

The Implications of XBRL for the Financial Statement Audit
A Proposal to the ACCA/IAAER Research Program to support the work of the IAASB
Update on Research Objectives and Methods

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November Update

Original Proposal and Feedback

In September, the Research Team proposed a study on the assurance implications of XBRL. In essence, the research proposal was for the delivery of a research position paper that would address a multitude of issues relevant to the formation of an XBRL-related international assurance standard or other guidance. The issues suggested in the initial proposal included: the influence of XBRL taxonomy design and instance document production; the interaction between international and national standards and national XBRL implementations; the impact of distribution of financial data in XBRL format; user perceptions of implied assurance and the expectation gap and auditor factors; and the processes in auditing XBRL instance documents.

The following feedback was received from the Program Advisory Committee in October:

The Program Advisory Committee representing the IAASB, ACCA, and IAAER has completed its initial review of proposals submitted to the grant program to inform the work of the IAASB. The Committee finds your proposed research to be of interest and relevance to the IAASB. In line with the call for proposals, the Committee invites you to submit a revised proposal for further consideration addressing the issues noted below by 15 November 2009. Grant winners will be announced no later than 5 January 2010.

The main concern of the Committee is the timetable for the research and the need to ‘fast track’ this particular project if it is to inform the work of the IAASB. The Committee encourages you to consider coordinating with the XBRL Task Force to identify a relevant portion of the research that can be accelerated so that your findings for this portion of the research can be discussed at the June 2010 deliverable. This proposed timing is of the utmost importance if the research is to inform the IAASB decision process and “guide standard setters in designing professional standards.”

Before beginning the revision, a couple of Committee members would be willing to speak with you and provide guidance on how the above recommendation may be achieved. That being said, the revised proposal should also address the following Committee recommendations.

- *Reorganizing Section 4 is needed to reflect a greater focus on user perceptions, auditing instance documents, auditor factors, and distribution, thereby resulting in less focus on taxonomy matters and XBRL International.*
- *Presently the description of the research methods is somewhat general and vague. A more complete description of the methodology should hence be included in the revised proposal.*

The Committee appreciates your interest in the work of the IAASB and looks forward to receiving your revised proposal.

IAASB Project

The IAASB has an active XBRL project under the direction of a task force chaired by IAASB member Craig Crawford with Kathleen Healy providing staff support. As the project Webpage¹ notes, the objectives of the project are:

The objective of Phase 1 is to consult with key stakeholders to understand how XBRL is actually being used in different jurisdictions as it relates to the filing of an entity's financial statements and how the IAASB should address the public interest considerations when auditors are associated with XBRL data.

The objective of Phase 2 is to apply the findings of the consultation in developing a pronouncement:

- To address the performance and reporting expectations of the auditor in connection with audited financial statements that are accompanied by XBRL data and,*
- If deemed necessary, to discuss the considerations relevant when audited financial statements are only filed in XBRL.*

The probable timeline for the project is:

December 2009	Discussion of project at IAASB meeting
December 2009 – May 2010	Research and communication with stakeholders
March or April 2010	Survey
June 2010	IAASB Meeting – Review
July 2010 – August 2010	Preparation of materials
September 2010	Further consideration at the IAASB meeting

Implications for Research Project

As noted in the feedback from the Program Advisory Group, our research project timeline would need to be changed in order to be of value to the IAASB XBRL Task Force. We consulted with James Gunn (by email) and Kathleen Healy of the IAASB (by phone). In the revised project below, we have implemented the following strategy.

¹ <http://www.ifac.org/IAASB/ProjectHistory.php?ProjID=0093>

- Flexibility in our research strategy to complement and supplement the work of the IAASB. We recognize that our work program may need to change to meet the needs of the XBRL Task Force and staff.
- Bring production of background, scoping and supporting evidence much earlier in the timeline.
- Push “academic” outcomes later in the timeline.
- Leverage the comparative advantage of the research team in respect to detailed XBRL knowledge including conducting assurance on XBRL instance documents and access to a range of stakeholders that are complementary to those available to the IAASB Task Force.

