

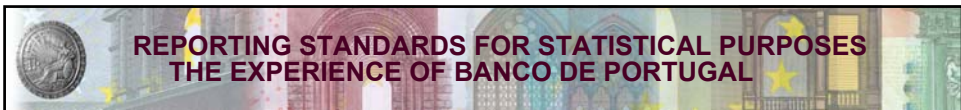


REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

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Digital Accounting Research Conference in Huelva, 14 - 15 October 2004



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Summary

- **Introduction**
- **A brief history of reporting standards in the BdP**
- **The reporting system of MFIs for Monetary and Financial Statistics**
- **The future reporting standard of non-financial corporations for other statistical production**
- **Conclusions**

Digital Accounting Research Conference in Huelva, 14 - 15 October 2004

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REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Introduction



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Banco de Portugal - Organic Law

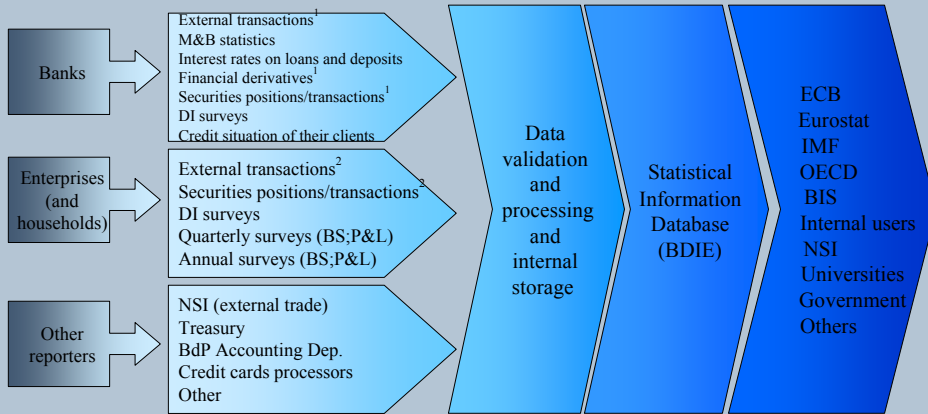
Article 13

1. The Bank shall ensure the collection and compilation of the **monetary, financial, foreign exchange and balance of payments statistics**, particularly, within the scope of its **co-operation with the ECB**.
2. The Bank **may require of any public or private body** the direct supply of whatever information deemed necessary for compliance with the provisions of the foregoing paragraph or with the tasks entrusted to it.



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Compilation and Production Issues



¹ On their own account and on behalf of their customers

² Direct reporting



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

**A brief history of
reporting standards in the BdP**



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Reporting Standard

= any standardised means of communicating to the “statistical entity” relevant raw data for the production of statistics.

Components:

- content
- syntax
- channel



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Contents

- International standard definitions for statistical purposes



- Additional demands for volumes and details



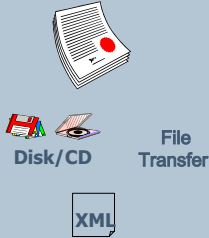
- Other specifications defined by the BdP



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Syntax / Channel

Reporting institutions



File
Transfer

Banco de Portugal



Until the end of the eighties

During the nineties

By the turn of the millennium



Local
application



Extranet Server



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

**The reporting system of MFIs
for Monetary and Financial Statistics:
*Background and Goals***



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The Portuguese monetary financial institutions (MFI) sector

As of December '03	Number of institutions	Number of reporting institutions	Weight ¹
MFI sector	202	82	-
Central Bank	1	1	-
Other MFIs	201	81	100.0%
Credit institutions	198	78	99.7%
<i>Banks</i>	67	67	92.5%
<i>Saving Banks</i>	5	5	3.7%
<i>Mutual Agricultural Credit Banks</i>	126	6	3.5%
Money Market Funds	3	3	0.3%

¹ In terms of total assets

121 institutions report as a group (aggregated data)



