam, March 1, 2011

Netherlands IAASB Standard Audit Report with Review Attestation

INDEPENDENT AUDITOR'S REPORT

To the Shareholders and the Supervisory Board of Offshore Tooling NV

Report on the financial statements

We have audited the accompanying financial statements 2010 of Offshore Tooling NV, Rotterdam. The financial statements include the consolidated financial statements and the company financial statements. The consolidated financial statements comprise the consolidated statement of financial position as at December 31, 2010, the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of the significant accounting policies and other explanatory information. The company financial statements comprise the company balance sheet as at 31 December 2010, the company profit and loss account for the year then ended and the notes, comprising a summary of the accounting policies and other explanatory information.

Management's responsibility

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the Report by the Managing Board in accordance with Part 9 of Book 2 of the Dutch Civil Code. Furthermore management is responsible for such internal control as it determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. This requires that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion with respect to the consolidated financial statements

In our opinion, the consolidated financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010, its result and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and with Part 9 of Book 2 of the Dutch Civil Code.

Opinion with respect to the company financial statements

In our opinion, the company financial statements give a true and fair view of the financial position of Offshore Tooling NV as at December 31, 2010 and of its result for the year then ended in accordance with Part 9 of Book 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements

Pursuant to the legal requirement under Section 2:393 sub 5 at e and f of the Dutch Civil Code, we have no deficiencies to report as a result of our examination whether the Report by the Managing Board, to the extent we can assess, has been prepared in accordance with Part 9 of Book 2 of this Code, and whether the information as required under Section 2:392 sub 1 at b-h has been annexed. Further we report that the Report by the Managing Board as set out on page xx to xx, to the extent we can assess, is consistent with the financial statements as required by Section 2:391 sub 4 of the Dutch Civil Code.

/s/
Accountants and Auditors LLP
Rotterdam, March 1, 2011

INDEPENDENT AUDITOR'S ASSURANCE REPORT

To the Shareholders and the Supervisory Board of Offshore Tooling NV

Report on the XBRL reports

Offshore Tooling NV. has converted financial information from the 2010 financial statements of Offshore Tooling NV, which were audited by Accountants and Auditors LLP, into a XBRL report ('Offshore Tooling NV annual report 2010.xbrl'), using the criteria on which the 'Commercieel Jaarrapport Groot' report, which is part of the Dutch Taxonomy 2010, is based. Offshore Tooling NV intends to publish this XBRL report on its website and submit it to the Chamber of Commerce. Management is responsible for the preparation of the XBRL report. Our responsibility is to provide an assurance report on the XBRL report.

Scope

We conducted our review in accordance with Dutch law, including the International Standard on Review Engagements 2400. This Standard requires that we plan and perform the review to obtain moderate assurance as to whether the XBRL report is derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling NV and correctly tagged in accordance with the criteria from the Dutch Taxonomy 2010. A review is limited primarily to inquiries of company personnel and thus provides less assurance than an audit. We have not performed an audit and, accordingly, we do not express an audit opinion.

An important characteristic of XBRL is the fact that multiple presentations of the XBRL Instance document is possible, without a single one presentation being the 'normative' or 'default' presentation. The 'Commercieel Jaarrapport' report mentioned above is only one of many possible presentations of the data contained in the instance document. Our review and our conclusion are limited to this presentation.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the XBRL report (Offshore Tooling NV annual report 2010.xbrl') is not derived consistently, in all material respects, from the 2010 financial statements of Offshore Tooling NV and not correctly tagged in accordance with the criteria on which the 'Commercieel Jaarrapport' report, which is part of the Dutch Taxonomy 2010, is based.

Other matter paragraph

We have pre-computed a MD5 checksum to uniquely identify the version of the instance document 'Offshore Tooling NV annual report 2010.xbrl' we have reviewed. MD5 checksums are widely used for this purpose. Using common utilities, users can compare the checksums of the downloaded XBRL files with the following pre-computed MD5 checksums: 'B78714AC2D6EA1EFA60869DD97310EED'.

/s/

Accountants and Auditors LLP

Rotterdam, March 1, 2011

Appendix 3 – Experimental Materials

Orientation of Participants on Audit and Assurance

Participants are provided with the following orientation on the nature of auditing and assurance:

Corporations may engage an independent practitioner, such as a CPA, to undertake an assurance engagement. The engagement requires that the practitioner evaluate information from the corporation against a set of defined criteria. The practitioner expresses a conclusion in a report. The most common forms of assurance engagements are audits and attestation engagements.

