

**XBRL TAXONOMY REVIEW and
COMPARISON between IFRS-GP TAXONOMY
and CN LISTED COMPANY TAXONOMY**

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2007

ABSTRACT

XBRL is set to be a standard way to record, store, and transmit business financial information. Taxonomies are the dictionaries used by XBRL, and they define the specific tags for individual items of data. I reviewed and compared the IFRS-GP taxonomy and the CN listed company taxonomy. National jurisdictions may need their own financial reporting taxonomies to reflect their own local financial regulations. Since 1993, China has adapted to a new market oriented accounting standard, Accounting Standard for Business Enterprises. According to this accounting regulation, China developed its XBRL taxonomy for the listed company. Much previous XBRL research has been done and a range of interesting topics were raised for the XBRL development. I discussed some of them in my first chapter. I introduced XBRL basic concepts and principles and its major development in EU and China in Chapter 2. I studied and reviewed the IFRS-GP taxonomy in detail in my third chapter, including its layout, relationship of physical files, reports of taxonomy, and the linkbase files. In Chapter 4, I concentrated on the CN listed company taxonomy, including the framework, elements and concepts, and multiple taxonomy reports. Finally, I delivered a comparison analysis about the IFRS-GP taxonomy and the CN listed company taxonomy from two points of view: the reporting perspective and the technical perspective. It is the differences in reporting practices that lead to the taxonomy reports' format and content differences. The two taxonomies structure differences play an important role in impacting taxonomy extensibility and comparability. In the perspective of application, there is no standard or best structure to meet all taxonomy extension requirements. I provide suggestions in future taxonomy design according to the disadvantages and advantages of the two taxonomies structures.

KEYWORDS

XBRL, XML, Taxonomy, Financial Statement, IFRS-GP taxonomy, CN listed company taxonomy, Disclosure Regulation Requirements

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LIST OF ABBREVIATIONS

IFRS-GP(International Finance Reporting Standards, General Purpose).....	8
XML (eXtensible Markup Language).....	8
XBRL (eXtensible Business Reporting Language).....	8
AICPA (American Institute of Certified Public Accountants)	10
SSE (Shang Hai Stock Exchange).....	12
GAAP(General Accepted Accounting Principle).....	15
FRTA (Financial Reporting Taxonomies Architecture).....	15
IFR (Internet financial report)	23
IASC Foundation (International Accounting Standards Committee Foundation)....	28
IAS (International accounting systems).....	28
ASBE(Accounting Standard for Business enterprises).....	47
IARs (Industry-specific Accounting Regulations).....	47
PASs (Practical Accounting Standards).....	47
CAS (Chinese accounting systems).....	47
CSRC(China Securities Regulatory Commission).....	71

1. INTRODUCTION

This chapter provides the basic information of my thesis, including research object, research background, and structure.

1.1 Research Background

XBRL, based on XML (eXtensible Markup Language) , uses identifying tabs to publish business reporting information on Internet. XBRL splits business information into two parts: taxonomy and instances. XBRL taxonomy plays an important role in XBRL by enabling specific tabs to be applied for individual items of financial reporting. XBRL can be used as a tool for searching, selecting, exchanging, as well as analyzing business information on Internet by companies, banks, stock exchange and other related corporations. Since it was founded by Hoffman et al in 1998, considerable researches and relative practices have been implemented to pursue the theoretical and empirical developments, including the reason why XML is used for XBRL, how well the taxonomy of financial statement corresponds to the companies reporting practices as well as other technical perspective of XBRL. The current XBRL-GP taxonomy was released in 2005, and it was used under the International Finance Reporting Standards to produce general purpose financial statements in the board of profit-oriented industries, incorporating banks and similar financial institutions. When compared to the IFRS-GP taxonomy, the CN taxonomy is at a beginning level up to now. China has released CN listed company taxonomy and CN fund company taxonomy, however, it has not covered all areas. There are several differences in the XBRL reports and the taxonomy structures between the two XBRL taxonomies.

1.2 Research Object

In order to provide some suggestions on the XBRL taxonomy design from accounting and technical perspectives, I made a thorough study on XBRL taxonomy. Through my study of

the **IFRS-GP**(International Finance Reporting Standards, General Purpose) taxonomy and the CN listed company taxonomy, I pursue the differences in their taxonomy structures and reporting format and contents. Based on these difference, I tried to find out what factors lead to the XBRL report content and format differences , what taxonomy structure is more flexible to fit users' diverse taxonomy extension requirements, which taxonomy extension method will be used to meet different customers' needs and whether the XBRL report information comparability will be hurt by customers' diverse extension needs.

1.3 Structure

I provided basic XBRL introduction in my second chapter, including XBRL history, XBRL research, and XBRL structure. I provided a thorough IFRS-GP taxonomy review in chapter 3. Chapter 4 concentrated on CN listed company taxonomy. In chapter 5, I compared the two taxonomies from the accounting and technical perspectives. Chapter 6 provided my suggestions on the future XBRL taxonomy design.

2. UNDERSTANDING XBRL

2.1 What is XBRL

2.1.1 XBRL Introduction

XBRL(eXtensible Business Reporting Language) is to address business reporting information on internet and bases on XML, which is a standard for electronic data exchange on internet. XBRL enables identifying tabs to be applied to the unique items of financial reporting. It is those identifying tabs that enable computers to understand human business reporting information. XBRL is a markup language, rather than a programming one. By using XBRL the business data and information can be shared and communicated by companies, banks, stock exchanges, accounting institutions, governments and other relating organizations.

XBRL is open-standard, free of charge, and developed by an international non-profit consortium. Numerous leading organizations are supporting and participating the development of XBRL. Now there are numerous successful XBRL cases in many countries. (XBRL Accelerates Around the World ,2006)

XBRL benefits the whole supply chain of the financial reporting information. First, XBRL can automate the data collection process. Similar to a traditional accounting system, in the input stage, a company enters its financial data and stores it in a database through an XBRL document generation process. An XBRL document is created by mapping company specific financial information to XBRL elements. A number of new software packages can do it automatically, providing a mapping that is made between a company's account names and XBRL elements developed for that jurisdiction, thus the information re-entry is eliminated and the data can be checked by software for accuracy (J.E.Boritz, Won G.No, 2004). Second, XBRL improves the transparency of data and helps decision-making. For example, some companies prefer listing stock option expenses in the notes of financial reports ,which is likely to be neglected by users, therefore, it tends to bring negative impacts on performance judgments. XBRL uses standard form to input and display information, therefore this problem will be avoided. For analysts, XBRL is able to simplify the data selection and comparison process and deepen the company analysis.

Taxonomies play an important role in XBRL. It functions as a mapping file that defines the specific tabs for individual items of finance reporting. XBRL offers a range of information besides simple tags, such as if it is monetary, percentage or faction. XBRL also allows considerable languages to be used in tags, and other subsidiary information as well as relating references. In addition, XBRL is able to show the relationship of those items with linkbase files. Without those files, individual tags do not recognize each other, and are thus only able to indicate their own contents and cannot work together. In fact, significant relationships exist in those items of financial statements. Based on those complex relationships, analysts are able to obtain useful results by analyzing and calculating data.

What is more, XBRL is easily extensible, thus organizations can adapt to it according to their diverse requirements.

2.1.2 XBRL History

The XBRL initiative started in 1998 by Hoffman et al. He offered reasons for the need for a standard set of specifications of Web-based financial and business reporting. He supported the use of XML. Independently, the **AICPA** (American Institute of Certified Public Accountants) came to the same conclusion. Subsequently AICPA provided seed money to develop a financial reporting specification based on XML. By the end of December 1998, the first prototype has been accomplished.

By August 1999, the called eXtensible Financial Reporting Markup Language (XFRML) Steering Committee was established, and the first meeting took place in October 1999. The xbrl.org was formed to coordinate the project. In the April 2000 public rollout of the first specification, the official name became the XBRL Steering Committee. XBRL.org is an independent organization, called XBRL International and supports the XBRL standard development. It sets XBRL specification. These specifications and the ancillary specifications are all royalty-free, in the public domain, and are freely licensed to any users.

XBRL development timeline is presented in the following:

Year	Developments
1997	Charlie Hoffman, (CPA, Knight Vale & Gregory, Washington, US) proposes using XML for financial reporting
1998	AICPA conducted a pilot study to build a prototype – called XFRML (eXtensible Financial Reporting Modeling Language)
1999	AICPA forms a steering committee – XBRL.org. About a dozen companies join the effort
2000	XFRML becomes XBRL First specification released US CI (Commercial and Industrial Firms) taxonomy released APRA (Australian Prudential Regulatory Authority) is the first company to implement XBRL 1.0
2001	Specification 2.0 for XBRL released Core requirements for General Ledger released
2002-03	Draft of taxonomy for IASC (International Accounting Standards Committee) released Several International Symposia held More than 170 organizations joined the effort under the umbrella of <i>XBRL International</i>
2004	XBRL Specification 2.1 approved.

Figure 1 XBRL research development timeline

(Communications of AIS ,Volume 13 Article 16 XBRL by A.Deshmukh)

In November 2005 the current specification for XBRL version 2.1 was released. Specifications provided the fundamental technical definitions about how XBRL works. The XBRL 2.1 Conformance Suite provided more than 200 tests to verify that applications proceed XBRL 2.1 documents correctly. The Conformance Suite has been approved as a Candidate Recommendation by the XBRL International Steering Committee (XBRL specifications ,2006).

2.1.3 XBRL Development in the EU & China

In the context of implementing of international accounting standards and improving the Financial reporting, the European Union decided to support a project, which began from Feb 1, 2004 to Jan 31, 2006, accelerating the development of XBRL in EU. The 2-year project financed by the EU had been found to improve the awareness and assist the members of EU in forming their local jurisdictions. The project was comprised of four packages :

- Improve awareness
- Establish and develop local jurisdictions

- Provide Internet tools for collaboration in EU community
- Support a permanent secretariat

(What are the objectives of the project? 2006)

Permanent secretariats are a team dedicated to working with XBRL International and European jurisdictions to manage the XBRL project in Europe. XBRL in the EU makes regular presentations to XBRL organizations, conferences and regular bodies, outlining XBRL cases to simplify the costs of regular and internal corporate finance reporting. Existence of local jurisdiction is a catalyst to the development of XBRL. The EU XBRL provides a network of experienced experts and knowledge to facilitate the process of forming local jurisdiction (About the organization..., 2004). The International Accounting Standards Committee Foundation continues its pioneering and leadership in XBRL international consortium. **IASCF** (International Accounting Standards Committee Foundation) released its final version of IFRS-GP taxonomy in May 2005, which represented International Financial Reporting Standards general purpose financial reporting for profit-oriented entities incorporating additional requirements for banks and financial institutions. It has been translated into German, Italian and Portuguese. I will discuss the IFRS-GP taxonomy in detail in the Chapter 3 .

The development of XBRL in China is at the beginning level, but there have recently been some important events. In 2003 the ShangHai Stock Exchange (**SSE**) used XBRL standard in the annual financial reports' abstract of 50 chosen companies. In 2004 the SSE requested all the corporations to use XBRL in their first quarter of the year's financial reports. Additionally, 352 corporations implemented XBRL standard system to submit the half-year financial statements to the SSE. By the end of 2004 the business reports and abstract part were bound to be released by one-time data entry with the updated XBRL system (Application Introduction..., 2004).

China lacks XBRL specialists. In 2000 the XBRL was formulated, then the XBRL 1.0 was drafted in 2001. In 2003 the XBRL 2.0 was completed. XBRL was implemented in

numerous jurisdictions, which typically represented a country, cross-border region, or internationally recognized business-reporting region. SSE became a formal member of XBRL organization in March of 2005. The ShangHai Stock Exchange XBRL standard reporting system was the first system based upon XBRL in China. What is more, the core part, taxonomy, has not covered all areas, since it was only accomplished in commerce and industry area. As for banking, real estate area and other areas, their specific taxonomy has not been released (What are the problems in the Chinese XBRL taxonomy development?, 2005).

The CN listed company taxonomies were drafted according to the Chinese Commerce and Industry Accounting Practices, XBRL 2.1 and the Financial Reporting Taxonomies Architecture. The CN listed company taxonomy will be uncovered in detail in the chapter 4.

2.2 Structure of XBRL

2.2.1 Framework of XBRL

XBRL defines a syntax by which the elements of XBRL are constructed and integrated together. XBRL splits business information into two components: taxonomies and XBRL instances. XBRL instances contain the facts being reported while taxonomies define the content of facts.

The taxonomies consist of Financial Reporting Taxonomy and the General Ledger Taxonomy. Today most attention has been focused on the external financial reports. However, companies and government organizations around the world have begun to recognize the potential for moving the XBRL down into the general ledger. Firms are recognizing that XBRL-GL can be used to reduce the cost of transferring and transmitting data from one system to another.

XBRL-GL is an application of the XML technology that has the capability to capture and communicate any information gathering required for business reporting that is represented by the accounting entry consisting of "amount", and "date". XBRL-GL has a hierarchy structure which helps communicating and transmitting information regardless of the original data's operating system or financial system. Once data is tagged at the lowest level, it can be used and reused for any purpose. For example, the company with multiple divisions and multiple financial systems can use the XBRL-GL as a middleware, bridging the gap from one system to another. XBRL-GL can also facilitate drill-down analysis of reporting elements and help share information with supply chain partners.(Neal Hannon 2003).

The instances, taxonomies and linkbase files must comply with the syntax requirements. Many of the syntax requirements use the XML schema, thus some validation processes of XML schema should be involved in the syntax requirements. Some of other syntax requirements not using XML need other technologies validation.

2.2.2 Taxonomies

Taxonomies play an important role in XBRL, because they act as dictionaries while applying each specific tag to individual items of financial reports. Taxonomies also offer relationships between concepts and can supply calculations to express those relationships. For example, current assets can be calculated from cash, account receivable, inventory, and other things.

National jurisdictions request their taxonomies to be defined according to their accounting regulations. Even diverse industries and specific organizations need particular taxonomies to fit their individual terminology and accounting practices. No single taxonomy can cover the world's diverse needs for financial reporting (Ashutosh Deshmukh 2004 volume 13).

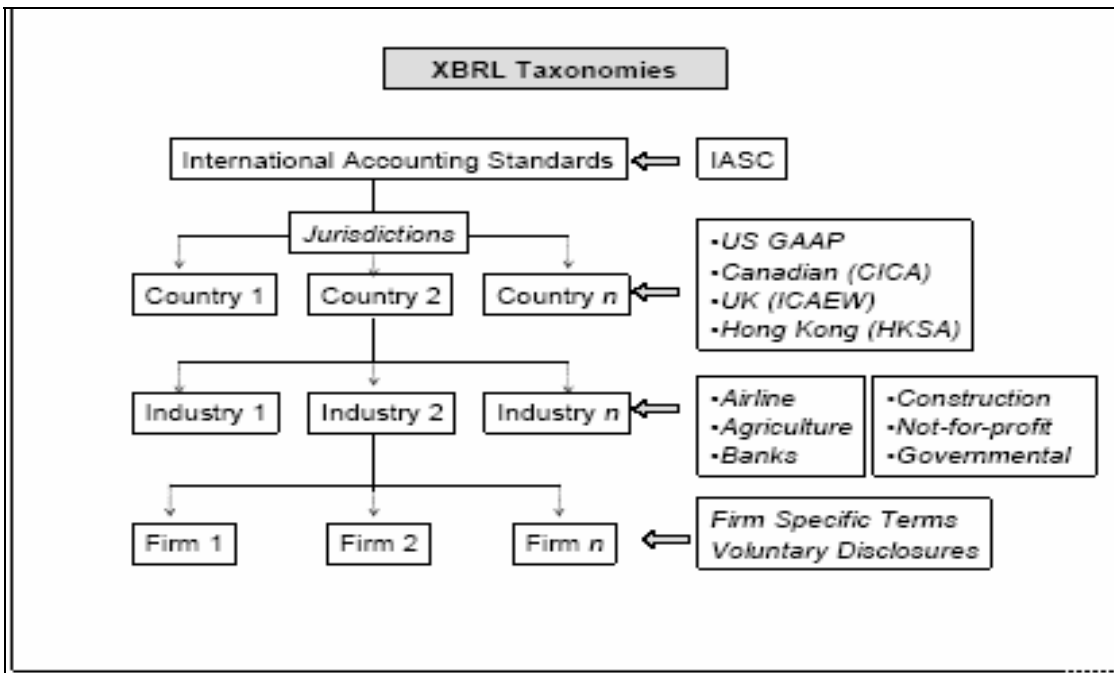


Figure 2. XBRL TAXONOMIES

(Communications of AIS ,Volume 13 Article 16 XBRL by A.Deshmukh)

I use the US **GAAP CI**(General Accepted Accounting Principle Commercial Industry) taxonomy as a conference to illustrate the basic elements of XBRL taxonomies .The US-GAAP-CI taxonomy has been prepared by the XBRL-US Domain Working Group, with feedback from other members of XBRL International as well. This US-GAAP-CI taxonomy is compliant with the XBRL 2.1 Specification, dated 2003-12-31 and follows the guidance prescribed in the Financial Reporting Taxonomy Architecture 1.0 (**FRTA**). It is a taxonomy created by combining other taxonomies in the US Financial Reporting Taxonomy Framework. Specifically, the US-GAAP-CI Taxonomy represents financial reporting details ranging from the Management Report to the Balance Sheet and Income Statement and it is used to create XBRL instance documents for commercial and industrial type companies.