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Scope of statistics produced

- ◆ Balance sheet (BS) statistics
 - ❖ MFIs statistics - *stocks and flows*
 - ❖ Investment funds statistics - *stocks*
 - ❖ Other financial intermediaries and financial auxiliaries statistics (excluding investment funds) - *stocks*
- ◆ MFIs interest rates (MIR) statistics
- ◆ Other statistics
 - ❖ Statistics on the reserve base
 - C.I. Liabilities up to 2 years (exc. Repos) vis a vis entities not subject to minimum reserves
 - The macro-ratio
 - ❖ Structural statistical indicators



The thrust behind the 2003 statistical system revision

- ◆ Main goal: to fully comply with the statistical requirements laid down by Regulations ECB/2001/13 (concerning MFI balance sheet) and ECB/2001/18 (concerning MFI interest rates)
- ◆ Secondary goal: optimise the statistical system
 - ❖ Reducing the reporting burden namely by excluding data with little relevance and by exploiting other statistical systems
 - ❖ Including new reporting requirements due to the market development (e.g. securitisation operations)
 - ❖ Improving the data quality control tools
 - ❖ Adopting a new transmission channel (BPnet)



**The reporting system of MFIs
for Monetary and Financial Statistics:
*Legal Framework and Guidelines***



Legal framework and guidelines

Regulation ECB/2001/13 concerning the consolidated balance sheet of the monetary financial institutions sector

Regulation ECB /2001/18 concerning statistics on interest rates applied by monetary financial institutions to deposits and loans vis-à-vis households and non-financial corporations

Guideline ECB/2003/2 concerning certain statistical reporting requirements of the ECB and the procedures for reporting by the NCB of statistical information in the field of MBS

BdP Instruction n.º 19/2002 concerning MFIs' balance sheet and interest rates statistics + Annex

BdP Guideline concerning the report of MFIs' balance sheet and interest rates statistics



**The reporting system of MFIs
for Monetary and Financial Statistics:
*General Features***



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General features of the reporting system (i)

WHO

Portuguese monetary financial institutions (MFIs) (as of December 2003)	Reporting scheme for BS statistics				Reporting scheme for MIR statistics	
	Monthly		Quarterly		Sample	
	Number	Weight ¹	Number	Weight ¹	Number	Weight ¹
MFI sector	44	-	38	-	-	-
Central Bank	1	-	0	-	-	-
Other MFIs	43	97,6%	38	2,4%	-	-
Credit institutions	40	97,3%	38	2,4%	16	77,5%
Banks	37	90,4%	30	2,1%	14	70,7%
Saving Banks	1	3,6%	4	0,1%	1	3,6%
Mutual Agricultural Credit Banks	2	3,3%	4	0,2%	1	3,2%
Money Market Funds	3	0,3%	0	0,0%	-	-

¹ In terms of total assets



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

General features of the reporting system (ii)

WHAT

Reporting tables

- ◆ Statistical balance sheet by country and currency (Table A)
- ◆ Balance sheet additional details by instrument, country or sector (Tables B, C and D)
- ◆ Loans and deposits geographical breakdown (Tables E and F)
- ◆ Interest rates on new business and on outstanding amounts (Tables G and H)
 - ◆ *Indicators for institutions reporting as a group*
 - ◆ *Data for sample monitoring*



General features of the reporting system (iii)

WHAT

ECB requirements (BS statistics)

Table A
Statistical balance sheet by country and currency

- Instrument
- Sector
- Maturity
- Purpose
- Country
- Currency

ECB requirements (MIR statistics)

Table G
Interest rates on new business

- Instrument
- Sector
- Maturity
- Purpose
- Amount Categ.