We have reworked the research proposal, concentrating on aligning our timeline for deliverables and research method to the needs of the IAASB Task Force. We have not significantly changed the nature of the research questions or the deliverables. Nothing in our work since the submission of the first round or in our discussion with the IAASB has led us to change the principal directions of our proposed research. To the contrary, we believe that the issues that we set out in Section 4 are highly relevant for the IAASB Task Force and the IAASB standards setting agenda. We note that the Program Advisory Committee was concerned that “greater focus [is needed] on user perceptions, auditing instance documents, auditor factors, and distribution, thereby resulting in less focus on taxonomy matters and XBRL International thereby resulting in less focus on taxonomy matters and XBRL International.” We may not have quite communicated the issues with 1) the production of XBRL reports, 2) the nature of possible errors in instance documents, and 3) as a result of (1) and (2), the nature of the actual audit task and resulting procedures. 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. We consider these issues are significant in understanding the risk and audit response thereto. We have, as a result, improved and strengthened our discussion of this material.

Given the very tight time constraints of this revised proposal, we have removed our proposed analysis of data level assurance and pushed back research on user perceptions to later in the deliverables. We anticipate that our revised proposed timeline of deliverables will allow us to conduct a follow-up survey or experiment based on the IAASB policy statement developed from the consultative paper.

Paragraphs that have been reworked are indicated thus:

| New or completely revised paragraph

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November Update on Research Objectives and Methods

1. Executive Summary

The eXtensible Business Reporting Language (XBRL) plays an important role in a wide variety of information value chains in nearly twenty countries. Several of those value chains include the transmission of audited financial statements to regulators and capital market exchanges and other information to consumers and intermediaries. Currently, some of these value chains have XBRL as the primary, or sole, communication method, or are planning to move in that direction. XBRL is currently on the IAASB agenda – although the direction that the Board will take in regard to XBRL is not clear. In large part, this uncertainty is the result of the paucity of professional guidance, academic or applied research. This proposal calls for the development of a research position paper to answer the research question: What are the implications of XBRL for the Financial Statement Audit? While there are implications of XBRL for internal audit, voluntary assurance, assurance over internal controls and continuous assurance we choose to focus on the Financial Statement Audit. This is the most pressing need to inform the IAASB's deliberations and policy development and where research can most influence practice. Therefore, the proposed work will inform the IAASB's decision process on the impact of XBRL on auditing, identified as topic area one in the CFP.

The proposed research position paper would address issues such as the influence of XBRL taxonomy design and instance document production; the interaction between international and national standards and national XBRL implementations; the impact of distribution of financial data in XBRL after reporting; user perceptions and the expectation gap; auditing XBRL instance documents and auditor factors. The research method would be largely qualitative and employ structured interviews, focus groups and surveys.

The research team would work closely with the IAASB XBRL Task Force. Proposed deliverables and planned dates are:

- 1) **Results** from an interview stage of the scoping phase: March 2010.
- 2) **Results** from the survey stage of the scoping phase: June 2010.
- 3) **An agenda for standards setters** in the form of a position paper that would complement and supplement the proposed consultative process of the IAASB: September 2010.
- 4) **An agenda for researchers** in the form of position paper on further research on audit and assurance on XBRL: December 2010.
- 5) **Results** from a study on the implications of assurance on financial statements in XBRL, from an end-user perspective: October 2011.

2. Research Team

We believe that we have created a research team that combines strong technical knowledge of XBRL, auditing, relevant research methods with a record of achievement in publication and practical experience. Team members are:

Roger Debreceeny 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 and has co-authored two recent books on XBRL. Over the last five years, together with colleague Skip White, he has run a residential boot-camp on XBRL for the American Accounting Association. He publishes on XBRL, Internet Financial Reporting, IT Governance and Accounting Information Systems. He teaches introductory and advanced auditing and AIS. Roger will be on sabbatical for the 2010/2011 year and can devote significant time to this project.

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 Debreceeny 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.

Hans Verkruijsse is an Accounting Information Systems professor at the Tilburg University. Hans is involved in a variety of XBRL task forces including IAASB, FEE, NIVRA (Chair), and XBRL International. Hans is a partner at Ernst & Young Accountants LLP in the Netherlands responsible for the Professional Practice Department section Assurance Services and in that capacity responsible for the XBRL implementation in Ernst & Young Netherlands. Hans also holds a position as chair of the Dutch Auditing and Assurance Standards Board of the NIVRA and 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. Hans has published many articles in the area of accountancy and IT-auditing.