ID	Weight	Balance	Type	NS	Label	Description	Reference
303	0	Debit	Monetary	usfr-gc	Assets (usfr-gc: Assets)	Probable future economic benefit obtained or controlled by an entity.	Statements on Financial Accounting Concepts 6
304	1	Debit	Monetary	usfr-pt	Current Assets (usfr-pt: TotalCurrentAssets)	Sum of all current assets - those assets that are reasonably expected to be realized in cash or sold or consumed within a year or within the normal operating cycle of the entity	
305	1	Debit	Monetary	usfr-pt	Cash, Cash Equivalents and Short Term Investments	Cash and short term investments with an original maturity less than one year, including restricted cash.	
306	1	Debit	Monetary	usfr-pt	Cash and Cash Equivalents (usfr-pt: CashCashEquivalents)	Cash and short term, highly liquid investments that are readily convertible to known amounts of cash and are so near their maturity that they present negligible risk of changes in value due to changes in interest rates - usually with an original maturity less than 90 days, This includes restricted cash, treasury bills, commercial paper and money market funds and other operating cash balances	SFAS (Statement on Financial Accounting Standards) 6; ARB (Accounting Research Bulletin) 43 6
307	1	Debit	Monetary	usfr-pt	Cash (usfr-pt: Unrestricted Cash)	Unrestricted cash available for day-to-day operating needs	SFAS 95 7
318	-1	Credit	Monetary	usfr-pt	Allowance for Doubtful Accounts (usfr-pt: AllowanceDoubtfulAccounts)	Estimate of uncollectible trade A/R that reduces the gross receivable to the amount expected to be collected	

Figure 3 . Partial Description of Elements in the US GAAP CI Taxonomy(XBRL communication of the association for information system volume13,2004 by Ashutosh Deshmukh)

This table shows partial entries for current assets in US GAAP Taxonomy, and each row corresponds to one element. ID is used as a primary key for elements, because the unique number is allocated for each element. In each row users can obtain the other attributes of

the element, such as weight, balance, name space , type, label ,description and reference. There are total of 1460 elements in US GAAP Taxonomy and they are to be used to create Income Statement, Balance Sheet, Statement of Cash Flows, Statement of Stockholder's Equity, Notes and Management Discussion and Analysis, Auditor's Report, Management Report, and SEC Officers Certification.

US GAAP taxonomy contains the following details:

- ID: The unique number corresponds to each element in the taxonomy.
- Weight: the relationship with the parent element. A weight of 1 indicates that the value of the parent will be obtained by rolling up all the elements values multiplied by weight1. For example, the parent element Current Assets can be derived by adding children elements such as inventories, cash and AR. The value of Account Allowance for Doubtful Accounts, whose weight is -1 , needed to be subtracted from the Account receivables Trade to obtain the Net Account Receivable .
- Balance: indicates whether the balance is debit or credit.
- Type: The date type such as monetary , string , shares, date and decimal.
- NS (Namespace): Refers to the taxonomies to which the element belongs. Since US GAAP combines a range of taxonomies.
- Label: the name of the financial element and its relating description. There can be multiple labels in different languages.
- Reference: This column refers to the corresponding literature offering the description of the financial elements. The reference includes the reference name, number, chapters, paragraphs, number of the literature.

Taxonomies consist of schema (.xsd file) and other interrelated XML files. The linkbase files include five files: references, presentation information, calculation relationship between elements, labels, and definitional relationship between elements. The literature documents are given in the reference XML file. The presentation XML file describes how those elements are organized, though it cannot be used in all circumstances, it presents us with the most commonly used way to present elements. The weights of elements are saved

in the calculation relationship XML file. The weight of 1 means the value of the element should be added with other elements to get their parent element's value. The weight of -1 indicates that the parent element's value should be subtracted by the element's value. The complete description of each element is included in the label XML file, and the description can be any language, such as German or French. The definitional relationship file describes the parent-child relationship between elements. It is based on that relationship that the financial report is generated. These 5 XML files connected to facilitate data retrieval and enable data to be calculated and reviewed by users according to their practical usages.

2.2.3 Instance document

An XBRL instance document is an XML file, which is used to describe financial facts. The taxonomy files only define the structure, label, and format of each element. The instance document contains the financial reporting information

The instance documents follow the syntax defined by XBRL. This syntax enables other applications that process instance document to review, extract, and calculate data efficiently. The XBRL instance documents consist of facts (items & tuples), contexts, units (if there are numeric elements), and sometimes footnotes. Items are simple financial facts, while tuples are a group of elements that connect with each other, and they cannot be understood without conjunction. The context carries substantial information such as, ID, entity, and period. Since the financial facts are likely to cover multiple contexts, multiple periods are to be expected. In addition, the facts may be divided according to segments and scenario. In some case, a fact is likely to be used for multiple entities. As for numeric elements, XBRL mandates that every element must have an associated unit, whose measure is an ISO 4217 currency unit, and its units must be declared.

Each element contains multiple attributes, including ID, entity, scenario, period, unit, and precision. For example, the element "cash and cash equivalents" has context reference NO I-2004, which carries the entity information and the period. Instant tag refers to a specific

point in time and is useful for balance sheet and cash flow statement. Another description duration, endDate tag means the specific ending date of a period of given length of time, and is useful for describing income statement. The entity identifies the organization (name of company, department, individual, etc.) to which the document pertains . The description of unit is “U-Monetary”, which refers to iso4217:eur. For Monetary measurements, we use standard currency designations. Precision shows the arithmetic precision of the measurement.

.....

```
<context id="I-2004">
  <entity>
    <identifier scheme="http://www.iascf.org/proofset">Proof Set</identifier>
  </entity>
  <period>
    <instant>2004-12-31</instant>
  </period>
</context>
```

.....

```
<unit id="U-Monetary">
  <measure>iso4217:EUR</measure>
</unit>
```

.....

```
<ifrs-gp:CashAndCashEquivalents contextRef="I-2004" unitRef="U-Monetary"
decimals="0">1000</ifrs-gp:CashAndCashEquivalents>
```

.....

Figure 4.Cash and cash equivalents instance document description (XBRL communication of the association for information system Volume 13, 2004 by Ashutosh Deshmukh)

In order to display documents tagged with XBRL code, it is necessary to use a style sheet, prepared with a style sheet language. Two of most popular style sheet languages are Cascading Style Sheet and Extensible Style sheet Language. After an XBRL instance document and a style sheet are prepared, XBRL documents can be shown in the web browser (J.E.Boritz, Won G. No 2004). With corresponding style sheets, the reporting information can be outputted into html, pdf , txt and other required formats.

After validated under the taxonomy and transformed by the style sheet, the cash and cash equivalents elements can be outputted into the readable reporting format.

2.3 XBRL Tools and Software

XBRL companies offer a variety of tools and software to assist creating taxonomy and instance documents. Diverse kinds of supplementary tools are required to bring additional practical functions to XBRL. The XBRL tools can be classified into following categories:

- Taxonomy related tools
- Instance document creation tools
- XBRL validation
- Instance analysis

(XBRL software tools 2005)

Taxonomy related tools enable viewing, editing and creating taxonomies. XBRL taxonomies can be extended for company specific financial statements by these tools. The XBRL taxonomy viewing tools allow reviewing and printing of taxonomies. Editing tools can add, delete, or change the existing taxonomy. When necessary, taxonomies can be built from scratch with building taxonomy tools. Numerous software packages offer supplementary tools to map the financial information system to the taxonomy, thus automating instance document creation. Additionally, new instance documents can be generated by editing imported instance documents. Instance analysis tools focus on their ability to import and diagnose corporate data stored in XBRL format. XBRL validation tools offer different levels of validation option. Users are able to select the application as a

XML syntax checker, XML Schema validation, XBRL validation without XML Schema validation, and XML Schema validation and XBRL validation. Users can also specify which XBRL link bases should be validated.

2.4 XBRL Research

I tried to provide the previous research about multiple interesting topics and discussions on the **XBRL** (eXtensible Business Report Language) development.

2.4.1 Why is XML used to develop XBRL?

Why is XML used for XBRL? I reviewed <<the production and use of semantically rich accounting>> reports on the Internet: **XML**(extensible Markup Language) and **XBRL**” by Roger Debreceeny and Glen L.Gray in September 2000. I will also discuss whether XML hierarchy fits the unusual level of XBRL extensibility or not in my chapter 5.

Most major corporations in the US have presented their financial reports on the internet, but, in fact, it is not clear whether stockholders are fully satisfied with the Web-based data. The time and effort allocated to Web data retrieval are actually increasing because of the difficulty of locating internet pages and searching specific data within the public Web or corporate intranets.

The inclusion of metadata information on a Web page significantly improves resource discovery, but it is not used extensively by firms due to its lack of standardization. Illustrative examples are presented to show the difficulty to locate specific financial information from Internet. In short, the manually web data mining is a very inefficient process, thus a robust standardized schema is needed.

XML is recommended for the attribute identification schema, because the most important elements of XML are validation for correctness, structural complexity, and an extensible tag set. Two major resource discovery developments, Resource Description Framework

(RDF) and the so-called DC, are discussed and compared, and they are complementary formats. RDF provides a robust syntax for defining various metadata, while DC provides the essential but extensible semantics for describing the metadata.

If the companies are free to develop their own labels for XML tags, the efficiency of searching for specific financial information will be marginally improved. XBRL is an initiative to develop an XML-based web-based business reporting specification. Two of the biggest groups of XBRL Committee are the domain-working groups and the specification one as well. The domain-working group develops a set of terms for each element of financial report including footnote, then the information is passed on to the specification-working group which will develop a well-formatted set of XML tags.

2.4.2 How well does the taxonomy for financial statements correspond to firms' reporting practices?

Nowadays countries are developing their XBRL taxonomy according to their different accounting practices and diverse industry regulations. The taxonomy associated for a specific industry can be extended to fit companies' preferred reporting practices by adding taxonomy customer tags. The taxonomies can be developed by several other entities for different purposes.

However, how well does the proposed taxonomy for financial statements correspond to firms' diverse reporting practices? <<Does the Year 2000 XBRL Taxonomy Accommodate Current Business Financial-Reporting Practice?>> by Matthew Bovee, Michael L. etc , 2002 fall , is a typical paper that explains this question. To address the issue, the authors assessed how well the year 2000 XBRL taxonomy version under US **GAAP** (General Accepted Accounting Principle) for Commercial & Industrial firms accommodates current financial report practices. I will also discuss the comparability of the two taxonomies in Chapter 5.

Differences exist between the taxonomy and firms' preferred reporting practices, especially the differences in aggregation of data and accounts. Managers and accountants prefer aggregation accounting data, and this might compensate in some cases for the lost detail (Sunder 1997). While custom tags allow a firm to preserve more detail, they are also at the possible cost of comparability. Firms desire the same level of disaggregation embodied in the taxonomy which can achieve complete comparability. If the amounts associated with custom tags should roll up into the sum associated with their parent accounts, and comparability is restored at the level of the parent account. Different firms can devise different custom tags for the same account. The design of taxonomy potentially affects the comparability and representational reliability of information.

The results indicate that the Commercial & Industrial taxonomy provides a good fit overall, and significantly better fit for some industries than for others, such as Entertainment and Petroleum Refining. Great differences exist among the three main financial reports concerning how well the XBRL taxonomy fits financial reports. It suggests modifications to the taxonomy and discusses the need for industry-specific taxonomies.

2.4.3 The determinants of Internet financial reporting

What factors affect the XBRL development? XBRL is the recent development of IFR. The paper <<the Determinants of Internet financial report>> by Roger Debreceeny, Glen L.Gray in October 2002 is a typical paper that illustrates what factors are crucial for the development of IFR. Internet financial reporting (**IFR**) is the distribution of corporate financial and performance information using Internet technologies, such as the World Wide Web (IASB 1999; Trites 1999; Ashbaugh et al,1999; FASB 2000). The authors identified firm related and national and international environmental variables as influencing IFR, and the external environmental factors were to be used in new disclosure decisions for the first time.

FASB (2000, Chapter 2) describes IFR in terms of content and presentation. Authors detail the firm specific characteristics and environmental variables, which are possible determinants of IFR. The primary foundation of our framework of IFR is the notion of information asymmetry between management and ownership (Berle and Means 1932). Internet disclosure can be cost effective, fast, flexible in format, and accessible to all types of users within or beyond national boundaries. The firm specific variables consist of size, foreign listing, a listing by non-US corporations on US exchanges, the amount of specific knowledge in an industry, growth prospects and intangibles, firm-specific market risk, and the debt-equity ratio. Larger companies have a tendency of greater information asymmetry, thus these companies prefer higher-level information disclosure. Dispersion of ownership across country borders is presumed as a positive factor for IFR. The US security market with extensive disclosure regulation serves to reduce the capital cost and give incentive to firms for using IFR. Firms with high growth prospects and high intangibles as well as High-tech firms will disclose more information as their earnings numbers are not sufficiently value-relevant. IFR can allow the debt holders to monitor the affairs of the company.

Two important environmental determinants are the level of internet pervasiveness and the overall disclosure environment in the firm's home country. Many corporations will adopt IFR as a means of widespread financial disclosure in those countries where there is a heavy penetration of internet usage. The national disclosure environment also affects the levels of IFR. Firms in high disclosure countries disclose more, and are more likely to adopt IFR.

660 corporations including 30 corporations with the highest market capitalization for 22 countries were selected to collect data. The firm specific and environmental variables were adopted to build an equation, and FASB framework, IFR-P and IFR-C was used as the measurement schema. A descriptive set of statistics was presented for this research, and we found that size, level of technology employed and growth prospects and intangibles were associated with IFR. The US listings were significant to IFR, while the general cross-listing was negatively associated with IFR. An important finding was that the information

disclosure environment was an important factor to IFR. IFR-presentation and the IFR-content were interrelated, especially at an advanced level.

2.4.4 A research on the technical perspective of XBRL

What is the technical research about XBRL ? What is the situation of the XBRL taxonomy design? I studied the paper <<Are We There Yet? A Research Perspective On The Extensible Business Reporting language (XBRL) >> by Roger Debreceeny, 2004. I will discuss and analyze the taxonomy design issue in Chapter 5.

The technologies suite by which XBRL was implemented was discussed in this paper. The business reports have contextual metadata internal to the reporting entity (Kowalski 1998; Vickery 1965; Weibel 1995). The information duality leads to the differences between the contextual metadata internal to entity and the external contextual metadata, such as a set of accounting standards. The latest version of XBRL specification is Version 2.1, which consists of both the XML Schema (Bradley 2003; Daum 2003) and Xlink standards (Wilde and Lowe 2002). When an XML document employs a concept from schema, it adopts the metadata inherent in the schema and can be validated against that schema. Schema provides a means by which instance documents can reference concepts from the specification and from taxonomies. The other primary technology employed by XBRL is Xlink, which provides hyperlinks that present comprehensive language for the expression of relationships between concepts. The instance document contains the contextual metadata that provides internal contextual metadata and adopts the XBRL specification. The instance document adopts the external metadata that is contained in a XBRL taxonomy. The XBRL specification is expressed as an XML schema.

