

The Canadian Institute of Chartered Accountants

Information Technology Advisory Committee

AUDIT & CONTROL
IMPLICATIONS OF XBRL

Innovations for a changing world



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AUDIT & CONTROL IMPLICATIONS OF XBRL

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INTRODUCTION

Extensible Business Reporting Language (XBRL) is an implementation of Extensible Markup Language (XML) that is specifically designed for financial and business reporting. XBRL has been under development by the CICA, AICPA and other professional bodies and companies as a vehicle for the use of the Internet in Business and Financial Reporting. An XBRL International Steering Committee directs the efforts of the group. Although considerable attention is being given to the XBRL development project by this and other groups, less attention generally has been given to the audit and control issues around XBRL. When XBRL is implemented, however, assurance services may be immediately affected, depending on the nature of the implementation.

In Canada, the XBRL Canada steering committee was formed during 2001 and two working groups were established. The PR/Liaison Working Group is focusing on the marketing and adoption of the XBRL digital reporting standard. The Taxonomy Working Group is defining the methodology for developing Canadian XBRL Taxonomies. After assembling a common tag list, the Taxonomy Working Group will focus on the development standards, approval, registration and distribution of taxonomies, with the involvement of public and private sector groups that have a vested interest in a particular taxonomy.

XBRL is complex and has various components and documents. The most critical documents in understanding the use of XBRL in the reporting process are the following:

- The XBRL Specification;
- XBRL Taxonomies;
- XBRL Instance Documents; and
- Style Sheets

The XBRL Specification

The XBRL 2.0 specification was released in December 2001 by the XBRL Specification Group and provides a technical explanation of what XBRL is and how it works. It sets out the framework of XBRL and also explains in detail the syntax and semantics of XBRL taxonomies and instance documents. It is available for download from <http://www.xbrl.org>.

XBRL Taxonomies

A taxonomy is a document that describes the key data elements (numbers or text) to be included in an XBRL instance document for the purpose of a particular type of financial reporting. Because taxonomies are specific to particular types of financial reporting, there are a several under preparation at present. Some have already been issued, including the first taxonomy covering financial reporting of commercial and industrial companies under US GAAP, which was released on July 31, 2000. An International Accounting Standards taxonomy was issued in 2002. Taxonomies contain the concepts and interrelationships used in a particular type of business reporting and taken in conjunction with the instance documents, enable the reports to be constructed. These taxonomies are also available for download from <http://www.xbrl.org>.

The descriptions of data in the financial statements are determined by the taxonomy being used. These taxonomies are developed to recognize particular sets of rules, such as generally accepted accounting principles, or the forms used to file financial statements with regulatory authorities. Several other taxonomies are being developed.

XBRL Instance Documents

Instance documents are a collection of data elements that are tagged according to the concepts found in the taxonomy being used. As an example, suppose Company X is preparing financial statements in accordance with Canadian GAAP. It will prepare an instance document that contains the amounts for specific items (such as cash on hand on December 31, 2001) and link those items to the category within which they should appear under the Canadian GAAP taxonomy. The taxonomy describes the items and the instance documents contain the actual amounts or details of the items.

Style Sheets

XBRL itself does not result in readable reports; instance documents are a collection of data and explanatory tags, but are not arranged in a “user friendly” manner. If a company wishes to prepare printed financial statements, the instance document will not suffice, because it does not look like a financial statement. XBRL was not designed for WYSIWYG (“what you see is what you get”) reporting; it was designed for moving data reliably and consistently between systems. Reports such as financial statements, however, can be generated through the use of style sheets, which can be in the form of Cascading Style Sheets (CSS), Extensible Stylesheet Language (XSL) Style Sheets, spreadsheets or other technologies that can be used to produce reports. To develop useful financial statements, for example, stylesheets will be prepared to add the necessary presentation elements to the data from the instance documents yielding a result that looks like financial statements, which can then be presented in HTML or another presentation format.

PROCEDURE FOR PREPARING XBRL REPORTS

The basic data that goes into the instance documents comes from accounting systems or other sources, such as spreadsheets. Sometimes, it is manually entered using an existing financial statement as a model. XBRL makes use of XML “tags” which are means of marking data. In XBRL, this means that certain data on a source document or in data files can be “tagged” and represented independently, without losing context within an instance document. These tagged data are mapped to the taxonomy, using software tools intended for this purpose. This mapping can then be saved in a spreadsheet and the underlying data can be displayed in trial balance-like format.