The focus of an audit engagement is the financial statements of a corporation. In an audit engagement the independent practitioner (CPA) expresses an opinion on the extent that the corporation's financial statements presents fairly the financial position, results of operations, and its cash flows. The criteria used by the CPA are generally accepted accounting principles (GAAP), which address both measurement and disclosures. An audit includes evaluation of the corporation's internal controls and consideration of risks that may arise from fraud. It includes tests, on a sample basis, of the evidence that support the corporation's financial statements. An audit provides reasonable assurance.

In an attestation engagement the independent practitioner (CPA) comes to a conclusion on a subject matter against a set of defined criteria. The CPA will conduct either an examination or review attestation engagement.

In an examination attestation engagement, the CPA expresses an opinion on how the subject matter aligns with the defined criteria. An example is an examination of a corporation's Management's Discussion and Analysis. An examination provides reasonable assurance.

In a review attestation engagement, the CPA expresses negative assurance on how the subject matter aligns with the defined criteria. An example is a review of a corporation's interim financial statements. A review provides moderate assurance.

Orientation of Participants on XBRL

Participants are provided with the following orientation on the nature of auditing and assurance:

XBRL is based on the Internet XML language and facilitates reporting of a company's financial, non-financial and textual information to third parties. Each application of XBRL has a standard dictionary of terms, called a taxonomy. For example, in the US, the US GAAP (accounting) XBRL taxonomy defines the standard terms needed for financial reporting by companies.

Each company tags the detailed information in their quarterly or annual reports against this taxonomy. Because every company uses the same standard taxonomy, users of the XBRL reports can automatically understand the information in the XBRL report (instance document). XBRL also

supports extensions to the standard UGT when companies find that they must make information disclosures that are not in the UGT.

XBRL is designed to make companies more transparent. The Securities and Exchange Commission (SEC) requires that listed companies submit quarterly and annual reports in XBRL format to the Commission's EDGAR database and provide the XBRL reports on their own websites. All of the detailed information in the quarterly and annual reports must be reported and tagged in the XBRL report. The facts that must be tagged include the dollar values in the financial statements and the notes and all textual disclosures. An XBRL report that mirrors a typical annual report will include more than 2,000 discrete facts.

After a short trial period, the SEC is setting the liability of companies for the information in the XBRL report at the same level as the human readable HTML report.

The tagged data in these XBRL reports are used by a wide range of interested parties including the SEC itself, other government regulators, banks and financial institutions, financial analysts, market information aggregators, websites and investors. Many of these users automatically integrate the XBRL-tagged data to their computer systems and databases. XBRL is also in wide use for other filings by the SEC and by other regulators, including the Federal Deposit Insurance Corporation (FDIC).

12 RESEARCH TEAM

Dr. Roger Debreceny is the Shidler College Distinguished Professor of Accounting, School of Accountancy, Shidler College of Business at the University of Hawai'i at Mānoa. Roger has been involved with XBRL since its inception. He made the first academic presentation on XML and financial reporting in 1998, subsequently published as the first and now widely cited academic journal article on XBRL. Roger is a former member of the International Steering Committee of XBRL International (XII) and is currently chair of XII's Certification Board (XCB). He has co-authored two recent books on XBRL and a white paper on XBRL published by IFAC and ISACA. He publishes on XBRL, Internet Financial Reporting, IT Governance and Accounting Information Systems. He teaches introductory and advanced auditing and AIS.

Dr. Stephanie Farewell is an Associate Professor of Accounting at the University of Arkansas at Little Rock. Involved with XBRL since 2003, Stephanie continues to serve as a judge for the annual XBRL Academic Competition. She will be working with Skip White to continue the American Accounting Association XBRL boot-camp. Stephanie researches and publishes XBRL from a pedagogical and behavioural decision making perspective. Most recently she and co-researcher Roger Debreceny have developed a pedagogical position paper on XBRL in the accounting curriculum and a series of cases, including an XBRL instance document attestation case based on the (US) ASB's SOP 09-1. She teaches introductory and advanced accounting information systems.

Dr. Hans Verkruijsse is an Accounting Information Systems professor at the Tilburg University. Hans is the chair of the XBRL Netherlands jurisdiction and is involved in a variety of XBRL task forces including IAASB, FEE, NIVRA (Chair), and XBRL International. Hans is a retired partner at Ernst & Young Accountants LLP in the Netherlands and was for years responsible for the Professional Practice Department section Assurance Services. He is still responsible for the XBRL implementation in Ernst & Young Netherlands. Hans also holds a position as chair of the Ethical Committee of the NOREA (Dutch Institute of Information Systems Auditors). For eight years he was technical advisor of the Dutch member of the IAASB and chair of the Dutch Auditing and Assurance Standard Board of the Royal NIVRA. Hans has published many articles in the area of accountancy and IT-auditing.