XBRL reports include numeric and textual data type. The textual data in the report helps for understanding the management and strategies of the firm. Similarly the accounting policies are vital for understanding the financial performance. Given the diverse nature of particular company, industry, and national GAAPs, easy and systematic retrieval of these disclosures

text assist to understand the financial statements. A variety of numeric data and relations are included in the XBRL reports, such as the various ratios in the performance statistics reports. The internal contextual metadata for accounting information is implemented in XBRL specification. Metadata associated with contexts, such as time period, units, and level of precision for numeric contexts, is used to describe the nature of financial facts. The external contextual information for accounting information presents the accounting policies adopted, individual disclosure regulations and the reconciliation, and it varies in the level of explicit definition and for the interconnectivity of concepts. An important facet of the design object of XBRL is the integration of multiple interoperable taxonomies which are constructed for national, industry, and company-specific environments.

The manner by which the XBRL taxonomy is designed and built is somewhat different from the traditional numerous modeling methodologies used to illustrate relationship between the underlying technologies and the high-level semantic concepts. There is no formal method for formally expressing the taxonomies in a visual or other modeling language, and there is no clear understanding of the appropriate coverage of the taxonomy. The inherent flexibility of XBRL results in many alternative ways to represent the information, though the FRTA 1.0 restricts the choice of taxonomy builders in representation of knowledge patterns. In addition, it is relatively difficult to generate procedures of formal testing of the final taxonomy. As Hoffman et al. (2002) note, “80% of the work of building a taxonomy is obtaining the concepts you want to express using the taxonomy; and not in building the taxonomy itself.”

The current tools allow users to construct taxonomy with hierarchical structures and to describe the properties of various linkbases. However, whether the hierarchy is the most appropriate structure or not is highly questionable and subject to empirical research, conducted in a design science framework. The business reports lack a formalized modeling semantics process such as the object models (Graham 2001; Jacobson 1999); state-transition diagrams or Unified Modeling Language (Booch 1996). The current trends in semantic modeling are the semantic web and the web service, which can be seen as

complementary tools and techniques for the representation and application information exchange, respectively, of knowledge. An important foundation of these developments is the integration of the information systems knowledge engineering discipline with the work on ontology.

Numerous research paradigms are available to address the XBRL adoption. The Technology Acceptance Model (Davis 1989) and the more recent Extended TAM (Mathieson 2001) are used to analyze and predict the usage of XBRL and the user acceptance based on perceived ease of use and usefulness. The TAM's assumptions are that the usage is volitional, and it combines various concepts: behavioral intention(BI), perceived ease (EOU), perceived usefulness(U) and a person's attitude (A) The ETAM complements TAM's weakness by considering the limitation of resources.

2.5 Summary

In this Chapter, I provided an overall introduction to XBRL, including its benefits, history, current situation in the EU & China and previous XBRL research. Some basic and fundamental concepts and structures were covered in this chapter, such as financial reporting taxonomy, GL taxonomy, instance document, taxonomy elements, taxonomy schema, and XML linkbase files. A brief introduction to XBRL tools and software was finally presented. In the next chapter I concentrate on the IFRS-GP taxonomy, including its layout, physical file relationships, taxonomy reports, concepts and elements, and linkbase files.

3 IFRS-GP TAXONOMY

3.1 Layout of IFRS-GP

The full name of IFRS-GP is International Finance Reporting Standards, General Purpose Financial Reporting for Profit-Oriented Entities, Incorporating Additional Requirements for

Banks and Similar Financial Institutions. It is used under the International Finance Reporting Standards to produce general purpose financial statements in the board of profit-oriented entities. Within the **IASC** (International Accounting Standards Committee) international foundation's internal Taxonomy Approval Process, approval levels are discussion paper, requirements paper, exposure paper, recommended and final. IFRS-GP is the final draft. Its structure and content have been reviewed by the financial and technology teams outside the IASC foundation. It complies with both the **FRTA** (Financial Reporting Taxonomies Architecture) and the XBRL specification version 2.1.

IFRS-GP encompasses a range of taxonomies for different reporting purposes. It supplies private and public sectors with annual, semi-annual, and quarterly financial reports including:

1. Balance Sheet (Classifies; order of liquidity; or net assets formats)
2. Income Statement (by nature or by function)
3. Statement of cash flow (indirect or direct method)
4. Statement of changes in Equity
5. Accounting Policies
6. Explanatory Disclosures

Additional taxonomies are applied to the entities with special needs. The elements of IFRS-GP are organized by using the "balance sheet" metaphor, which is the most commonly used financial statement presentation style. Labels of taxonomies are in English, while the linkbases can be in other languages, such as French.

IFRS-GP taxonomy expresses the classification of financial reporting under the International Financial Reporting Standards (IFRS) by using XBRL and is compliant to the XBRL specification 2.1. It was generated by a core team consisting of experts in IFRS/IAS (International Accounting System) financial reporting, XBRL expert, and project manager with expertise in both XBRL and financial report. It was released on the 15th of May, 2005 by the IASC Foundation (International Accounting Standards Committee Foundation), and it was issued in accordance with IASC Foundation Internal Taxonomy Process. It is

“Acknowledged” under the XBRL International Taxonomy Recognition Process (2004-11-19). A taxonomy with acknowledged status indicates that the taxonomy must comply with an appropriate version of XBRL specification and it has been tested by a set of validation tools prescribed by the XBRL specification-working group (Peter Calvert & Josef Macdonald, November 2004). In addition, the taxonomy must have a minimum set of documents which identify the key facts and contain the copyright statements and other legal documents.

The summary information of IFRS-GP uses a table for organizing all the presentation and calculation linkbase by area of taxonomy. For example, “the balance sheet, classified” has the calculation and presentation linkbase files and printouts of all those files. A portion of this table is listed as following:

Description	Type	Linkbase File	Printout
General Purpose			
Balance Sheet, Classified	Presentation	ifrs-gp-pre-bs-classified-2005-05-15.xml	ifrs-gp-pre-bs-classified-2005-05-15.pdf
	Calculation	ifrs-gp-cal-bs-classified-2005-05-15.xml	ifrs-gp-cal-bs-classified-2005-05-15.pdf

Figure 5. Partial presentation and calculation linkbases
(presentation and calculation linkbase files of IFRS-GP taxonomy)

The general purpose taxonomy is applicable to all types of enterprises, while the financial institutions section can only be used by financial institutions. The summary page also includes the following information: explanatory notes, printout of DTS elements, all taxonomy printouts, taxonomy overview diagram, taxonomy modules manager, taxonomy viewer, sample instance documents, errors and corrections.

3.2 Relationship of Physical Files

The core file of IFRS-GP taxonomy is the `ifrs-gp-2005-05-15.xsd` schema file, which contains the definition of concepts of the taxonomy. And this file is supported by other three taxonomy files:

- `ifrs-gp-roles-2005-05-15.xsd` which includes the extended link roles used by the taxonomy
- `restatedLabel.xsd` which contains a definition of a label role that will be included in the Link Role Registry
- `ifrs-gp-types-2005-05-15.xsd` which contains custom types ,data types defined by the taxonomy.

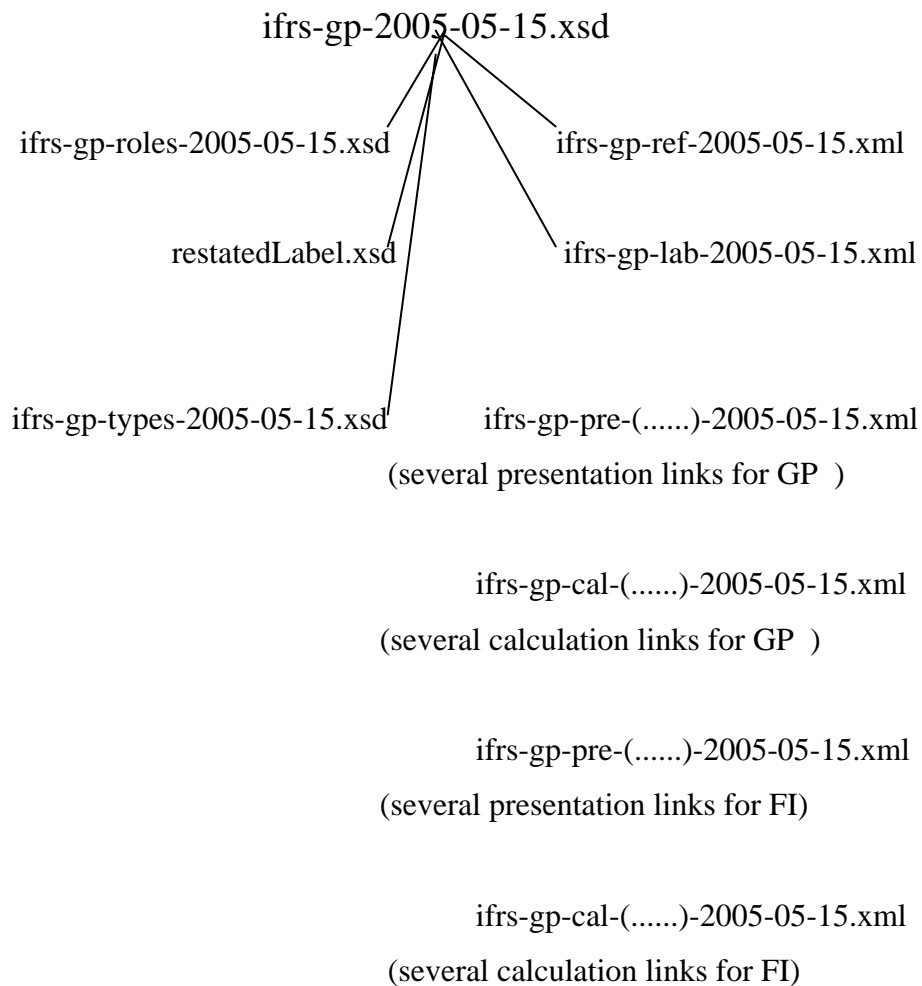


Figure6 Relationship of physical taxonomy files

(Hitchhikers guide for understanding the IFRS-GP taxonomy by Thomas Egan, Charles Hoffman, Colm O haonghusa, May 27, 2005)

The reference linkbase and the label linkbase are physically connected to the taxonomy schema. The reference linkbase files (ifrs-gp-ref-2005-05-15.xml) offer the references to the information in the bound volume that brings meaning to the concepts; while the label linkbase files (ifrs-gp-lab-2005-05-15.xml) contain the English labels for the defined concepts .

Numerous presentation linkbases and calculation linkbases for different purposes are contained in the taxonomy, but none of them is physically connected to the core taxonomy schema file. Therefore, the flexibility of use is obtained. A reporting entity with an appropriate presentation or calculation linkbase creates another taxonomy to physically attach components together and provide a file as an extension taxonomy with the instance document. Alternatively, the linkbase files can be attached to the instance document.

The core taxonomy schema file contains all the concepts and links to other important files including taxonomy labels for each concept and the references for each concept of the taxonomy. Additionally, it contains multiple presentation and calculation linkbase files which are not physically connected to the schema file. For example, there is no link to the classified balance sheet presentation and calculation links. No entity will use all of the XML linkbase files together, and users will always have to create the extension taxonomy according to their individual demands. But it is the core schema file that hooks all the components together.

An example of extension taxonomy is taxonomy proof ifrs-gp-2005-05-15.xsd and the instance proof-ifrs-gp-2005-05-15.xml. This taxonomy hooks all components together in one place and is used by the instances which use all the concepts in the taxonomy. A good approach for users to generate schema is to open the proof taxonomy, add some new links

or delete some components that they do not need, and then save it as their own extension taxonomy.

3.3 Taxonomy Reports

There are considerable reports carried in the taxonomy, and they will be helpful for understanding of the taxonomy. Users can find those report links in the summary document of the IFRS-GP taxonomy (Charles Hoffman, Thomas Egan, Colm O hAonghusa, Giancarlo Pellizzari, TrevPyman, Allyson Ugarte 2005).

Presentation Report

The presentation report focuses on the relations among concepts. The presentation report is the best report to understand the taxonomy. The following is a portion of cash flow direct method report named as “ifrs-gp-pre-cf-direct-2005-05-15 .xml.”

Presentation Report							5/7/2005 5:47:46 AM
ID	Bal	Per	Nil	Type	NS	Label	Reference
1						Extended Link (Cash Flow, Direct Method)	
2	D		(String)		ifrs-gp	Cash Flow Statement (Presentation)	IAS 1 102 (Def); IAS 1 8 d (Pres)
3	D		(String)		ifrs-gp	Net Cash Flows from (Used in) Operating Activities, Direct Method (Presentation)	XBRL (Pres)
4	D		(String)		ifrs-gp	Cash Flows from (Used in) Operations, Direct Method (Presentation)	XBRL (Pres)
5	D	D	T	Monetary	ifrs-gp	Receipts from Customers	IAS 7 14 a (Pres); IAS 7 14 b (Pres)
6	D	D	T	Monetary	ifrs-gp	Receipts from Government Grants	IAS 20 28 (Pres)
7	C	D	T	Monetary	ifrs-gp	Payments to Suppliers	IAS 7 14 c (Meas)
8	C	D	T	Monetary	ifrs-gp	Payments to Employees	IAS 7 14 d (Meas)

Figure 7 A portion of presentation report

(ifrs-gp-pre-cf-direct-2005-05-15.pdf)

It shows different extended links, each presentation link is contained within an extended link which partitions the presentation links into “sets” or “networks” as they are referred to in XBRL. The concepts can not be partitioned; only the relations can be partitioned. There

are a total of 21 presentation reports that show different presentation sections of IFRS-GP taxonomy (Charles Hoffman et al. 2005).

It contains the associating information of each element including the ID, Bal, Per, Type, NS, Label, and Reference. The ID attribute is only an index of concepts in the presentation report. In the presentation report label attributes (ending balance, starting balance, or standard) are used instead of the element name.

The relationship between concepts is illustrated by the indentation under the label. An indentation means that there is a parent and child relationship between the outer concept and the indented concept. All the indented concepts belong to the outer concept, and the concepts without indentation are called siblings. The following is the indentation structure of a cash flow, direct method presentation report.

ID	Label
1	<i>Extended link (cash flow, direct method)</i>
2	<i>cash flow, direct method</i>
3	<i>net cash flows from operating activities (presentation)</i>
4	<i>cash flows from operation, direct method (presentation)</i>
5	receipts from customers

17	<i>cash flows from other operation activities (presentation)</i>
18	proceeds from dividends received classified as operating

27	<i>net cash flows from investing activities (presentation)</i>
29	payments to capitalize expenditures
30	payment for capitalized development costs

61	<i>net cash flows from financing activities (presentation)</i>

74	payments of dividends classified as financing
75	payments of dividends to minority interests

82	net increase (decrease) in cash and cash equivalents
83	effect on exchange rate changes on cash and cash equivalents
84	effect on changes in Scope of consolidation on cash and cash equivalents
85	cash and cash equivalents, cash flow statement, beginning balance
86	cash and cash equivalents, cash flow statement, ending balance
87	<i>Extended link (default link)</i>

Figure 8 Structure of Cash Flow Presentation Report
(ifrs-gp-pre-cf-direct-2005-05-15.pdf)

Another item worth mentioning is the abstract concept. The ID 3,4,17, 27, 61 with “presentation” in parenthesis are all abstract concepts which are used only to organize the report. The abstract concept has another trait, which is that their type is (string) and they are just like “placeholder” or “headings.”

Each concept is likely to appear many times in the presentation report. For example, the concept “plane, property and equipment, net” appears in the classified balance sheet, order of liquidity balance sheet, net assets balance sheet and the portfolio basis balance sheet. The information of the concept (id, type, bal, NS, per, Nil) is all the same, only their parent-child relation is different. Each concept will show up in at least one of the presentation reports.

Calculation Report

Another report that will help us to understand the taxonomy is the calculation report, which shows the calculation relation among concepts. Here is a portion of cash flows, direct method, and calculation report.

Calculation Report							5/7/2005 6:01:19 AM	
ID	Wgt	Bal	Per	Nil	Type	NS	Label	Reference
1							Extended Link (Cash Flows, Direct Method)	
2		D	D	T	Monetary	ifrs-gp	Net Increase (Decrease) in Cash and Cash Equivalents	IFRS-CP (Pres)
3	1	D	D	T	Monetary	ifrs-gp	Net Cash Flows from (Used in) Operating Activities	IAS 7 10 (Pres)
4	1	D	D	T	Monetary	ifrs-gp	Cash Flows from (Used in) Operations, Total	IAS 7 18 a (Meas); IAS 7 14 (Pres)
5	1	D	D	T	Monetary	ifrs-gp	Receipts from Customers	IAS 7 14 a (Pres); IAS 7 14 b (Pres)
6	1	D	D	T	Monetary	ifrs-gp	Receipts from Government Grants	IAS 20 28 (Pres)
7	-1	C	D	T	Monetary	ifrs-gp	Payments to Suppliers	IAS 7 14 c (Meas)
8	-1	C	D	T	Monetary	ifrs-gp	Payments to Employees	IAS 7 14 d (Meas)

Figure 9 A portion of cash flows calculation report
(ifrs-gp-cal-cf-direct-2005-05-15.pdf)

Each report has the same general characters. There are totally 19 calculation reports --- each equivalent to one presentation report, except the “code lists, General purpose” and “accounting policies, financial institutions.” These two areas have no calculation report because they contain no calculations.