3. Introduction

Background on XBRL

Now a decade in development, the eXtensible Business Reporting Language (XBRL) has recently come to the forefront for auditing standards setters. Indeed, the September 2009

meeting of the IAASB considered the future direction that the Board would take in respect to XBRL. 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. We will return to these issues in more detail shortly and discuss alternative research on audit, assurance and XBRL. We propose a course of action that is productive in terms of informing the IAASB agenda, based on an academically sound methodology and achievable within the timetable of this research funding opportunity.

The eXtensible Business Reporting Language (XBRL) is a computer-based data representation language that allows information transfers of sophisticated business performance information in a completely unambiguous form. XBRL allows information, such as annual reports, to go from companies and other entities directly to the databases, web sites and computers of stakeholders and information consumers. XBRL facilitates automated consumption of large quantities of information without any ambiguity in the underlying meaning of that information.

There are three key elements in XBRL. First, a taxonomy provides a common dictionary of concepts. 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”). 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 and the XML standard on which it rests. In a typical XBRL financial reporting value chain implementation, a large and complex taxonomy seeks to impound the disclosure requirements of a set of accounting standards together with those aspects of disclosure we observe in practice but not encompassed in the standards, industry variations and often national reporting requirements. In the US, XBRL US has prepared a large taxonomy of more than 12,000 discrete financial statement concepts. In Japan, the EDINET taxonomy impounds reporting requirements for Japanese GAAP. Internationally, the IASCF has created a significant taxonomy for IFRS. There are also important uses of XBRL for “Standard Business Reporting” in the Netherlands and forthcoming in Australia and New Zealand and for other information value chains such as reporting financial institution risk and capital adequacy.

The 2009 mandate by the SEC to require filings to its EDGAR information repository in the XBRL format for its corporate and mutual fund filers has changed the face of disclosure in the US (SEC 2009). The SEC requires filers to submit a wide array of information, including quarterly and annual financial reports for corporations, in a format that allows ready extraction and onward transmission to stakeholders and a host of information intermediaries. This has been the most visible of the many other important implementations of XBRL around the world, notably in China, Korea and Japan. We see audited financial statements already being submitted to regulators either currently *only* in XBRL format (e.g., Singapore) or planned to be only in that format in the near future (e.g., Malaysia, Netherlands, US, and South Africa).

XBRL and the Audit Production Process²

XBRL has the potential to influence several aspects of the audit production process, as we show in Figure 1. The audit production process can be impacted by 1) the client tagging transactions and processes against a standard taxonomy of controls; 2) using 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.