Table H
Interest rates on outstanding amounts

- Instrument
- Sector
- Maturity
- Purpose

Extra-ECB requirements (BS statistics)

Table B
Balance sheet additional details by instrument

Table C
Balance sheet additional details by country

Table D
Balance sheet additional details by sector

Table E
Loans geographical breakdown

Table F
Deposits geographical breakdown



General features of the reporting system (iv)

WHEN

Timeliness and reporting frequency

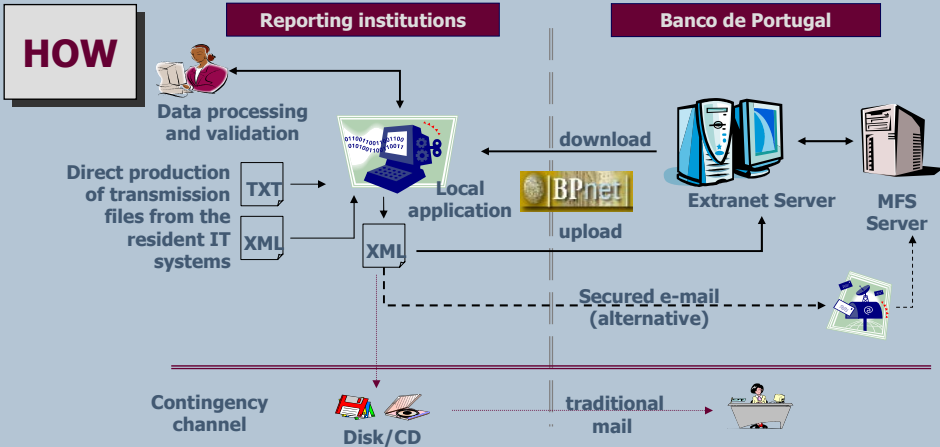
Table	Monthly scheme	Quarterly scheme
A	10 ^o working day	20 ^o working day
G *	15 ^o working day	
H *	15 ^o working day	
B	20 ^o working day	20 ^o working day
C	20 ^o working day	20 ^o working day
D	20 ^o working day	20 ^o working day
E	20 ^o working day	20 ^o working day
F	20 ^o working day	20 ^o working day

* Only for institutions included in the sample
+ Timeliness after the reference month



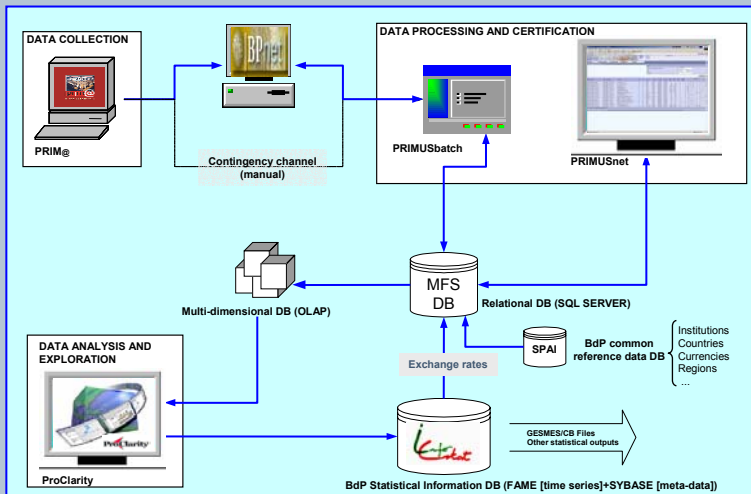
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General features of the reporting system (v)



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Technical environment for the production of MFS