The calculation reports look quite similar to the presentation report. Every calculation report is equivalent to one presentation report, and they have the same hierarchy. Both of them use the indentation relation to indicate the “parent–child” relation, but they still have some differences.

First of all, the “Wgt” item is not contained in the presentation report. The calculation relationships between the concepts are shown with the different values of the “Wgt” attributes. Nowadays a more sophisticated mechanism, the formula linkbase, is utilized.

Definitions Report

The IFRS-GP taxonomy presently has no definition link, and as such, there is no definition reports included in the taxonomy.

Explanatory Notes or Taxonomy Documentation

The explanatory notes of the IFRS.GP taxonomy (ifrs-gp-2005-05-15.pdf) contain a lot of additional information which is not included in the taxonomy schema or linkbase files. Such information included the legal file, terms and conditions of use, disclaimers and other information of the legal nature and is deemed quite important.

Sample instance document

The taxonomy provides a number of instance documents which help us to understand the taxonomy file and the process through which the XSLT style sheets translate an XBRL instance document into a readable PDF document. The PDF file is created by running a style sheet (SampleCompany-2005-05-15.xsl) to transform the XBRL into XSL-FO (SampleCompany-2005-05-15.fo), and then the XSL-FO file is sent to an FO processor which outputs PDF (SampleCompany-2005-05-15.pdf).

3.4 Linkbase Files of the Taxonomy

The linkbase files consist of *presentation links*, *calculation links*, *definition links*, *labels and references*. Each kind of linkbase will be described in the following section.

Presentation links

Presentation links and presentation reports are the most “user-friendly” linkbases in the taxonomy. They present the information based on the structure of human report with XML. The presentation links are not intended to be used for rendering reports, but they will help in the rendering information. The extended links explanation is chosen rather than the unreadable URI to refer to the extended links. The IFRS-GP taxonomy presents links that are physically located in 23 files, segregated into 23 extended links which partition the presentation links. Furthermore, they are partitioned into artificial groups in order to make

them more readable to humans. A summary of the extended links definition and their associating explanation is included in the following section.

Extended Presentation links definition

Balance Sheet Grouping

Under IFRS, entities might use one of four common balance sheet formats. Each type of balance sheet is partitioned by an extended link into these independent formats.

Balance Sheet, Classified

The assets and liabilities are partitioned into current and non-current portions.

Balance Sheet, Order of Liquidity

There is no breaking down into current and non-current portions.

Balance Sheet, Net Assets

Using a classified format to organize the assets and liabilities under one net asset.

Balance Sheet, Portfolio Format

Common balance sheet format used by financial institution

Income Statement Grouping

Under IFRS, entities may report their income statement by nature of the expense or by function. The styles of entities vary by nature and by function. The financial institutions always report it by nature, and their formats are different from the general purpose entities.

Income Statement, by Function

General purpose income statement by function

Income Statement, by Nature

General purpose income statement by nature

Income Statement, financial institution

Income statement used by financial institution

Cash Flow Grouping

Entities use direct or indirect method to report the cash flow, but the financial institution uses different formats.

Cash Flow, Direct Method

The direct method is less popular than the indirect method. It reports the cash inflows and outflows directly, without the potential adjustments to the net income. The direct method analyzes various types of operation activities and calculates the total cash flow created by each one.

Cash Flow, Indirect Method

The indirect method is popular because of its relative simplicity. It starts with a figure for net income and helps to adjust the accrual amount for any item that does not affect cash flows.

Cash Flow, Direct Method, financial institution

Financial institutions' cash flow statement uses the direct method.

Cash Flow, Indirect Method, financial institution

Financial institutions' cash flow statement uses indirect method.

Statement of Changes in Equity

The statement of equity is the same for financial institutions and general purpose entities. Except, General Purpose entities will not have components which are not applicable to them.

Statement of Changes in Equity, General Purpose
Statement of Changes in equity.

Accounting policies Grouping

Accounting policies are segregated into two chunks: those applicable to all General Purpose entities and financial institutions and those applicable only to financial institutions.

Accounting Policies

Accounting policies are typically applicable to all types of entities.

Accounting Policies, financial institution

Accounting policies are only applicable to financial institutions.

Explanatory Disclosures Grouping

Explanatory disclosures are segregated into three chunks: those applicable to all entities, those applicable to only financial institutions, and those used only for the first time adopters of IFRS.

Explanatory Disclosures, General Purpose

Explanatory disclosure is applicable to all entities.

Explanatory Disclosures, Financial Institution

Explanatory disclosure is applicable to financial institution.

Disclosures, First Time Adoption of *IFRS*

Explanatory disclosure is used only for the first time adopters of *IFRS*.

Class Breakdowns Grouping

Classes summarized on the balance sheet and income statement are commonly, if appropriate, disclosed in additional detail in the explanatory disclosures section of a

financial statement. One concept can be broken down into multiple different dimensions. For example, the classes of revenue [by nature] can be broken down into small pieces as following:

Classes of Revenue [by nature](presentation)

Revenue, Total [by nature]

Sale of Goods [by nature]

Rendering of Services [by nature]

Revenue from Construction Contracts [by nature]

Royalty Income [by nature]

Property Rental Income[by nature]

Miscellaneous Other Revenue[by nature]

While classes could have been put together for the presentation links, they could not be put together in the calculation links, because separated calculation could not be correctly expressed in only one link. In order to keep the consistence of the presentation link and the calculation link, the presentation linkbase should be partitioned similarly to the calculation linkbase.

Classes, General Purpose

It contains the detailed breakdowns of the classes for general purpose entities.

Classes, Financial Institution

It includes the detailed breakdowns of the classes applicable only to financial institutions.

Current/ Non current Classification

It breaks down a balance sheet into current and non-current portions.

Net/Gross Classification

It contains the breakdown of a balance sheet into its net, gross, and accumulated depreciation/amortization.

Other extended links Grouping

It contains other miscellaneous extended links.

Other, General Purpose

It includes other miscellaneous relationships which do not fit elsewhere.

Code Lists, General Purpose

It contains elements which are intended to be used in the “code type” elements within tuples. Note that only one code list is provided for types of related party transaction.

Calculation links

IFRS-GP taxonomy contains 21 physical calculation linkbase files partitioned into 28 extended links which are similar to the presentation links. Some calculation links appear two or more times which can increase the amount of maintenance and possibilities of errors. Given the inability to deal with the calculation relationships across extended links, IFRS-GP has to accept the burden of additional maintenance and the burden of ensuing the consistence of calculation links. This may change in the future.

There are some differences between the presentation links and the calculation links. Not all of the concepts in the presentation links are shown in the calculations. Only the calculation relations are contained in the calculation links. No abstract items, no strings, no tuples and concepts not involved in calculations appear in a calculation linkbase. Only the numeric concepts are contained in the calculation links.

It should also be noted that certain types of calculations are not currently supported in IFRS-GP. The primary type of calculation which is not expressed in the calculation links is the “movement analysis” type of calculation. It has the following format of calculation: beginning balance + changes = ending balance. Since calculation linkbases do not support cross-context calculations; the beginning balance, changes and ending balance would be in

a different context. The beginning balance is on a specific date, and the ending balance should be on another specific date. Different dates require different contexts in XBRL. The changes are a duration type of period (from/to) and thus also require a different context. Therefore, the movement analysis type of calculation should not be shown in the calculation links.

A more sophisticated mechanism, the formula linkbase, is being developed in the XBRL international to overcome those limitations.

Extended Calculation links definition

Balance Sheets Grouping

It is the same as the presentation linkbase.

Income Statements Grouping

It is the same as the presentation linkbase.

Cash Flow Statements Grouping

It is the same as the presentation linkbase. The calculations among the beginning balance of cash, net changes in cash, exchange gains and ending balance of cash are not expressed for any cash flow statement.

Statement of Changes in Equity Grouping

It is the same as the presentation linkbase. Two types of calculations are not expressed in any components of equity. One is calculations among the beginning balance, prior period adjustments and restated balance. The other is restated balance, total changes, and ending balance.

There are two dimensions of calculations. One is the total changes for each class of equity; and the other one is the total for each type of change within each class. These calculations are expressed in independent extended links.

Statement of Changes in Equity

It is the same as the presentation linkbase. It expresses calculations for total changes by each class.

Statement of Changes in Equity, each line

It expresses calculations of the total changes for all classes by each “line item.”

Accounting policies Grouping

Same as presentation linkbase

Accounting Policies

Same as the presentation linkbase

Accounting Policies, financial institution

There are no calculations, so no extended link is provided.

Explanatory Disclosures Grouping

Explanatory Disclosure

Same as presentation links. No movement analysis calculation is expressed.

Calculations within tuples are expressed in this extended link.

Explanatory Disclosure, financial institution

Same as presentation links. Note that no movement analysis calculation is expressed.

Disclosures, First Time Adoption of IFRS

Same as presentation link.

The extended link captures calculation between elements outside a tuple or elements within a tuple. For example, “OtherFinancialAssets” is a concept on the balance sheet; the tuple “Class Of the Financial Assets” contains the concept “Amount Of Class Of Other Financial Assets”, the total of which adds up to what is contained on the balance sheet.

PPE-Lines

Intangible Lines

Provisions Lines

It is similar to the statement of equity changes, movement analysis have multiple dimensions. The extended link holds calculations of the “total” line items.

Class Breakdowns Grouping

Same as presentation linkbase.

Other Extended Links Grouping

Code list

There are no calculations, so no extended link is provided.

Other

Same as presentation links.

Definition links

No definition links are included in the current version of the IFRS-GP taxonomy, because a necessary focus on the core taxonomy precluded the team creating the definition links. Definition links can be used to provide additional information about the taxonomy, which can be useful and offer a good understanding to a computer. One of typical cases is that a definition link can be created to identify each policy in the taxonomy.

Labels

Now the IFRS-GP taxonomy has been translated into multiple languages, including French, German, Italian, Dutch, Japanese, and Portuguese. And the associating label linkbase is prepared for the each language.

Each taxonomy concept has its own unique label, and no two labels are the same in the label linkbase for the standard label role. Therefore, the concepts of the IFRS-GP taxonomy can be safely referred to and be guaranteed unique in application.

“Standard” label roles are provided for the entire taxonomy concepts: beginning balance (“period start label”), ending balance (“period end label”), and restated balance (“restated balance”) labels are provided appropriately. The reporting entities are likely to provide their own labels for concepts in instance documents.

References

The IFRS-GP taxonomy contains one reference linkbase with references for each concept in the taxonomy. As required by the IFRT, the reference part consists of the standard components as following section:

Reference Part Name	Example	Explanation
Name	IFRS	Name refers to the specific publication. Typical names are IFRS, IAS, IFRS-CP (common practice). There are two other references which are likely to appear in the taxonomy. XBRL refers to the abstract concepts for structure which will not appear in the final reports. IFRS-SC means that a concept was added to provide a subtotal to better organize the taxonomy.
Number	2	Number is used to record the actual number of the specific publication.
Paragraph	45	This is used to refer to the specific paragraph in a publication.
Sub-paragraph	B	sub-paragraph of a paragraph
Clause	vi	component of a sub-paragraph

Role	(pres)	It indicates the reference role. Values include (Pre) for presentation, (Meas) for measurement, and (Comm) for commentary.
------	--------	--

Figure 10 Explanation of references
(Hitchhikers Guide to Understanding the IFRS-GP Taxonomy)

The majority of references are from the International Financial Reporting Standards including International Accounting Standards and Interpretations of 31 March 2004. The only document for IFRS-GP taxonomy is the bound volume. No reference document is prepared for a concept of a specific taxonomy. The bound volume of the reference document is in the XML format and the references connect each concept of the taxonomy to the bound volume.

3.5 Summary

The IFRS-GP taxonomy is reviewed in detail, including its layout, relationship of physical files, and report taxonomy, and extended linkbase files. Only the reference linkbase and label linkbase are really connected to the taxonomy. A series of presentation and calculation linkbases are not linked to the taxonomy physically. Presentation reports display the position of each element and the indented structure of all concepts and elements. The calculation reports explain the calculation relationship in the elements. IFRS-GP consists of a range of extended grouping linkbases, including presentation links, calculation links, definition links, labels and reference links.

4 CN LISTED COMPANY TAXONOMY

4.1 Chinese Accounting Research

To analyze and study the current Chinese accounting standard's development situation, I reviewed the paper << An empirical evaluation of the new system of business accounting in China>> by Z. Jun lin, Feng Chen, Qingliang Tang 2001. This paper introduced the Chinese economic background and accounting practices status, and the evaluation of the new **CAS** (Chinese accounting system).

Since 1993, the Chinese government has introduced a new accounting system to adapt to the growth of a market-oriented economy. The new accounting system, **ASBE** (Accounting Standard for Business Enterprises), and 13 new **IARs** (industry-specific accounting regulations) became effective on July 1, 1993. Furthermore, the government began to develop a series of transaction-based **PASs** (practical accounting standards) in recent years with the support of the World Bank and technical assistance from the "Big Five" international accounting firms (Hepp&Chen, 1997).

Since the founding of the People's Republic in 1949, China adopted public (state) ownership of the production means and a former Soviet-style planned economy. The government undertook direct administration of business operations across the country. The uniform accounting systems were formulated and enforced by the Ministry of Finance at the central government to ensure that accounting and finance reporting meet the state's economic planning and fiscal control. The traditional accounting system overemphasized the information needs of the government business administration and it lacks logical coherence of accounting procedures as prescribed in accounting regulations and rules (Ge & Lin 1993; Scapens & Hao 1995). Additionally, under the state's former fiscal system of "supplying all funds and collecting all profits," business accounting was restricted to performing a bookkeeping function with a stringent application of the cash method of recognition of revenues and expenses and the specified fund administration patterns for accounting transactions (Lin, 1998; Zhou, 1998). Mandatory charts of accounts were imposed and the format and content of accounting reports were centrally regulated to facilitate the execution and reporting of the state's economic plans and fiscal budgets.

Therefore, the traditional accounting practices departed substantially from the counterparts in the industrial world (Lou & Zhang 1991; Aiken et al. 1995).

In the late 1970s, economic liberalization and reformation took place in China, and the Chinese economy diversified with the significant changes in the business ownership structure and economic administration. Inflows of foreign capital in the forms of joint-ventures and other foreign direct investments accelerated, and stocks and securities reappeared in the Chinese market. Those changes drove business financing and management practices to change dramatically and the interest group of the business reporting information to expand. The traditional accounting standard rooted in the highly centralized planned economy no longer fit the great economic changes, but it remained in effect and no substantial changes were made until early 1990s, except for a few accounting regulations that were enacted to accommodate for the emerging business operations with foreign investments or public listing (Ge & Lin 1993).

A series of basic accounting concepts and principles were officially codified in the Chinese accounting standards (Lu 1995, Yan & Xu 1995, Lin et al 1998). The format and content of financial reports were developed to replace the traditional fund-based accounting reports. The new accounting standard was the product of the market-oriented economics reforms in China, and it has expanded its objective for serving both government and non-government users through substantial changes in the content and format of the financial statements. Though the ASBE has incorporated the general principles and procedures from the International Accounting Standards, a substantial gap between the two remains (LIU & Turley 1995; Xiao & Pan 1997). Some researchers contend that the differences between the new Chinese accounting systems and the US GAPP or IASs lie mainly in a lack of the “conservatism (prudence) accounting convention” in Chinese accounting (Ma 1994; Liu 1996). Some studies suggested that the major differences may come from the less conservative treatments of bad-debt allowances and depreciation, varied procedures to account for goodwill amortization, pension costs and other employee benefits, R&D

spending, tax expenses, and a lack of provision for inventory price decline or value impairment of long term assets or investments (Shun 1996; Charkrarty 1998; Chen 1999).