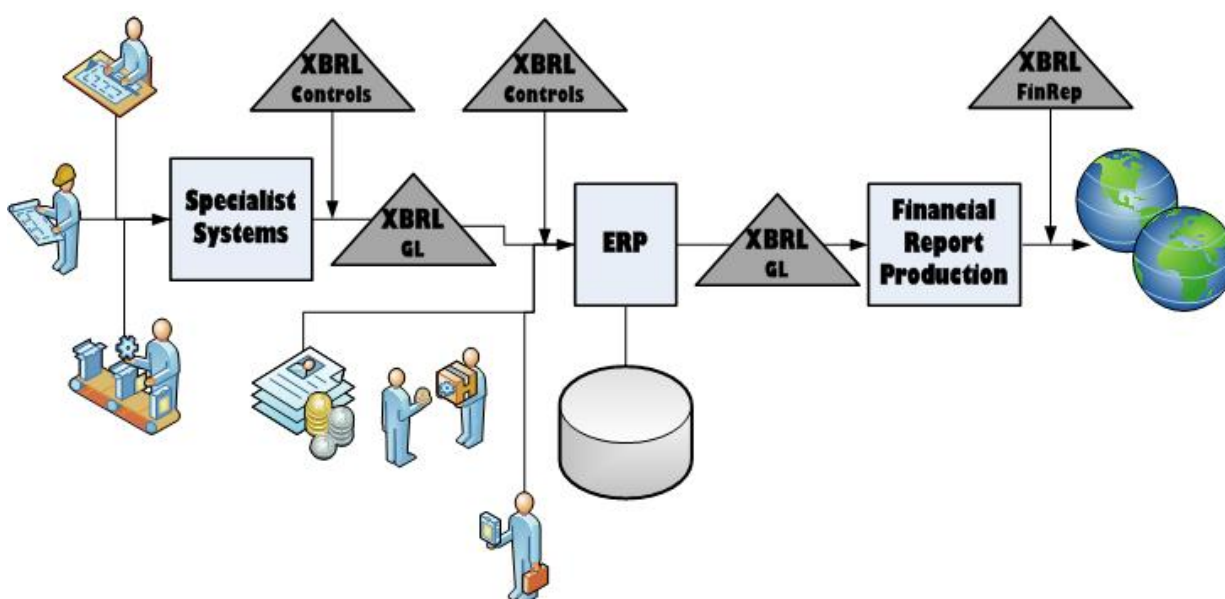


Figure 1: XBRL and Assurance along the Information Value Chain

XBRL and the Financial Statement Reporting Process

The second aspect is the way that XBRL impacts the production of audited financial reports and communication and use of audited data by information consumers. XBRL makes explicit, by tagging the financial report against an externally created and validated taxonomy, what is implicit in the traditional paper-based report. In traditional information value chains, standards setters set accounting standards that provide a mixture of general guidance on disclosure (e.g., IAS 1) and specific disclosure requirements. In an XBRL world, all disclosure is made explicit – either in the externally mandated taxonomy or in entity-level extensions. When the XBRL instance document either replaces the paper-based disclosure or has equivalent standing, it is probably simplistic to suggest that the XBRL instance document is not subject to audit.

² We restrict our discussion and recommended course of action to financial statements. This is at the heart of the IAASB's work and most direct to the Board's decision-making.

Further, XBRL is systematically *designed* to have the information in a report pulled apart and integrated into a variety of other information products. The concept of a monolithic financial statement that is always associated with the appropriate audit report is called in to question in an XBRL-enabled financial reporting world. Further, XBRL can facilitate data-level auditing. Here the auditor opines on a given fact and applies appropriate levels of materiality to that fact. The auditor opinion may be tagged to the particular fact and stay with the fact as it moves across the value chain.

4. Research Proposal - A research position paper

We propose a research position paper on XBRL and the financial statement audit. While, as we pointed out in the previous section, there are implications for broader aspects of assurance including the audit over internal controls and continuous assurance, we propose to restrict our study to the impact of XBRL on the traditional financial statement audit. There are three reasons for this. First, this is where the focus of interest of the IAASB and other standards setters is likely to be over the next few years. Second, some of the technical foundations for broader application to areas such as continuous assurance are not in place at the XBRL, application program or corporate adoption levels. We believe that the greatest return on the research investment and the most pressing professional need for research is at the level of the financial statement audit.

We propose a research position paper because of 1) the paucity of research literature and 2) the complexity of the issues at play. There is only the slightest professional and academic literature on the audit and assurance of XBRL documents— almost so slight as to be a null set (e.g., Boritz and No 2008, 2009; Plumlee and Plumlee 2008; Srivastava and Kogan 2009; Trites 2002; XBRL International 2006). There has been interest in XBRL at the standard setter level. In the US, there has been “stopgap” guidance from the PCAOB and the Center for Audit Quality. The Auditing Standards Board has published guidance on attestation on XBRL filings (ASB 2009). The reports from the CICA and XBRL International are the most substantial reports to date, but now significantly dated given the significant international development of XBRL since publication (Trites 2002; XBRL International 2006). We consider that there is an urgent need for a research position paper on the application of XBRL to the financial statement audit. We take the report by the ISAR community for the IFAC on levels of assurance (Maijoor et al. 2002) as our model of a research position paper.

Some of the issues that we would see being within the scope of the proposed position paper are:

Influence of XBRL Taxonomy Design and Instance Document Production: There can be significant differences in the design of XBRL taxonomies. Even in the relatively similar area of corporate financial reporting, there are important design differences between the US, IASB, Japanese and Dutch approaches to XBRL taxonomies. This can give rise to markedly reporting methods and usability (Piechocki et al. 2009). Similarly, the way in which instance documents are produced can give rise to markedly disparate functionality – the tension between technology neutral financial reporting standards and XBRL-based reporting systems gives rise

to many audit issues. There is a wide range of risks and possible errors in instance documents. For example, Drs. Debreceeny and Farewell have an active and current research program that is analyzing a variety of issues with the SEC EDGAR program. Notwithstanding the XBRL technologies and the rules set in place by the SEC, we observe calculation inconsistencies by 20% of filers and inappropriate extensions by a significant proportion of filers.