Some accounting programs, such as Great Plains, SAP, Navision, and ACCPAC, are including the ability to create XBRL instance documents with their software. Financial statements can be prepared from these instance documents using stylesheets, or the data can be directly imported into budgeting and analysis tools.

The data items tagged to be included, for example, in the financial statement item “inventories” will be tagged in the data files as pertaining to the inventories section of the relevant taxonomy and mapped to the instance document, which is then used as a source for populating the style sheet (the financial statements). The chart of accounts of the accounting system is mapped to the taxonomy concept it will summarize to, such as the appropriate concept for inventories; the accounting system then creates the instance document (data file containing the business fact with the contextual tags). That file can be published directly, transformed into an XML file, formatted into HTML or a PDF file, or used for consolidation or data migration purposes.

XBRL can be used in a variety of ways. It can enable the preparation of particular financial statements from a specially prepared instance document, which would require the preparation of a new instance document for subsequent financial statements at a later date. Instance documents can be manually prepared, or can be generated automatically by mapping taxonomies to the data files within an accounting system, provided that system is XBRL enabled or can make its data files available to external tools. In the latter case, the financial statements can be generated periodically or, in theory at least, could be produced on a real time basis.

The use of XBRL does not mean that printed financial reports will be prepared. For financial reporting purposes, an instance document that is prepared in accordance with, for example, the IAS taxonomy can be posted on a web site. Analysts and others can then simply run their own analytical processing on the data and prepare their own comparative reports, bringing in the data of other companies from numerous web sites, and consolidating that information within one report. With XBRL, this process can be automated and used to retrieve data periodically from a variety of sources. This use of XBRL bypasses printed financial statements, and highlights issues about the status and completeness of the data being retrieved from an assurance viewpoint, even though that data may be contained elsewhere in audited financial statements on the web site or in printed format. As organizations increasingly use Internet-only disclosure, eventually there may be no printed reports to fall back on.

RISKS OF ERROR

When financial statements are prepared using XBRL, the risks of error centre around the accurate mapping of the accounts to the tags, and the use of the appropriate taxonomies. The accurate mapping of the tags will ensure that the data retrieved are the appropriate data. Risks of error within the data being retrieved are no different than in any other situation. When financial information is streamed in real time, the risk of error in the financial statements could become higher, depending on the controls in place over any changes in that data, and the controls in place over changes in the mapping of data to tags. In this case, there is an additional risk that the data being picked up through the tags will change, and that the changes will contain errors or be unaudited. This would indicate that, in cases where real time data is being included in XBRL generated financial statements, additional controls need to be implemented to ensure that the data retain their accuracy and integrity.

CONTROL ISSUES

Use of the Appropriate Taxonomy

There is a need for an enterprise to have a system in place to ensure that the taxonomy being used to prepare the financial statements is the appropriate one. This suggests that personnel who are knowledgeable about the accounting requirements of a particular report or financial statements, and the taxonomy being used, be required to review and approve the taxonomy being used. Such review would involve considering the details of the taxonomy to ensure that it is up to date in the context of current requirements, and that it is being applied properly.

Tagging of Data

There should be procedures in place to ensure that the tagging of data is complete and accurate. Such procedures should include review and approval by a knowledgeable person of the tagging that has been applied, the data elements to which it has been applied, and the consistency of the tagged data elements with the prescribed requirements of the particular taxonomy being used.

Because the tagging is unlikely, in many cases, to change over time, the reviews subsequent to the initial review may be shortened to a review intended only to identify unauthorized changes.

Integrity of Tagged Data

There should be in place prescribed approval procedures for the generation of financial statements from tagged data, whether for inclusion on web sites or other purposes. These procedures would be applied to financial statements generated at a point in time, and would be required to be followed for any update of those financial statements. For financial statements generated on a real time basis, a more complex set of procedures would be needed, so that changes in the tagged data are subject to proper controls that will ensure, on a continuing basis, their integrity and accuracy. This may require the use of continuous assurance techniques, such as online monitoring and exception reporting software and the use of other computer-aided assurance techniques.

The XBRL Steering Committee has identified two possible new taxonomies that will directly assist in assurance services – one for audit schedules and the other for working papers. These are simply tools that would make use of XBRL to retrieve the data needed.

Because XBRL can optionally be used to link instance documents back to files on disk, there may be a security risk that needs to be addressed to deal with the possibility that such linkages might be exploited by hackers and other unauthorized intruders. In such cases, additional security precautions, such as the use of encryption and proper configuration of firewalls, should be considered.