To obtain the overall evaluation of the new accounting system and investigate what would be necessary to improve within the existing accounting system, the questionnaire survey method was applied in this study. Descriptive statistics research was undertaken to analyze the data collected from different groups, including officials in charge of financing and accounting work, bank credit and loan officers and financial analysts in investment and securities companies, general managers in firms, Chinese CPAs and accounting professors.

We found that the new accounting system implemented in 1993 has resulted in enhanced decision usefulness of accounting information. The overall benefits of the new accounting systems were that the comparability of financial statements provided by different firms was improved and the accounting information was more easily understood. It balanced the information needs of various groups of users, assisted investors and creditors have a clearer picture of the firms. The information needs of government and business management could also be better satisfied. However, there was no evidence that supports that the reliability of accounting information has been enhanced since the introduction of the new accounting system. There was increasing support for the adoption of internationally accepted accounting principles and procedures in the Chinese accounting system. Respondents supported that a substantial gap remained between the existing accounting practices in China and international norms. About 90% of the respondents agreed that China should speed up the formulation and enforcement of Practical Accounting Standards that are more in line with the IAAS. Different views from diverse groups were compared in this paper also.

4.2 Overview of CN Listed Company Taxonomy

XBRL international granted acknowledged status to Chinese Listed Company Taxonomy, confirming that the taxonomy fully conforms to the XBRL specification 2.1 and Financial Reporting Taxonomy Architecture (FRTA) requirements. It was generated by the ShangHai

Stock Exchange (SSH) according to electronic information disclosure specification for listed companies and the Chinese Generally Accepted Accounting Principle (GAAP), and it was published on 07-07-2005.

4.2.1 Framework of CN Listed Company Taxonomy

The CN Listed company taxonomy framework is a collection of XBRL taxonomies that will be used to express the business reports of the commercial and industry listed companies. Different components of the framework will be used for different reporting purposes, and new components will be added over time to cover more diverse reporting needs. The taxonomy for banking and saving Institutions is under construction (CN listed company taxonomy framework 2006).

Below is a graphical representation of the CN listed company Framework

CN Listed Company Information Disclosure Taxonomy Framework

Shanghai Stock Exchange (SSE) Working Group

Chinese Listed Company Information Disclosure Taxonomy Working Draft

Date issued: 2005-07-07

Status: draft

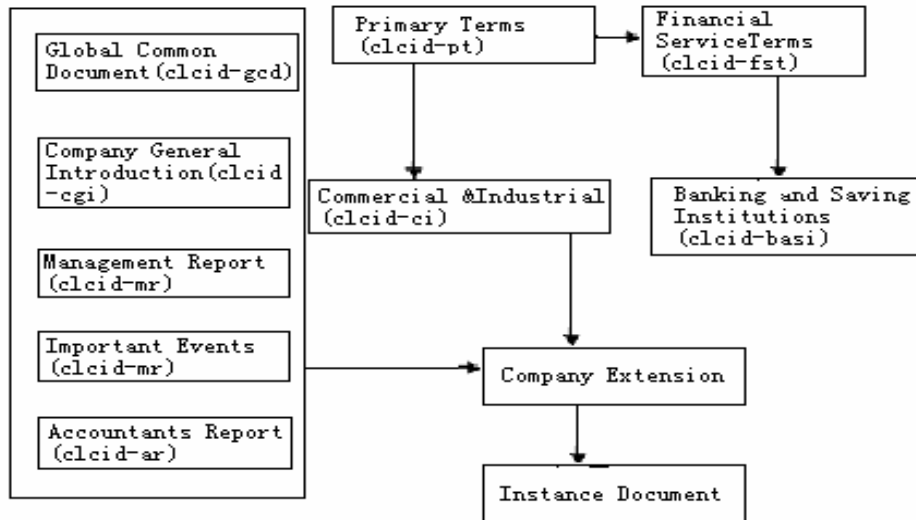


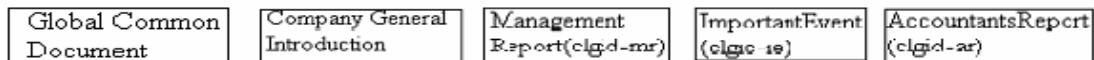
Figure11 CN listed company taxonomy framework

Types of components or layers

The following is the summary of the components or layers contained in the CN listed taxonomy :

- Add-on taxonomy
- Common terms
- Industry relationships

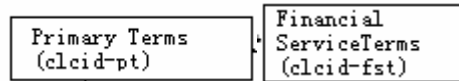
Add-on taxonomy



Add-on taxonomies are self-contained taxonomies which include all elements and relationships they require. For instance they contain the schema files and the related linkbase files, such as presentation, calculation, label, reference and definition. Users can

import the add-on components to their extension taxonomy or use them directly in the instances document. They are not imported into the extension taxonomy, because they are not universally used by users and they can be updated, superseded or replaced independently of the extension taxonomy.

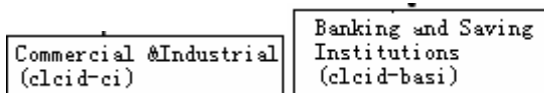
Common terms layer



Common terms layers are the foundational building blocks for the industrial extension taxonomies. Primary terms contain all the public concepts and relationships which are common to multiple industries sector. The Financial Service Terms include the terms that are common solely to the finance service sectors. They are stored in common places to ease maintenance and maximize comparability.

These components include the schema file, label linkbases and definition linkbases, in some cases they may include presentation linkbases and calculation linkbases where the element relationships are known to be common for multiple industries that will extend the particular common term components.

Industry taxonomy layer



The industry taxonomy layers specify and extend the concepts defined in the common terms layer and build relationships between these concepts using the presentation and calculation linkbases. Users normally need to select a primary taxonomy from the industry taxonomy layers to create company extensions or instance documents. Only the commercial and industrial taxonomy is available in the current development. Other industry sectors, such as commercial and savings taxonomy, are under construction.

Components

The following is a set of components currently available in the CN listed company taxonomy.

Namespace prefix	Name	Layer	Description
Clcid-gcd	Global common document	Add-on taxonomy	Covers a range of information commonly used in business reporting, including entity information, instance document information, reporting periods and general purpose information. It is an important building block in many jurisdictional and other taxonomies.
Clcid-ar	Accountant report	Add-on taxonomy	Contains information that describes the independently audited financial standard report, such as the name and signature of the independent auditor/accountant.
Clcid-mr	Management report	Add-on taxonomy	Describes companies' structure, the board of supervisor's standard reports, directorate's standard report, and major financial data .
Clcid-ie	Important event	Add-on taxonomy	Provides the corporation register information, stock name & code and the important events of the entities, such as a lawsuit.
Clcid-cgi	Company general introduction	Add-on taxonomy	Provides the company profile, changes in shareholders' equity, and administer, director and supervisors employee introduction information.
Clcid-ci	Commercial and	Industrial relationship	Provides the XBRL concepts and relationships for the Commercial and Industrial entities, based

	industrial		on the Common Terms layer.
Clcid-pt	Primary terms	Common terms	Provides the detail-level terms and relationships which are common in several major industries.
Clcid-fst	Primary terms	Common terms	Provides the detail-level terms and relationships which are specific to the finance-serving sectors.
Clcid-basi	Bank and savings institution	Industrial relationship	Built on the common layer for the banking related entities to express the business xbrl report.

Figure12 CN listed company taxonomy component taxonomy

(China Securities Regulatory Commission; Information Disclosure and Corporate Governance in China; 2005)

4.2.2 Development and Design of the Taxonomy

Taxonomy Development

The CLCID Taxonomy had evolved over the last two years, through an iterative process of review and comparison against industry practice.

Namespace

The namespace rules are as following:

<http://www.xbrl-cn.org/cn/lcid/common/<TaxonomyModuleAbbreviation>/2005-07-07>

TaxonomyModuleID = 'Clcid' - < TaxonomyModuleAbbreviation >

•

Taxonomy	Name	TaxonomyModule	NameSpace
----------	------	----------------	-----------

(Abbreviation)	ID	
Global Common Document(gcd)	Clcid-gcd	http://www.xbrl-cn.org/cn/lcid/common/gcd/2005-07-07
Company General Introduction(cgi)	Clcid-cgi	http://www.xbrl-cn.org/cn/lcid/common/cgi/2005-07-07
Accountant Report(ar)	Clcid-ar	http://www.xbrl-cn.org/cn/lcid/common/ar/2005-07-07
Management Report(mr)	Clcid-mr	http://www.xbrl-cn.org/cn/lcid/common/mr/2005-07-07
Important Event	Clcid-ie	http://www.xbrl-cn.org/cn/lcid/common/ie/2005-07-07
Primary Terms	Clcid-pt	http://www.xbrl-cn.org/cn/lcid/common/pt/2005-07-07
Commercial&Industrial	Clcid-ci	http://www.xbrl-cn.org/cn/lcid/common/ci/2005-07-07

Figure 13 CN Taxonomy name, module abbreviation and namespace

(China Securities Regulatory Commission; Information Disclosure and Corporate Governance in China; 2005)

Label Languages

Currently, labels for taxonomy elements are provided in Chinese and English. In the future, taxonomy labels could be expressed in additional languages as required.

References

This taxonomy provides references to Chinese Listed Company Information Disclosure Regulations, Corporate Accounting Standard and other relevant standards. Figure 21 shows an example of the reference elements used in this taxonomy, using “Corporate Accounting

Standard chapter 2 section 1 clause 17 ” to illustrate how a reference is matched to these elements:

Name:	Corporate Accounting Standard
Chapter:	2
Section	1
Clause:	17
Publisher:	The Treasury Department

Figure 14 : Reference Naming Structure

(China Securities Regulatory Commission; Information Disclosure and Corporate Governance in China; 2005)

4.3 Taxonomy Report

In order to explain what information each taxonomy includes and how the elements are structured in each report (XBRL in china , Peter Calvert ,September 2005), I offer some major reports publications . The current versions are in Chinese, and I have translated them into English.

4.3.1 Global Common Document Taxonomy

It covers a range of information commonly used in business reporting. The GCD is expected to be an important building block in many jurisdictions and other taxonomies. This taxonomy defines a standard report cover as following:

Standard Report Cover

2004

Title

Report year	2004
Delivered date	2005-03-15
Date	2005-03-16
Produced by	HouYubo
auditor	QiDongfeng
Published by	FangZhonghua
Report Code	2005031601
Company code	600601
Company Name	FangZhengTechnology
Publish Media	ShangHai security newspaper
Ending date of financial year	2004-01-01
Beginning date of financial year	2004-12-31
Basic information	Annul report abstract
Report ID	20050316-600601-0000012

Figure 15 report cover standard style

(CN Listed Company Information Disclosure – Global Common Document Taxonomy Explanatory Notes SSE , Sep2005)

Besides the report cover standard style, the Global common document includes amendment information, contents of reference files, and the ending part of the report.

4.3.2 Company General Introduction Taxonomy

The company general introduction taxonomy includes the following 4 reports:

1. company profile
2. share capital changes and shareholders' status
3. information about the company's directors, supervisors, senior management and staff
4. the related companies brief introduction

The following is an example of a partial company profile report printout to show the structure and some concepts:

Standard Company profile

2004	
company profile	
Legal Chinese name	FangZheng Group Ltd.
Legal English name	Founder Technology Group Corp
Legal representative	FangZhonghua
Stock A exchange market	SSH stock exchange
Stock A abbreviation	FangZhengTechnology
Stock A code	600601
Other related reference	
business license	3100001005644
Taxation register Code	310106132365909
Register capital	970,447,000
Director headcount	9
Independent director	3
supervisor	

Figure 16 A partial company profile standard style

(CN Listed Company Disclosure –Company General Introduction Taxonomy Explanatory Notes SSE , Sep2005)

4.3.3 Accountants Report Taxonomy

This taxonomy illustrates the standard audit report:

Standard Audit Report

2004

Audit report

Stock code	600001
Company name	HanDan steel
Audit report Code	JinHuaHui Shen[2005]No 3004
title	Audit report
Report receiver	all stockholders of the HanDan steel Co.Ltd.
introduction	We audited HanDan Steel Co. Ltd. , including the balance sheet on the ending date of 2004 , cash flow report and the profit and profit distribute statement of 2004. We are responsible for opinions on your financial report based on our audit work..
scope	According to Chinese Certified Public independent audit principles , we plan and implement audit tasks to investigate if great mistakes exist in company 's financial reports. We use spot-test methods to check the vouchers supporting the amount on the financial reports and notes, and evaluate the accounting policies used by the administrations while making reports. We believe that our audit tasks offer reasonable basis to express opinions.
opinion	In our opinion, the above –mentioned financial reports accord to the regulations of the CN GAAP and corporation accounting practices, and from the major perspectives, they reveal the financial situation on the specific date of 31-12-2004 , the cash flow and profit distribution of the year 2004 impartially .
Audit firms	HeBeiHuaAn accountants firms Co. Ltd.
Address of the audit firms	YuHua Xi Road. No 158, ShiJiaZhuang P.R.china

Audit date	2005-03-23
Audit opinion of CPA firms	Without reservation

Figure 17 Standard Audit Report
(CN Listed Company Information Disclosure - Accountants Report Explanatory Notes
SSE , Sep2005)

4.3.4 Management Report Taxonomy

According to the Chinese securities committee, the stock exchange's information disclosure regulations and other regulation documents, the information (especially the periodic reports), which will be released by listed companies, is given complete explanations and regulation.

This management report taxonomy and the important event taxonomy together illustrate the aforementioned regulations. The management report taxonomy includes:

1. Corporate Governance Structure
2. General Meeting of Shareholders Brief Introduction
3. Report by the Board of Directors
4. Report by the Board of Supervisors
5. Important notice
6. Brief balance sheet
7. Brief profit and profit distribute statement
8. Brief cash flow statement
9. Accounting and business major data abstract
10. Stock equity changes

11. Business performance report assorted by business and products

12. Business performance report assorted by location

A partial Corporate governance structure report

2004

Corporate governance structure

Corporate governance condition	In the report period , company consummates the corporate governance structure and regulates business and operation ,according to 《 corporate law 》 、 《 security law 》 、 《 listed company management regulation 》 and 《 ShangHai stock exchange regulation 》
--------------------------------	---

Independent director fulfilling duty status

Board of director meeting attendance status	
Director name	Ji Baocheng
due meeting times	11
Attendance in person times	1
Precative attendance times	0
Absent times	10

Business independence, employee independence, fund integrity, corporate independence and finance independence situation

Business independence	Company has Independent purchase, manufacture, and sale and service systems. Major businesses do not conflict with the holding company and decision making is independent.
Employee independence

Fund integrity	Transparent property rights
Corporation independence	Company sets sound and independent organization system . There is no affiliation between the functional department and the holding company.
Finance independence	Company sets up independent finance department, and built independent accounting system and policies. ; Company opens independent accounts, pay taxation independently .
Performance evaluation and promotion to the administrations	Administrations are responsible for the board of directors directly, their responsibilities are clear. To increase the long-term profits, promotion and checking policies have been set up , including the risk bonus and the annul pay.

Figure 18 a partial corporate governance structure report

(CN Listed Company Information Disclosure – Management Report Taxonomy
Explanatory Notes SSE , Sep2005)

4.3.5 Important Event Taxonomy

The important event taxonomy and the management report taxonomy together present the non-financial report information that illustrates the board of directors meeting and important events of the listed company. The important event taxonomy includes the following reports:

1. Important event report
2. Brief company profile introduction
3. Brief, relative company profile introduction

The important event report consists of the major lawsuit and arbitration issues in the report period, including material agreements and the execution information, purchasing or selling assets, merger and acquisition, associated transactions, performance of commitments made by the company or shareholders with 5% or more of the company's stock, employment and

dismissal from the accounting firm, as well as detailed information about the events if the Company, the Board of Directors, or Directors, have been investigated by the Stock Exchange during the reporting period.

A partial Important event report

2004

Important event

Important lawsuit arbitration issues	
Prosecution	Guang Zhou PuLin import and export Co.Ltd.
Respondent to suit	ZhuHai FangZheng Technologies circuit board Co.Ltd.
If this company is prosecution	no
If this company is respondent to suit	no
Arbitrage type	lawsuit
If the lawsuit happened after the previous report	no
If the court accept the case	yes
Lawsuit reason	Contracting fees ,material fees being delayed
Amount	5,191,904.19
Lawsuit process	pacification agreement is signed on 18-12-2003
Lawsuit verdict implementation	Pacification agreement has not been completed by now.