Our current research project is on the appropriateness of extensions made by filers. While our research is not yet complete, it is clear that in a significant number of those filings where extensions were made, those extensions were either 1) clearly inappropriate or 2) while in line with previous production of financial statements by the entity, did not align correctly with the taxonomy, thereby reducing financial statement interoperability and understanding.

Any consideration of auditing XBRL instance documents must consider the nature of possible errors in the production of those instance documents. We will review the nature of these possible errors, drawing on our existing research and understanding of XBRL technologies and alternative implementations of XBRL internationally.

Interaction between international and national standards and national XBRL implementations: XBRL taxonomies can be built internationally (e.g., IASB) or nationally (e.g., the Netherlands and Singapore). Regulation and filings are, however, almost always national. The interaction between XBRL international and national taxonomies and national securities and corporate regulation is an important consideration for both research and practice. 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 (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?

Impact of Distribution of Financial Data, Post-reporting: What are the implications for the audit of an official filing in XBRL, which is systematically designed to allow the data to be re-used, disassembled and repurposed (mashed) with other data? Are there technical solutions that would allow audit tags to stay with the data, upon the report disassembly? Are their policy implications?

User Perceptions and Expectation Gap: What are users' perceptions of the reliability of financial information elements filed in XBRL format? How are these perceptions affected by users' assumptions about the nature of auditor involvement with that information? What are users' longer-term expectations regarding the nature of assurance that will attach to XBRL data? How does the level of assurance (i.e., data level, report level or both) provided on XBRL data affect users' perceptions of information reliability? How does this vary across background (e.g., capital markets, credit markets etc.)? How does taxonomy construction/ownership affect

users' perceptions of information reliability? How does the provision of user extensions affect users' perceptions of information reliability?

Auditing XBRL instance documents: What are the major challenges faced in connection with auditing XBRL instance documents? How do these challenges differ according to factors such as size of firm, size of clients serviced, and whether the auditor practices in a developed versus developing country. What are the tool requirements? How does XBRL change the balance between controls testing, analytical procedures and substantive, data-oriented substantive testing?

In particular, we will undertake a systematic analysis of the nature of potential audit programs. We will consider programs that either or both 1) consider the controls involved in the production of instance documents, and 2) assurance of instance documents.

Auditor Factors: What are the implications of the implications of XBRL for the external audit function? How would assurance on XBRL be integrated into audit methodologies and programs? What are the implications for the education of auditors? How does XBRL impact auditor understanding of and involvement with the understanding and audit of underlying automated systems?

5. Research method

The research underlying the position paper would be largely qualitative in nature. The research will be divided into two major phases: a scoping phase, concentrating on understanding the issues, informed by desk research and consultation with stakeholders, and an end-user phase, that concentrates on the attitudes of end-users to assurance on the XBRL instance document.

Scoping

As discussed, an important aspect of understanding the assurance implications of XBRL is to fully appreciate both the general and particular aspects of XBRL implementations. As we discuss above, XBRL is not monolithic. XBRL provides a toolkit for the construction of automated information value chains. There are many, many choices in how those automated information value chains are put together. Some involve the distribution of financial statements – many do not. Some allow significant entity-level variation – many do not. Some value chains are built by regulators, others by stock exchanges and other parties.

While the IAASB set global standards, they are implemented locally under local laws and regulation. The way XBRL is introduced can vary widely. In some jurisdictions, XBRL is supplementary to more traditional distribution methods. In others, they have equal standing. In others, we see that XBRL will be the *sole* method of reporting to regulators. We need to study the impact of these variations on the need for and nature of assurance on XBRL instance document and document production at the national level in order to inform global decision making.