ASSURANCE ISSUES

The objective of assurance with regard to financial statements developed using XBRL remains the same as in the case of other financial statements. Because the detailed procedures used to accumulate data are different, however, there may be a need to add procedures to deal with these differences, or to test the controls that are added to ensure that the XBRL tags maintain their integrity.

The technology also provides for new capabilities that open the door for more assurance opportunities through the use of XML Signature and XML Encryption. These might include the ability to have clients and their accountants sign files, or even individual facts within the files. Therefore, there is an opportunity for new, or expanded, assurance services. The use of XBRL may also lead to a need for additional procedures and consideration of additional issues. Moreover, there is a major distinction between those financial statements generated at a particular point in time and those that are generated on a real time basis. The approach used in carrying out assurance procedures and reporting on them must differ considerably.

Financial Statements Generated at a Point in Time

When XBRL is used to generate financial statements at a point in time, the auditors' focus must be on the additional procedures and policies that are required to implement XBRL. The controls in place in this respect would need to be reviewed. This would include a review of the controls over the use of an appropriate taxonomy, the tagging of data, and the integrity of the tagged data. Documentation and review of these controls, as well as consideration of their effectiveness, is necessary. In addition, the auditor would test the controls, through checks of review and authorization procedures. The auditor would form a conclusion as to the appropriateness of the taxonomy being used in the circumstances.

In addition, the auditor needs to test the data tagging carried out to see that it is appropriate and includes all the data required.

Financial Statements Generated on a Real time Basis

Additional procedures required when the financial statements are generated using XBRL on a real time basis would necessitate additional controls to ensure, on a continuing basis, the integrity and accuracy of the tagged data as it changes. Such controls would need to be identified and evaluated. If online monitoring and exception reporting software is used by the organization, then this software can be used for the assurance function as well. Continuous auditing procedures can be developed based on selecting the most useful and appropriate exception reports that would flag conditions, such as unauthorized changes in selected data elements, for the auditors' attention. Other audit software might also be installed that could be used to monitor selected conditions and generate periodic reports at random intervals for audit purposes.

Ensure Appropriate Taxonomy Being Used

At this time, there are few taxonomies available. Many are under development, however, and the question of taxonomy selection will become very important as new taxonomies become available. The taxonomy being used must be appropriate to the intended use of the financial statements being produced. Therefore, financial statements being produced for general use in accordance with Canadian generally accepted accounting principles would use a taxonomy that is specifically intended to produce such statements. Similarly, if the intention is to produce financial statements for filing with a corporate regulatory body, then the taxonomy that is intended to produce such statements should be used.

Review Tagging Methodology – Conduct Completeness Tests to Ensure

All Relevant Data is Tagged

One of the audit concerns that would need to be addressed is that of whether all relevant data in the source records has been tagged. This would involve a review of the tagging system in software systems to ensure that data such as new data elements, or new accounts, is included in the tagging process. Completeness is critical at all times, but may be most critical when data are included in records that are not self balancing, as it would be more difficult to notice the absence of such data.

Test the Tags in the Instance Documents

Another concern of an auditor involved with XBRL generated financial statements is whether the data are properly tagged. The concern here is that the data are those that should be included in a particular tag under the intent of the taxonomy being used. For example, if a taxonomy includes a tag for unusual items, as defined under Canadian GAAP, then the data included must meet the definition of such items under the taxonomy and under GAAP. The same would apply to other tagged items, like repairs and maintenance and sales.

EMERGING ISSUES

The principal emerging issues with regard to XBRL centre around the inclusion of XBRL instance documents on a web site for access by the general public. As mentioned above, some companies have begun to do this, and it means that users can go to the sites, gather the specific data items they want, and then import them into their own documents or analytical tools.

A significant issue that arises with this approach is the status of the retrieved data from an assurance standpoint. If this data is also included in audited financial statements, for example, is it audited? Technically, it is not, and a reporting mechanism exists for providing audit assurance on individual items within financial statements in the form of a report under Section 5805 of the *CICA Handbook – Audit Reports on Financial Information other than Financial Statements*. This standard, however, did not contemplate data level assurance, and would need to be revisited by the Assurance Standards Board before being applied in this area.