Assets trade events

AssetsPurchased	14,020,000
AssetsSold	10,830,000

warranty

Warranty in total

143,000,000

Figure 19 A partial important event report

(CN Listed Company Information Disclosure –import event Taxonomy Explanatory Notes
SSE , Sep2005)

4.3.6 Primary Terms Taxonomy

In the CN listed company taxonomy, the primary terms taxonomy offers the common terms and relationships which can be imported into many industrial taxonomies. The elements and relationships of the all financial reports are defined in this taxonomy.

The following reports are illustrated by this taxonomy:

1. Year-By-Year Comparison of Balance Sheet.
2. Year-By-Year Comparison of Statement Of Profit And Profit Distribution
3. Cash Flow in Reporting Period
4. Key financial and performance indicators:
 - a. Key financial indicators
 - b. Difference of net profits calculated in domestic and foreign accounting standards and the explanation
 - c. Three-year key financial and performance indicators before the end of the reporting period
5. Notes on financial statements
6. Changes in shareholders' equity in the reporting period
7. Performance report of board of directors by products
8. Performance report of board of directors by location
9. Primary business explanation by products by location

This taxonomy defines nearly 360 elements, and most of them are monetaryItemType defining financial data. There are a few numberItemType elements representing some

specific data, such as ROA and ROE. It contains almost 50 abstract elements which describe the structure of the report and report titles.

In the following, I use a partial balance sheet to explain the element type:

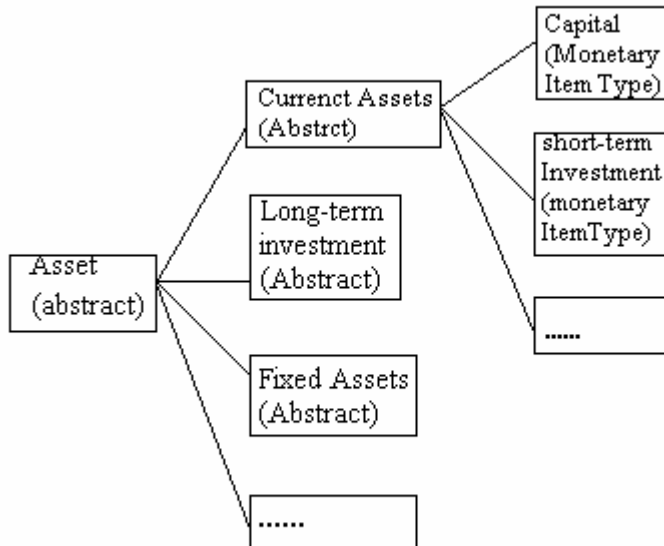


Figure 20 a partial content of the balance sheet

(CN Listed Company Information Disclosure –Primary Terms Taxonomy
ExplanatoryNotes SSE , Sep2005)

The CN taxonomy also uses the presentation report to organize the taxonomy elements. The best view of a taxonomy can be obtained from looking at the presentation linkbase. Firstly, the presentation linkbase contains all of the elements of the taxonomy. Secondly, the presentation extended links are in an order which is somewhat logically familiar to an accountant. The name attribute explains the element's Chinese name. Level and Order attributes are used to address the report structure and the position of an element. On the right side of the table, all of the elements of the primary terms taxonomy are presented in the financial statements format. A partial of the primary terms taxonomy presentation report is listed as following:

ID	Name	Namespace	Data Type	Level	Order	Role	Label
							ZiChanFuZhaiBiao
1	ZiChanFuZhaiBiao	clcid-pt	abstract	1			Balance Sheet
2	ZiChan	clcid-pt	abstract	2	1		Assets
3	LiuDongZiChan	clcid-pt	abstract	3	1		Current Assets
4	HuoBiZiJin	clcid-pt	monetary	4	1		Monetary Funds
5	DuanQiTouZi	clcid-pt	monetary	4	2		Short-Term Investment
6	YingShouPiaoJu	clcid-pt	monetary	4	3		Notes Receivable
7	YingShouGuLi	clcid-pt	monetary	4	4		Dividends Receivable
8	YingShouLiXi	clcid-pt	monetary	4	5		Interests Receivable
9	YingShouZhangKuan	clcid-pt	monetary	4	6		Accounts Receivable
10	QiTaYingShouKuan	clcid-pt	monetary	4	7		Other Receivables
11	YuFuZhangKuan	clcid-pt	monetary	4	8		Accounts In Advance
12	YingShouBuTieKuan	clcid-pt	monetary	4	9		Subsidies Receivable
13	CunHuo	clcid-pt	monetary	4	10		Inventories

Figure 21 a partial of the primary terms taxonomy presentation report

(clcid-pt-2005-07-07-presentaion-linkbase_pdf.pdf)

Financial data and performance abstract

	2004	2003
Financial data and performance abstract		
Major financial data		
Total profit	182,479,377.77	155,782,874.98
Net profit	159,792,751.67	139,483,665.28
Gross profit	491,613,979.36	411,421,284.63
Other profit	5,609,024.37	4,398,856.1
Operation profit	185,506,084.11	143,808,796.09
Investment income	-4,693,492.39	-569,286.45
Allowance income	2,647,341.89	19,882,080.84
Working cash	218,809,202.87	
Cash and cash equivalents increase	-59,784,936.18	

Accounting policy difference		
Net profit	159,792,751.67	139,483,665.28
Stockholders' equity	1,615,899,285.24	1,456,806,695.6
The latest 3 years' financial data		
Net income	6,217,467,773.81	5,252,064,701.89
Total profits	182,479,377.77	155,782,874.98
Net profits	159,792,751.67	139,483,665.28
Total assets	3,414,579,187.85	3,059,344,277.07
Total stockholders' equity	1,615,899,285.24	1,456,806,695.6
Working cash	218,809,202.87	
Changes of stockholders' equities		
Capital stock	970,447,028	485,223,514
Capital reserve fund	323,161,704.19	662,483,511.95
Contributed surplus	166,498,294.55	115,837,949.99
Mandatory provident fund	68,529,549.7	46,795,976.32
Undistributed profit	157,324,566.88	193,759,213.97
Total equity	1,615,899,285.24	1,456,806,695.6

Figure 22 Financial data and performance abstract

(CN Listed Company Information Disclosure –Primary Terms Taxonomy Explanatory Notes SSE , Sep2005):

The notes of the financial statements describe the account receivable, account payable advance payment , and fees to be apportioned analysis. They contain long-term investment, fixed assets, cash paid and received from investment, operation and financing activities notes. Inventory , equities and profit-distributed reports are included in this report.

The performance report analyzes the income, cost and profits with some ratios by products, fields and location , and these ratios include year-by-year income, cost, and profits amount, and percent rate.

4.3.7 Commercial & Industrial Taxonomy

This taxonomy imports some basic concepts and relationships from the primary terms taxonomy, and intends to use them in the commercial and industrial sectors. It mainly includes the reports as following (SSE , Sep2005):

1. Balance sheet
2. Profit and profit-distributed report
3. Accounting data and performance abstract
4. Assets decreased value report
5. Changes stockholders equities
6. Financial report notes

4.4 Summary

I reviewed the CN listed company taxonomy. CN listed company uses a framework taxonomy structure to organize all the concepts. Its framework consists of multiple stand-alone taxonomies, common terms and industry taxonomies. These stand-alone taxonomies can be imported into a new taxonomy as components. I introduced taxonomy naming rules, namespace, label languages, as well as references. I explained all the component taxonomies by listing reports. .

5 Taxonomy Comparison between CN vs IFRS-GP

In this chapter, I compared and analyzed the differences between the CN vs. IFRS-GP

XBRL taxonomy from accounting regulation perspective and technical perspective. There are many factors that lead to the XBRL taxonomy differences between diverse jurisdictions. Multiple differences of the accounting handling methods and detailed concepts between these two accounting standards cannot be seen in XBRL reports. The differences between Chinese Accounting Standards and the International Accounting Standards lead to the content and format differences of the taxonomy reports. The two taxonomies use different taxonomy structures to organize elements, and advantages and disadvantages of each structure were discussed in the perspective of extensibility.

5.1 Accounting Regulation Perspectives

In China, the Ministry of Finance is responsible for setting the accounting regulations for information disclosure requirements of listed companies. In 1992, the Ministry of Finance issued “Provisional Accounting Regulations for Joint-Stock Limited Enterprises.” This then became the statutory accounting system for listed companies. By the end of 1992, the Ministry of Finance issued “(basic) Accounting Standards for Business Enterprise,” but the issuance of (detailed) accounting standards was still much delayed. With the rapid development of the securities market, business transactions became more and more complex and the “Accounting Regulations for Joint-Stock Limited Enterprise” were not able to meet practical requirements. There was a call for detailed accounting standards. In 1996, earnings manipulation via related party transactions became more acute, however, there was no requirement or standard for the disclosure of related party transactions. In order to solve this problem, in May 1997, under much pressure from all directions, the Ministry of Finance issued the first detailed accounting standard, the “Disclosure of Related Party Relationships and Transactions.” Listed companies had to adopt this accounting standard. In 1998, the Ministry of Finance issued eight detailed accounting standards. In 1999, an additional standard was issued. At the same time, amendments were made to “Provisional Accounting Regulations for Joint-Stock Limited Enterprises.” As a result, the “Accounting Regulations for Joint-Stock Limited Enterprises” was formulated. There are 9 detailed accounting standards that have already been issued:

1. Disclosure of related party relationship and transactions
2. Cash flow statement
3. Post balance sheet event
4. Debt restructuring
5. Revenue
6. Investments
7. Construction contracts
8. Change in accounting policy, estimate and correction of errors
9. Non-monetary transactions

(China Securities Regulatory Commission ,Information Disclosure and Corporate Governance in China ,1999).

Both “Accounting Regulations for Joint-Stock Limited Enterprises” and various other accounting standards co-exist as governing accounting regulations for listed companies. Since the end of 1998, there has been another development in accounting standards applicable to listed companies. Due to impact from the Asian economic crisis and changes in the Chinese economy, over the last 10 years, listed companies have been experiencing difficulties in their operations and/or operating “in the red.” Certain companies were even forced to close down. Listed companies were restructured more often than in the past. The accounting treatment for asset restructuring was not addressed in existing accounting standards/regulations. Additionally, prudence was not emphasized in these standards. With this in mind, in December 1998, the Ministry of Finance issued a specific requirements, in the form of Q&A, regarding “Accounting Regulations for Joint-Stock Limited Enterprise” and certain other specific accounting standards. In this publication, the date of acquisition for reporting purpose, and the requirements for companies to first comply with “Accounting Regulations for Joint-Stock Limited Enterprise” and other accounting standards was clarified. In 1999, the Ministry of Finance issued two publications on “Supplementary rules on certain accounting treatments when adopting ‘Accounting Regulations for Joint-Stock Limited Enterprise.’” Listed companies are now required to provide enough provisions for possible losses of short-term investments, receivables, inventory, and long-term investments. This requirement brings the Chinese accounting practice one step closer to internationally accepted accounting standards. With the issuance of more specific accounting principles like these, accounting standards for

listed companies are approaching those of other countries with developed market economies (China Securities Regulatory Commission 1999).

The thrust of these revisions, in general, has led to more specific rules as well as an increased number of required disclosure items. Major areas of disclosure covered by IAS (e.g. prior period adjustments, contingent items, segment reporting, post balance sheet date events) are also, more or less, covered by **CSRC** (China Securities Regulatory Commission 1999) regulations. However, the less detailed and definite CSRC requirements leave room for alternative interpretations. The lack of a clear and applicable definition of contingent liability has made the requirements difficult to enforce.

In the following, I list the reports of IFRS-GP taxonomy and CN listed company taxonomy and try to compare and explain the differences between the two XBRL taxonomies from the point of financial report differences.

IFRS-GP General Purpose	CN Listed Company
<ol style="list-style-type: none"> 1. Balance Sheet, Classified 2. Balance Sheet, Order of Liquidity 3. Balance Sheet, Net Assets 4. Income Statement, by Function 5. Income Statement, by Nature 6. Cash Flow, Direct Method 7. Cash Flow, Indirect Method 8. Statement of Changes in Equity, General Purpose 9. Accounting Policies, General Purpose 10. Disclosures, General Purpose 	<ol style="list-style-type: none"> 1 Company profile 2 Information about the company's directors, supervisors, senior management and staff 3 Brief introduction of the related company 4. Corporate Governance Structure 5. Report by the Board of Directors 6. Important event report 7. Year-On-Year Comparison of Balance Sheet. 8. Year-On-Year Comparison of

<p>11. Disclosures, First Time Adoption of IFRS</p> <p>12. Classes, General Purpose</p> <p>13. Other, General Purpose</p> <p>14. Code Lists, General Purpose</p> <p>15. Balance Sheet, Portfolio Basis</p> <p>Financial Institutions</p> <p>16. Income Statement, Financial Institutions</p> <p>17. Cash Flow, Direct Method, Financial Institutions</p> <p>18. Cash Flow, Indirect Method, Financial Institutions</p> <p>19. Accounting Policies, Financial Institutions</p> <p>20. Disclosures, Financial Institutions</p> <p>21. Classes, Financial Institutions</p>	<p>Statement Of Profit And Profit Appropriation</p> <p>9.Cash Flow in Reporting Period</p> <p>10. Summary Of Key Financial And Performance Indicators:</p> <p>(1)Key Financial Indicators</p> <p>(2)Difference of Net Profits calculated in domestic and foreign accounting standards and the explanation.</p> <p>(3)Item and amount of excluded extraordinary profit and loss</p> <p>(4)Three-Year key financial and performance indicators before the end of reporting period.</p> <p>(5)Weighted ROE and EPS based on net profit excluding extraordinary profit and loss</p> <p>11.Changes in shareholders' equity in the reporting period</p> <p>12.Significant accounting policies, accounting estimates and preparation methods of (consolidated) financial statements</p> <p>13.Contingencies, Post Date Events</p>
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	<p>14. Notes of financial statements</p> <p>15. Segment reporting for both business and geography</p>
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Figure 23 report list of IFRS-GP taxonomy & CN listed company taxonomy

From the list, the IFRS-GP provides a complete set of financial statements that are designed according to the different reporting requirements for the general-purpose entities and the financial institutions. CN listed company taxonomy consists of a range of taxonomy components, instead of a single large taxonomy such as IFRS-GP, and it provides the financial statements, segment statements, profit appropriation statements, company profile introduction as well as the management reports.

5.1.1 Balance Sheet

According to the IAS 1 (revised), the content and formats of the balance sheet can be presented under classification of assets, classification of liabilities and classification of stockholders' equity.

An entity must normally present a classified balance sheet, separating current and non-current assets and liabilities. Under the classification of assets, the assets, liabilities, and stockholders' equity are separated in the balance sheet, so that important relationships can be shown and attention can be focused on significant subtotals. Only if a presentation based on liquidity provides information that is reliable and more relevant, may the current/non-current split be omitted [IAS 1.51]. With the classification of Liabilities, the liabilities are normally displayed on the balance sheet in the order of payment. Liquidity refers to an entity's present cash and near-cash position as well as to the timing of its future cash flows which are anticipated to occur in the normal course of business. Liquidity thus refers to an enterprise's ability to meet its obligations as they fall due. In either case, if an asset (liability) category contains amounts that will be received (settled) after 12 months

with assets (liabilities) that will be received (settled) within 12 months, note disclosure is required that separates the longer-term amounts from the 12-month amounts [IAS 1.52]. Classification of Stockholders' Equity is used to present the interests of the stockholders in the assets of a corporation. It shows the cumulative net results of past transactions and other events.

In the IFRS-GP taxonomy likebase, we can find three links regarding the classification of assets, classification of liability and the classification of stockholders' equity.