In this first scoping phase, we would employ the following research methods:

- Literature review of academic, professional and standards sources.
- Analysis of actual XBRL data from existing filing regimes, from an audit perspective.
- Focus groups and structured interviews with auditors, exchanges, securities regulators, standards setters, XBRL specialists, and user communities (e.g., analysts and bankers).
- A survey of national securities regulators, exchanges, auditor supervisory bodies, national institutes, audit firms, auditees and XBRL International jurisdictions.

Working closely with the IAASB XBRL Task Force and the XBRL International Assurance Working Group, we will: conduct individual and focus group interviews, and a survey a variety of interested parties and stakeholders. These stakeholders would include:

- Securities regulators
- Auditors
- Audit regulators
- Accounting professional organizations
- Preparers
- XBRL specialists
- Banks and financial institutions
- Data aggregators
- Analysts

For illustrative purposes only, we show this in the following diagram. In the first stage, we will conduct a series of structured interviews and focus groups with selected stakeholders in a limited number of countries. In the second stage, we will seek to fill in the remaining cells in the matrix by surveying all stakeholders in all the selected countries.

Matrix of Interaction with Stakeholders

	Country 1	Country 2	Country 3	Country 4	Country 5	Country ..	Country ..	Country ..	Country ..	Country n
Securities Regulator										
Accounting Professional Org										
Analyst										
Auditor Regulator										
XBRL Jurisdiction										
Audit Professionals										
Supply Chain support										
Preparers										

Key:		Interviews in Stage 1		Survey in Stage 2		Not surveyed
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Again, we would work closely with the IAASB XBRL Task Force, to generate a standard set of questions for the interviews with stakeholders and on the design of the subsequent survey.

In the interview stage, we expect to concentrate on the following countries:

- Australia
- Belgium
- Canada

- China
- Italy
- Netherlands
- Spain
- USA

We have chosen these countries because of the stage of their XBRL developments and geographical and cultural diversity. We expect to conduct approximately thirty interviews in the interview phase (i.e. we will not seek to interview representatives of each stakeholder group in every country). As discussed, we would follow this with a survey of those stakeholders we do not cover in the interview stage. We will use our own contacts and those of the IAASB staff, IAASB Consultative Advisory Group (CAG), XBRL International and other contacts to identify the appropriate representatives in the various stakeholder organizations.

In addition to these national groups, there are international groups and organizations that we would seek to interact with, including:

- European Commission
- XBRL International
- Regional accounting organizations (e.g., FEE)
- Basel II Committee
- IOSCO, etc.

End User Perspective

The second major aspect of the study is to appreciate the end-user perception of the role of XBRL assurance on financial statements. The detailed design of this part of the study will respond to the findings in the first phase. Our current thinking is that we will run an experiment, somewhat similar to the study conducted by Hasan et al. (2003), on the implication of levels of assurance.

6. Deliverables

The proposed deliverables are:

- **Summary results** from the interview stage of the scoping phase
- **Summary results** from the survey stage of the scoping phase

- **An agenda for standards setters:** A position paper that would complement and supplement the proposed consultative process of the IAASB.
- **An agenda for research:** A research position paper would provide the academic community a clear and unambiguous research agenda for the many unanswered questions that surround the role of XBRL in the financial statement audit. The agenda would draw on relevant auditing, systems and XBRL literatures. There will be research opportunities for auditing, international accounting and systems faculty.
- **End-user perspective:** A study on the implications of assurance on financial statements in XBRL, from an end-user perspective.

7. Timeline

We propose the following deadlines for each phase:

- 1) **Summary interview results:** March 2010
- 2) **Summary survey results:** June 2010
- 3) **An agenda for standards setters:** September 2010
- 4) **An agenda for research:** December 2010
- 5) **End-user perspective:** October 2011.

The deadlines would be adjusted as needed to meet the needs of the IASB XBRL Task Force.

8. Informing the IAASB Decision Process

The course of action decided at the September meeting of the IAASB calls for the creation of a consultative process to explore the implications for XBRL. The IAASB process will, we anticipate, be at a relatively high level of abstraction. Our proposed Research position paper would directly complement the IAASB process, by providing more depth at the tactical and technical level. The timed deliverables and the final results of the proposed research would inform the IAASB in its current and foreseeable future deliberations on XBRL assurance and provide input to the possible development of XBRL assurance standards. We plan to work closely with the XBRL Task Force and the IFAC Staff.

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