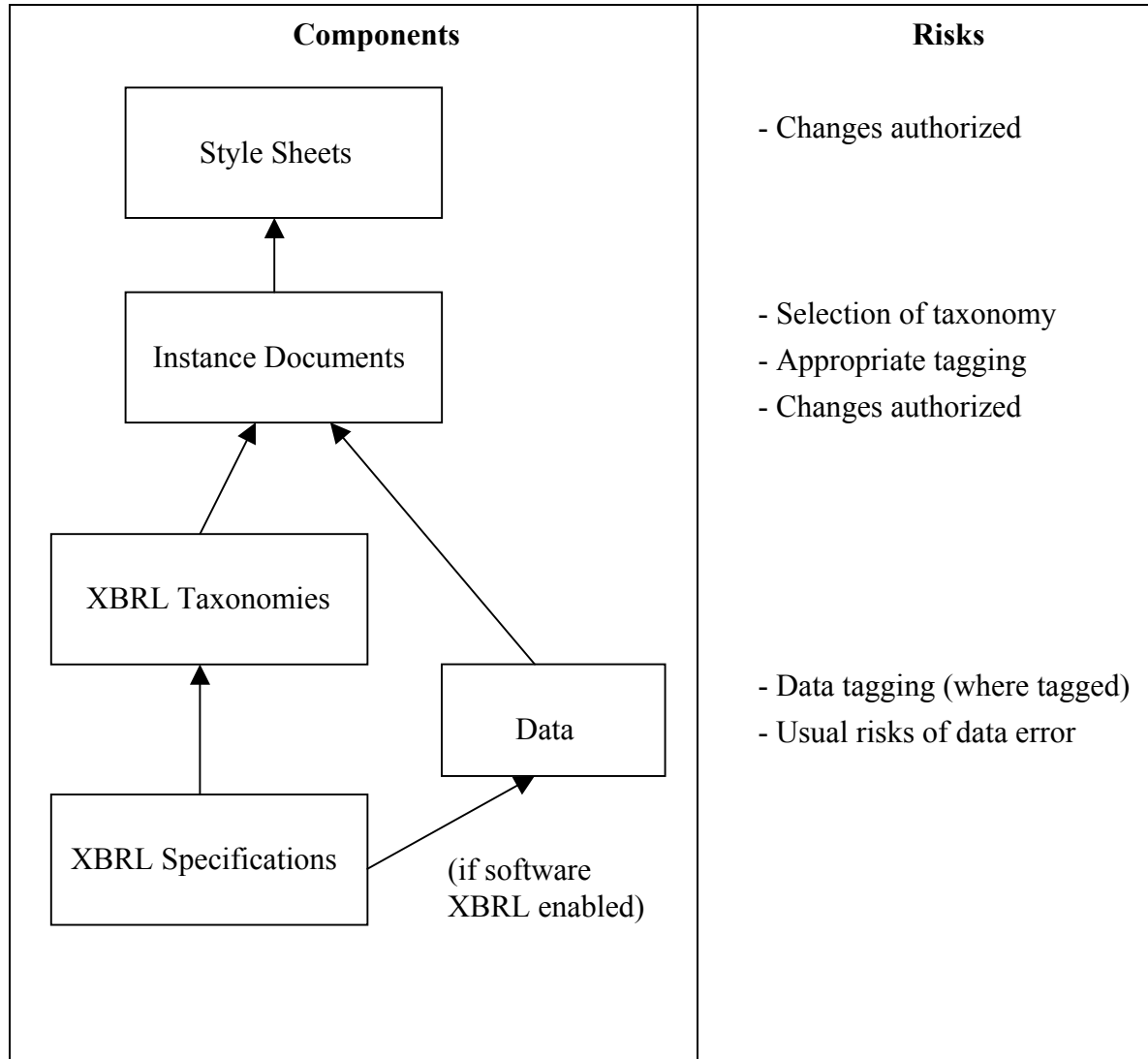
The issue of data level assurance extends beyond data included in financial statements and beyond data that is included in audited reports. It also includes the issue of context – that is, the context in which the data should be read. (For example, what does an increase in sales mean to the bottom line?) If individual data elements are taken in isolation, that context may indeed be lost. It is reasonable to assume that this issue will grow in importance as the use of XBRL expands, and is one that the profession needs to address. Data Level Assurance is a service opportunity for the profession.

CONCLUSION

The use of XBRL for generating audited financial statements leads to a number of additional factors that auditors must take into consideration. As a minimum, the auditor must address the controls and procedures used in the XBRL tagging process and the taxonomies being used. Where the financial statements are generated on a real time or some continuing basis, then there will likely be a need for some continuing audit procedures to be applied.

Appendix

COMPONENTS OF XBRL AND RELATED CONTROL RISKS



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