Description	Type	Linkbase File	Printout
General Purpose			
Balance Sheet, Classified	Presentation	ifrs-gp-pre-bs-classified-2005-05-15.xml	ifrs-gp-pre-bs-classified-2005-05-15.pdf
	Calculation	ifrs-gp-cal-bs-classified-2005-05-15.xml	ifrs-gp-cal-bs-classified-2005-05-15.pdf
Balance Sheet, Order of Liquidity	Presentation	ifrs-gp-pre-bs-liquidity-2005-05-15.xml	ifrs-gp-pre-bs-liquidity-2005-05-15.pdf
	Calculation	ifrs-gp-cal-bs-liquidity-2005-05-15.xml	ifrs-gp-cal-bs-liquidity-2005-05-15.pdf
Balance Sheet, Net Assets	Presentation	ifrs-gp-pre-bs-netAssets-2005-05-15.xml	ifrs-gp-pre-bs-netAssets-2005-05-15.pdf
	Calculation	ifrs-gp-cal-bs-netAssets-2005-05-15.xml	ifrs-gp-cal-bs-netAssets

Figure 24 IFRS-GP taxonomy balance sheet linkbase (International Financial Reporting Standards, General Purpose Financial Reporting for Profit-Oriented Entities, Incorporating Additional Requirements for Banks and Similar Financial Institutions (IFRS-GP)2005-05-15 Summary Information)

According to the Chinese Accounting Standards, only one format of balance sheet is included: a classified balance sheet. Therefore, the CN listed company taxonomy only provides balance sheets in this format. In the IFRS-GP taxonomy, users have other formats to choose from when presenting their balance sheets: the classified, order of liquidity, and

net assets. Furthermore, the previous year’s financial information is compulsory in the CAS balance sheet for comparison, but not required in the notes. CSRS rules require listed companies to include this comparative information in their notes. There is no comparative financial information of the previous year in the IFRS-GP taxonomy.

5.1.2 Income Statement

Specifically, IAS1 (revises) offers two different manners of classifying operating and other expenses to present the income statement: the so-called nature scheme, or the functional one. While entities are encouraged to apply one or the other of these on the face of the income statement, it would be permissible to relegate this information to the notes.

The natural expense classification scheme [IAS 1 81] identifies costs and expenses in terms of their characters, such as salaries and wages, raw materials consumed, and depreciation of plant assets. On the other hand, the functional classification scheme (also referred to as the “cost of sales” method) [IAS 1 92] reports on the purpose of the expenditure, such as for manufacturing, distribution, and administration. Note that the minimum line item disclosures mandated by the standard must be met in any case; thus, finance costs must be identified as such, regardless of which classification scheme is employed. The IAS1 (revised) furthermore stipulates that if a reporting entity adopts the functional classification scheme, it must also provide information on the nature of its expenses, including depreciation and amortization and staff costs (salaries and wages).

Therefore, we can find the two different links associated with the function and nature manners:

Description	Type	Linkbase File	Printout
Income Statement, by Function	Presentation	ifrs-gp-pre-is-byFunction-2005-05-15.xml	ifrs-gp-pre-is-byFunction-2005-05-15.pdf
	Calculation	ifrs-gp-cal-is-byFunction-2005-05-15.xml	ifrs-gp-cal-is-byFunction-2005-05-15.pdf

Income Statement, by Nature	Presentation	ifrs-gp-pre-is-byNature-2005-05-15.xml	ifrs-gp-pre-is-byNature-2005-05-15.pdf
	Calculation	ifrs-gp-cal-is-byNature-2005-05-15.xml	ifrs-gp-cal-is-byNature-2005-05-15.pdf

Figure 25 IFRS-GP Income statement linkbase (International Financial Reporting Standards, General Purpose Financial Reporting for Profit-Oriented Entities, Incorporating Additional Requirements for Banks and Similar Financial Institutions (IFRS-GP)2005-05-15 Summary Information)

Under CAS, the Year-On-Year Comparison of Statement Of Profit And Profit appropriation is compulsory, and the profits and the profit distribution of an entity are described. It combines the major items of income statement and the profit distribution statement, including the revenue, gross profit, profits from operation, net profit, profit available for distribution, statutory public welfare fund, and undistributed profit. The functional classification scheme is used on the purpose of the expenditure, such as for manufacturing, distribution, and administration. The nature expense classification is not allowed in the profit and profit distribution statement. Therefore, in the CN listed company taxonomy, we can not find an income statement, but all the necessary items of the income statement are covered in the profit and profit distribution statement, which also includes information about the profit available for distribution, statutory public welfare fund, and undistributed profit. Additionally, the expenditure is organized in the function classification. There are no other options, such as nature classification, that can be used in the profit and profit distribution statement. Another difference between the two taxonomies is that the comparative financial information from the prior year is included in the CN listed companies taxonomy, but not in the IFRS-GP taxonomy.

5.1.3. Cash Flow Statements

I reviewed the printout file of the IFRS-GP presentation linkbase, and the literature of the cash flow statement is IAS 7. According to IAS 7, the cash flow statement is applicable for

periods beginning on or after Jan 1, 1994. IAS 7 describes the principles in preparing a cash flow statement, which is presented as an integral part of the financial statements. Cash flows are classified as cash flows from operating activities, cash flows from investing activities, and cash flows from financing activities. The operating activities are the principle revenue-producing activities of the entity. They also include activities that are not financing or investing activities. IAS 7 permits two methods to present the information of cash flows from operating activities:

- The direct method, whereby major classes of gross cash receipts and gross cash payments are disclosed. It is also referred to as the income statement method, reports major classes of operating cash receipts and payments.
- The indirect method, whereby gross profit or loss for the period are adjusted for non-cash items, and items of income or expenses related to financing and investing activities. It focuses on the differences between net income and net cash flow from operations.

The direct method effectively presents income statement information on a cash rather than an accrual basis and may suggest that net cash flow is as good as, or better than, net income as a measure of performance (Mahoney, Sever and Theis, 1988). Advocates of indirect method note that the indirect method presents a useful link between a cash flow statement, income statement and the balance sheet. Critics point out that the direct method requires a supplemental disclosure to present a reconciliation of net income and net cash (Tantatape Brahmasrene, C. David Strupeck, and Donna Whitten 2004).

In the IFRS-GP XBRL taxonomy linkbase, we can find two links regarding the direct method and the indirect method respectively.

Description	Type	Linkbase File	Printout
Cash Flow, Direct Method	Presentation	ifrs-gp-pre-cf-direct-2005-05-15.xml	ifrs-gp-pre-cf-direct-2005-05-15.pdf
	Calculation	ifrs-gp-cal-cf-direct-2005-05-15.xml	ifrs-gp-cal-cf-direct-2005-05-15.pdf

Cash Flow, Indirect Method	Presentation	ifrs-gp-pre-cf-indirect-2005-05-15.xml	ifrs-gp-pre-cf-indirect-2005-05-15.pdf
	Calculation	ifrs-gp-cal-cf-indirect-2005-05-15.xml	ifrs-gp-cal-cf-indirect-2005-05-15.pdf

Figure 26 IFRS-GP taxonomy cash flow linkbase (International Financial Reporting Standards, General Purpose Financial Reporting for Profit-Oriented Entities, Incorporating Additional Requirements for Banks and Similar Financial Institutions (IFRS-GP)2005-05-15 Summary Information)

In the Chinese XBRL listed company taxonomy, I found the literature of the cash flow statement from reference linkbase of the Primary Terms taxonomy. According to the ASBE (Accounting Standard for Business Enterprises cash flow statements) revised 01/2001, the classifications of cash flows are the same as IAS, including cash flow from operating activities, cash flow from investing activities, and cash flow from financing activities. However, an enterprise should report cash flows from operating activities using the direct method, and an enterprise should disclose a reconciliation of net profit to cash flow from operating activities in a note to accounting statements. Therefore, the CN listed taxonomy organizes cash flow report linkbase with the direct method. In the IFRS-GP XBRL taxonomy, users have the option to choose from the direct or indirect methods.

According to the IAS, the interest received and paid should be classified in the cash flow statement. In the printout file of the IFRS-GP XBRL taxonomy cash flow calculation report, classifications of interest consists of proceeds from interests received classified as investing, proceeds from interests received classified as operating, payments for interest classified as financing, payments for interest classified as operating, and payments for interest capitalized on construction of assets ([ifrs-gp-cal-cf-direct-2005-05-15.pdf](#)). According to the CAS, in the CN company taxonomy cash flow report ([clcid-pt-2005-07-07-sample](#)), the interest paid must be classified only as a financing activity, with the classification of received interest dependent on its nature.

5.1.4. Statement of Changes in Equity

IAS1 (revised) offers preparers two principal mechanisms for reporting the changes in enterprise equity for a period. The first of these is a comprehensive statement of changes in equity. The second is the statement of recognized income and expenses. This statement of changes in equity should present:

1. An enterprise's total recognized gains or losses for the period, including those that are recognized directly in equity. From each item, details of each item of income, expense, gain, or loss that are required by other IFRS to be shown directly in equity, along with the total of these items, plus net profit or loss for the period must be given. This will also include the cumulative effect of any changes in accounting policy and of correction of errors if retrospective adjustment is required.
2. Other changes in the equity accounts, along with a reconciliation of beginning and ending balances in each of the components of equity (giving details by each class of equity capital) and balances of accumulated profit or loss (giving details of the movements for the period).

From the printout of the statement of changes in equity report (ifrs-gp-cal-sce-2005-05-15.pdf), I found that the report was organized in these two mechanisms. Compared to the IFRS report, the Chinese statement of changes in equity report (clcid-pt-2005-07-07-sample) only offers one mechanism to organize the statement of changes in equity, which is similar to the IFRS's second one. It includes the previous year's comparative financial information about the details of each component of equity and the accumulated effect of any changes in accounting policy and of the correction of errors. According to the Chinese accounting system, reporting a separate line item for "total comprehensive income" combining net profit or loss charged directly to equity is prohibited.

5.1.5 Disclosures, Segment Information & Summary of Key Financial Figures

Segment reporting is the disclosure of financial information about an entity's operations in different industries of different geographic regions and also encompasses information about

the reporting entity's foreign operations and export sales, and its major customers. The consolidated financial reporting might not provide enough insight to users (particularly investors) to make informed economic decisions. Segment reporting became required under some national GAAP in the late 1970s.

The relevant international standard, IAS14, was originally issued in 1981. Subsequently, this standard was revised and became effective in 1998. Product/service and geographic classification schemes are both required for the presentation of segment data. One basis of presentation is defined as primary, and the other is secondary. Which is designated as the primary depends on how actual management decisions are made by the entity (Barry J, Epstein 2006). Disclosure requirements of the secondary segments are considerably less detailed than for primary ones.

Both business and geography segment disclosures are required for the listed companies in China according to the Chinese accounting system. In the CN Listed Company Information Disclosure –Primary Terms Taxonomy Explanatory Notes SSE, Sep2005, both business and geography segment reports are required in the CN listed company taxonomy. In the IFRS-GP taxonomy there are no linkbases for the segment report. However, both the business and geography segment disclosures are required by IFRS, this problem is likely to be solved by XBRL dimension. I will discuss this point in the section 5.2.

5.1.6 Disclosure of Related Party Transactions and Relationship

In order to control the earnings manipulation via related party transactions, in May 1997, the “Disclosure of Related Party Relationships and Transactions” was issued by the Ministry of Finance. Listed companies must adopt this accounting standard.

“If a party has the power to, directly or indirectly, control, jointly control or exercise significant influence over the financial and operating policy decisions of another party, or two or more parties are subject to control from the same party, they are regarded as related

parties” (China Securities Regulatory Commission, 1997). The definition of the related party relationship, defined by the IAS 24, is similar to the IFRS. The state-owned enterprises are not included simply because they are owned by the government in China. However, there is no exemption for state controlled profit-oriented enterprises in IFRS.

Related party transactions are dealings between related parties involving transfer of resources or obligations between them, regardless of whether a price is charged for the transactions. The disclosure requirements of IFRS and Chinese Accounting System are very similar, including control relationships, related party relationships, nature of transactions, and pricing policies. On December 21, 2001, the Ministry of Finance issued a paper “provisional regulations of the Accounting Treatments of Sale of Assets and other transactions between related parties,” which is a special Chinese disclosure requirement for related parties. It declared that any transaction result of related parties that exceeds the gain that would be measured on the basis of the fair value of goods and services sold cannot be recognized as an income and must be credited directly to the equity, unless there is sufficient evidence to support that the price is fair (CaiKuai[2001] No 64).

In the CN listed company taxonomy , the important event taxonomy includes the brief related company profile introduction, including (Accounting Standard For Business Enterprises Disclosure of the Related Party Relationships and Transactions):

1. The nature or type of business entity, the name, the legal representative and the place of registration of the related enterprise, and its registered capital and changes
2. The principal business of the related enterprise
3. The proportion of shares or equity interest held and changes

In the IFRS-GP taxonomy, the related enterprise information is not covered, though transactions between enterprises that are considered related parties must be adequately disclosed in financial statements of the reporting entity (Barry J, Epstein 2006)

5.2 Technical Perspective

I will review the taxonomy structure of the CN listed company taxonomy and point out the differences from the IFRS-GP taxonomy. Then I will analyze the advantages and disadvantages of the two taxonomy structures, especially from the extensibility perspective.

5.2.1 IFRS-GP vs. CN XBRL Taxonomy Structure Comparison

The structure of CN listed company taxonomy is more like the US Financial Reporting Taxonomy Framework, including add-on taxonomy layer, common terms layer, common relationships layer, industry concepts layer, and industry relationship layer. The taxonomy framework is a set of concepts and relationships between concepts. Its current industry concepts and relationship layers consist of clcid-ci (Commercial & Industry) and clcid-baso (Banking and Saving Institutions). The CN listed company taxonomy framework contains a number of taxonomies that are used to create an industry taxonomy such as clcid-ci. Each taxonomy contains a lot of different physical files. Some of the files are related and have physical mechanisms to express that relationship. For example, the XML schema <import> element physically relates the files in a precise fashion so that the XBRL processor can navigate through them consistently and completely. In general, there are 4 ways taxonomy files will be related (Charles Hoffman 2005):

- <import> element from one schema file to another schema file
- <schemaRef> element from an instance document to a schema file
- <linkbaseRef> element from an instance document or schema file to a linkbase
- <locator>HREF attribute from a linkbase locator to a schema file

The CN listed company commercial and industry taxonomy schema contains:

- <import> to connect to the primary terms taxonomy clcid-pt-2005-07-07.xsd,
- <linkbaseRef> physically link to the set of presentation links, clcid-ci-2005-07-07-presentation.xml
- <linkbaseRef> physically link to the set of calculation links, clcid-ci-2005-07-07-calculation.xml , it defines a number of extended link roles used in the presentation and calculation linkbase

Like all taxonomy files, it also imports two schemas used by XBRL, `xbrl-instance-2003-12-31.xsd` and `xbrl-linkbase-2003-12-31.xsd`. This is required per XBRL specification. The CI taxonomy defines some concepts, and it imports key concepts from the primary terms taxonomy. The calculation and presentation links are physically connected with the schema. This is a difference from the IFRS-GP taxonomy, because all of the presentation and calculation linkbases are not physically connected with the schema and instead it provides them as modularly as possible and lets users select their desired presentation and calculation linkbase and links them together. This approach is characterized by creating lots of smaller components and a taxonomy user can ultimately hook the smaller components that they desire to use either to their company extension taxonomy or to their instance documents. The IFRS-GP taxonomy basically separates presentation and calculation links by statement. For example, there is one separate file for the cash flow statement (direct method), and a different physical file for the cash flow statement (indirect method). The entity will pick one or the other. Since they are in different files, the creator of an instance document would pick up one needed and use it for a cash flow statement, and they do not have the extra undesired information. Currently the CN listed company taxonomy typically puts all the extended links into one physical file, so the links cannot be separated. Another option might be for XBRL international to prohibit an entire extended link. One of the advantages to the IFRS-GP is that the user is not burdened by unnecessary presentation and calculation links, even though the users need to look through a large number of smaller files to locate the desired files. Compared to IFRS-GP, the CN listed company taxonomy provides a big file with everything in it. When the users need a small number of concepts and relationships, they get everything if they use the big file. Users tend to be burdened by thousands of unneeded concepts.

One of the problems of putting everything into one file relates to calculation. When you have both the direct and indirect cash flow calculations in one file, an XBRL processor must try and calculate both, because there is no way to turn one of the statements off. Some of the concepts are shared by two methods, both networks of calculations are used by an XBRL processor. One of the statements tends to calculate incorrectly as facts provided

in the instance document only exist for one of the two cash flow methods. This is an argument for separating extended links into separate files. By doing so, instance creators can use the calculations they desire, not the undesired set, and there are no calculation inconsistencies.

The IFRS-GP taxonomy did not go far enough in partitioning financial statement components. Though each statement is in a separate file, the notes, which make up 50% of the taxonomy, are in one file. It is highly likely that the notes will be broken down into separated extended links, possibly by disclosure. The notes to the financial statements contain the accounting policies and explanatory disclosures of a financial statement. The policies and disclosures are suggested to be combined into one link for each disclosure. For example: “Intangible Assets Policies” and “Intangible Assets Disclosures” are in one physical file. The explanatory disclosures have a lot in common with the accounting policies because they contain lots of text, but the explanatory disclosures are significantly more complicated than the accounting policies. The policies contain few tuples or calculation linkbases which are more complicated to understand. The presentation linkbase and the calculation linkbase might also be combined into one physical file, though it is not currently allowed by the FRTA, these two files always work together, so it seems as if they belong to the same physical file.

5.2.2 XBRL Taxonomy Extension

Extension is simply adding new taxonomy concepts to the taxonomy, while using or referencing another taxonomy as the base. Extensibility functionality is one of the compelling features of XBRL which centers on the ability to add new XBRL concepts and relations and prohibit existing relations. Based on XML, XBRL adds a mechanism for overriding arcs to allow taxonomies to be extended by adding a new linkbase. In the taxonomy where the prohibition exists, you are actually creating an additional relation stating that the relation expressed in the base taxonomy you are extending is “null and void”, when in fact the base taxonomy is not impacted at all.

Both the IFRS-GP taxonomy and the CN listed company taxonomy are built to be extended. It is not possible for any taxonomy to provide everything which every industry or company would require to report in their financial statement. Both of the two taxonomies have tried to make the extension easier for the creators and minimize the necessary extension. For example, they provide as many subtotals as possible. The average XBRL document is relatively flat, because a series of data are on the same level. The best data model provides the maximum possible precision, and the data can be extended with the minimum impact on the backwards comparability. XBRL strives to provide an unusual degree of extensibility. However, the parent-child hierarchy has some weaknesses. In a tree-like structure, XML documents suffer a similar problem – an alternation in the content model near to the root of a document can affect the interpretation of a huge portion of the document. When 5 Xlinks are describing one concept, the documentation tends to get repetitive, and verbose data structure (Lucid Holland 2006).

There are many factors that impact the decision whether to extend the base taxonomy or to create a separate taxonomy. Taxonomies always need updates which rely on the owners of the base taxonomy. To simply create their taxonomy extension rather than update the base taxonomy motivates people to prefer taxonomy extension. The fewer resources the entity have, the more likely the entity will choose to use the base taxonomy directly and to create their specific extension. The more flexible the base taxonomy is, the higher the possibility that the groups will choose to extend it rather than create a new taxonomy. The taxonomy with more tuples has the more complex taxonomy structures than the taxonomy with less tuples. The CN listed company taxonomy defines 96 tuples. The IFRS-GP taxonomy consists of 121 tuples. The more flexibility the taxonomy desires, the more the company tends to create a new taxonomy rather than extend a taxonomy. One determining factor is the appropriateness of the taxonomy concept. For example, The CN listed company taxonomy consists of 1,846 elements. If the entity only needs 100 elements from the CN listed company taxonomy it is better to create the new 100 concepts and then map to the CN listed company taxonomy. Having those 1,746 concepts which are not needed will hurt

the usability as a result. The IFRS-GP taxonomy consists of 4,112 concepts, much more than the CN listed company taxonomy.

The CN listed company commercial & industry taxonomy provides only six extended linkbases, including :

1. Balance sheet
2. Statement of profit and profit distribution
3. Statement of provision for depreciation
4. Key financial and performance indicator
5. Changes in shareholders' equity
6. Notes of financial statement

The IFRS-GP taxonomy consists of 21 extended linkbases. From the name of the IFRS-GP, General Purpose Financial Reporting for Profit-Oriented Entities, Incorporating Additional Requirements for Banks and Similar Financial Institutions, we know that the IFRS-GP is a general standard for a range of industries. It covers the needs of a greater range of companies than CN listed company taxonomy. However, there are still some areas not covered in this taxonomy. An extension should be created in the following areas:

IFRS 4-Insurance Contracts

IAS 20-Accounting for Government Grants and Disclosure of Government Assistance

IAS 26-Accounting and Reporting by retirement Benefit Plans

IAS 29-Financial Reporting for Hyperinflationary Economics

IAS 34-Interim Financial Reporting

The IFRS-GP taxonomy is a base taxonomy. All the concepts and relationships are defined in the taxonomy. Compared to IFRS-GP, the CN listed company commercial & industry taxonomy is an extended taxonomy, as it imports key elements and relationships from the CN listed company Primary Terms taxonomy. A lot of taxonomies are developed to meet other industries' accounting practices, such as banking and saving institutions.

IFRS-GP taxonomy does not provide definition linkbase, as its reference is IAS. IAS provides more options for the users to disclose their financial information. For example, Balance sheets can be defined as one of the four formats: classified balance sheet, order of liquidity balance sheet, net assets balance sheet, and portfolio basis balance sheet. The CAS is more stringent than the IAS, as it provides only one option for the users. The differences between CAS and IAS which I discussed in detail in the section 5.1: Accounting Perspective, partially explained why the IFRS-GP taxonomy has much more linkbase than CN listed company taxonomy.

IAS provides users with more options for presenting the balance sheet than CN listed company taxonomy, but at the same time, the taxonomy structure becomes more complicated than the Chinese one. The complicated taxonomy structure tends to hurt the extensibility of the taxonomy structure. In general, when the user moves down in the taxonomy hierarchy, the probability to extend the taxonomy tends to increase. It is not reasonable to extend the higher level of the taxonomy hierarchy, such as “asset”, “liability”, and “equity.” What is more, at the lower level, there is no taxonomy that provides all the options required for the reporting entity. For example, the concepts “other miscellaneous income”, “other miscellaneous expenses”, “other miscellaneous assets”, “other miscellaneous liabilities.” These concepts are all endless and more unique to the entity’s specific requirements than the higher level concepts “asset.” Therefore, the taxonomy extension tends to be created at the lower level. In a tree like structure, it is not very difficult to add concepts and relationships at the leaf level as moving the leaf level concepts to the root level. From this point of view, the tree like XML hierarchy fits the unusual level extensibility of XBRL. When the IFRS-GP taxonomy users add a concept to the taxonomy, though only one of the four balance sheet linkbase options is used by the company, all four optional presentation and calculation linkbases need to be updated to present the new concept’s position and its relationship with other concepts in the report, otherwise, the consistence and comparability of the four linkbase options tend to be hurt while comparing the financial data across companies. IFRS-GP taxonomy provides four options for the cash flow statements, three options for the income statements. When the users obtain more

options from IFRS-GP taxonomy to develop their instance documents, they will be involved in much work in the process of adding new concepts to the taxonomy.

In an entity, the managers' reporting decision plays an important role in the taxonomy extension project. The information users' desires, managers' self-interest, and auditors' reporting guidelines will definitely impact the manager's reporting decision (Bovee, Ettredge, Srivastava, and Vasarhelyi-Does the year 2000). Differences will exist between the taxonomy and the firms' preferred reporting practices. According to Bovee M extensions to the taxonomy indeed preserve predictive and feedback value while permitting firm- or industry-specificity. Custom tags thus allow a firm to preserve more detail, but at the cost of the comparability. The taxonomy, which is more flexible to be extended, will fit the entity's reporting practices better by generating its specific custom tags and aggregation level. However, this involves a potential loss of comparability across firms. There is no agreed-upon standard to devise customer tags, and companies are allowed to devise different customer tags for the same account. Additionally, XBRL-enabled software will not recognize custom tags as the taxonomy's corresponding tags. On the other hand, taxonomy which is not easy to be extended cannot meet different companies' diverse reporting practices, and is unlikely to preserve companies' predictive and feedback value in detail. The differences between the aggregation level of the information and the accounts are particularly important. If the taxonomy is more aggregated than the managers prefer, the differences between the taxonomy and the firms' preferred reporting practices will lead to the loss of information. If the taxonomy is less aggregated than the managers' prefer, companies tend to preserve data in the parent account while not presenting information in a more disaggregated level. Unfortunately, firms' preferred methods of aggregation data often result in violations of the taxonomy hierarchy. However, with the somewhat rigorous taxonomy, comparability is achieved when comparing financial information across companies. Usually, firms that desire the same level of aggregation embodied in the taxonomy can achieve complete comparability.

5.2.3 Taxonomy Extension Methods Analysis and Application

In practice, 5 options tend to be used as taxonomy extension methods by different jurisdictions according to their situation:

- Don't Allow Extensions: It does not allow any extension. This might occur if a jurisdiction has no additional information it desires to add to the taxonomy.
- Create a New stand-alone taxonomy: It actually copies the existing taxonomy, and changes the namespace identifier and namespace prefix, deletes what is not desired, adds additional required concepts, and creates a totally new taxonomy, then maps the new taxonomy to the existing taxonomy.
- Create an extension taxonomy, and leverage relationship linkbase: It is to create an extension taxonomy which references the existing taxonomy, then adds new desired concepts and prohibits what is not desired in the taxonomy. This includes leveraging the existing linkbases in addition to the concepts.
- Create an extension taxonomy, and create new relationship linkbases: It is to leverage the taxonomy and label and reference linkbases, but then create new presentation and calculation linkbases.
- Create an extension taxonomy, and create all new linkbases: The concepts are used, but none of the linkbases are desired to be reused.
(Charles Hoffman 2005)

In the following, I listed some major factors that affect the extensibility and usability of the taxonomy and compared those factors between IFRS-GP and CN taxonomy. The analysis only focused on the taxonomy structure differences.

	IFRS-GP taxonomy	CN listed company Commerce & Industry (clcid-ci) taxonomy
Concept amount	4112	1846
Linkbase amount	21	6
Linkbase model	Modularity	All in one file

Figure 27 taxonomy structure factors between IFRS-GP & CN

A taxonomy is likely to be extended on the company level, industry extension level, and the country jurisdiction level. On different levels, the taxonomy users have different resources to build their desired taxonomy, and on each level, the users' requirements have their specific traits. From the extensibility perspective, I will analyze and compare the advantages and disadvantages of taxonomy structure of the IFRS-GP taxonomy and CN listed commerce & industry company taxonomy on each level. My analysis disregards all of the accounting regulation differences.

On the country level, the existing taxonomy will be extended to meet the requirements of the whole country and all of the industries within the country. The desired taxonomy should have high flexibility, as it is highly likely to be used as base taxonomy and extended by multiple industries and entities. I think that to create new and stand-alone taxonomy is the best choice for the country level taxonomy users, and the IFRS-GP taxonomy structure fits better in this extension method than the CN taxonomy. The IFRS-GP taxonomy consists of over 4,000 concepts, covering a great range of industries. The clcid-ci taxonomy has less concepts which are specific to the commerce and industry areas. The appropriateness of the taxonomy concepts cannot meet the whole country's needs. The stand-alone taxonomy provides the highest level of flexibility in all of the extension methods, but it requires copyright to use the existing taxonomy. The country level taxonomy users always have more resources to build their taxonomy extension than the company and industry level users. Therefore, it is more possible for them to have enough resources to generate a desired taxonomy by copying and editing the existing taxonomy. A typical taxonomy extension case on the country level is the proceeding Australia XBRL project, which began in February 2006. It is to extend the latest IFRS-GP taxonomy for the additional reporting requirements of Australia Accounting Standard, Corporations Act Requirements and Stock Exchange Listing Rules.

On the company level, the taxonomy users do not need such a great range of the concepts as the country level users. It is a burden to have many more concepts than what they really need, as it will hurt the usability of the taxonomy. IFRS-GP taxonomy indeed brings more

conveniences to the users by providing more options for the presentation and calculation linkbase than the Chinese one, but it also brings much work when we add new concepts or prohibit some relationships, as it is necessary to maintain the consistence of those optional linkbases. In my opinion, these disadvantages are highly likely to become more obvious on the company level than on the other levels, because the majority of the extension work focuses on creating custom tags and implementing the appropriate aggregation level of information according to the entities reporting practices. Compared to the country level, the composition of the taxonomy extension job is much simpler, it does not need to analyze the accounting regulation differences, because the company's accounting systems have already met the country's reporting practices. As for the taxonomy extension method, companies tend to choose the last three ones of the five methods which I listed above. They will create extension taxonomy which references the existing taxonomy, add some customer tags and prohibit what is not desired for the taxonomy. In my opinion, the company is unlikely to create new stand-alone taxonomy, as they do not desire to be involved in the complicated maintenance work. Furthermore, the companies do not have as many resources to create new taxonomy as the country level users, and they are likely to simply use the existing taxonomy and create the "marginal" extension that they need. According to how well the existing linkbases correlate with the users' desired linkbases, users are likely to create all new linkbases, create presentation & calculation linkbases or leverage the existing linkbases.

On the industry level, taxonomy needs to conform to national accounting regulation and develop its industry traits. Modularity is a good trait on all three levels. The IFRS-GP taxonomy separates its linkbases with reports, but it consists of one big taxonomy. The CN-listed company C&I taxonomy includes all its linkbases in one file, but it divides its taxonomy into multiple stand-alone parts which are used as components. Those useful ones will be imported and integrated to build the desired taxonomy. There are only 6 extended linkbases, so maybe there is no need to separate them as with the IFRS-GP. I think that the taxonomy framework structure is more flexible than the bound volume structure.

The XBRL Dimensions specification was projected for May 2006. This version of document follows the XBRL Dimensions 1.0 Candidate Recommendation dated 2005-12-31. XBRL dimension is about how dimensions are used in financial reporting and how dimensions are expressed using XBRL. A trait for XBRL dimension is the segmental breakdown. One typical case is a group and the business segments and/or geographic segments of a group. In the current IFRS-GP taxonomy, there are no linkbases for the segment report, which is required by IFRS. This shortcoming is to be overcome by implementing of XBRL dimension. XBRL dimension is a standard global way of expressing multi-dimensional information which may exist in business information. It facilitates the ability to express relationships between contexts. XBRL dimension provides a global standard for the communication of this semantic information., therefore, these relations can be understood by computer applications. Excel Pivot Table is a dynamic tool to be used for the multi-dimension analysis.

6 CONCLUSION

Through review and comparison of the IFRS-GP and CN taxonomy, I have some suggestions for the future of taxonomy design. As for the taxonomy structure, I prefer CN framework taxonomy structure which divides the big taxonomy into multiple stand-alone taxonomies which can be used as components to build up the extended taxonomy. This framework structure brings much flexibility and convenience to taxonomy extension work. Users will not be burdened by those unnecessary concepts provided for the other industries. It is not beneficial to define all the concepts in one big taxonomy as IFRS-GP which provides the full range of concepts for all the industries which set IAS as their accounting practice regulation. The appropriateness of the concepts plays an important role in the taxonomy structure extension. The redundant concepts of one taxonomy tend to hurt the flexibility and convenience of the taxonomy. I argue for the modularity of reports, which is a positive trait of IFRS-GP. The useful report linkbase will not be burdened by those undesired linkbase. It is likely to lead to some errors in the calculation links, when putting

multiple calculation linkbases in one big file. Though the CN framework puts all the calculation reports in one calculation linkbase, as it provides only one option for each report, errors will be avoided in the calculation linkbase. It is flexible to consist of multiple options for one report in the perspective of usability, however, it burdens the taxonomy extension work when users try to create their customer tags or prohibit what is not desired, as all of the optional linkbases need to be maintained for consistence and comparability.

There is no standard taxonomy structure or best extension method to fit all taxonomy extension needs. I divided all of the taxonomy users into three levels: company level, industry level and country level. On the country level, the appropriateness of the concepts of a desired base taxonomy should fit the whole country's needs. Users are likely to prefer copying and editing the existing taxonomy, as they tend to have enough resources to use it directly, and they desire high flexibility and maintenance control. On the company level, the appropriateness of the concepts of a desired base taxonomy only needs to fit an industry's needs. The taxonomy framework structure better fits an entity's specific needs. Users can import their desired component taxonomies and they will not be burdened by those unnecessary concepts and those undesired linkbases. Users tend to generate extended taxonomy instead of creating new stand-alone taxonomies, because they will not be involved in the maintenance work, and they believe that the existing taxonomy will be well maintained and that there is a reliable, periodic release schedule. Users are likely to generate suitable linkbases depending on how well the existing ones correlate to their desired linkbases. Industry level users need to follow the national practice and leave much room for the companies' extension.

XBRL dimension is a new development which provides a segmental breakdown of the business information. It facilitates the ability to express the relationships between contexts. The business segment and geography segment report will be generated by this XBRL dimension project.

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