The software Prim@



Main features

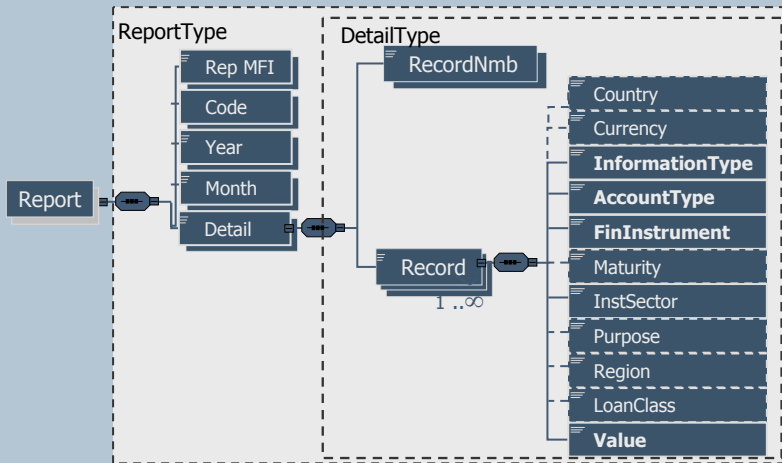
- ◆ Imports data from MFIs own systems into the PRIM@ database
- ◆ Allows for manual corrections to the imported data
- ◆ Carries out consistency checks
- ◆ Allows for several printing possibilities (v.g. reporting tables)
- ◆ Computes the reserve base amount
- ◆ Generates the XML file to transmit to the BdP



**The reporting system of MFIs
for Monetary and Financial Statistics:
*Syntax - XML***



Syntax - XML



File specification for data transmission: XML

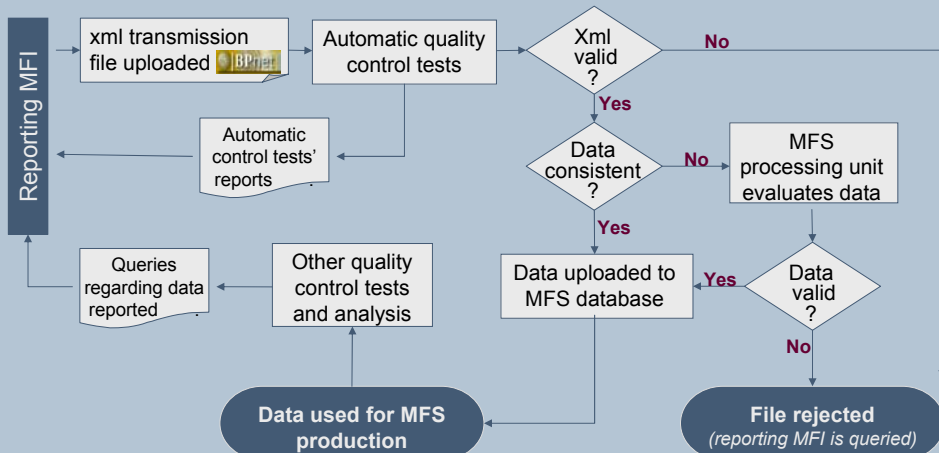
```

<?xml version="1.0" encoding="utf-8" ?>
<Reporte DataReporte="31-01-2003">
  <Reportante>9999</Reportante>
  <Codigo>EMF</Codigo>
  <Ano>2003</Ano>
  <Mes>1</Mes>
  <Detalhes>
    <NumRegistos>6</NumRegistos>
    <Registo>
      <Pais>PRT</Pais>
      <TipoInformacao>S</TipoInformacao>
      <TipoConta>E</TipoConta>
      <Valor>27.73</Valor>
    </Registo>
    ...
  </Detalhes>
</Reporte>
  
```



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Data reception and processing



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL

Automatic quality control checks (i)

- ◆ **IT checks** [*Prim@ assures the respect for IT checks*]
 - ❖ XML file format validation
 - ❖ Individual record validation
- ◆ **Consistency checks** [*Prim@ performs these consistency checks*]
 - ❖ 182 linear checks
 - ❖ Verify the relations within each table and between different tables
- ◆ **Inter-temporal plausibility checks**
 - ❖ Compare the evolution of data reported by every MFI



Automatic quality control checks (ii)

◆ Further remarks

- ❖ The reporting MFIs receive (via BPnet or e-mail) two reports concerning the automatic checks:
 - R1: XML format tests
 - R2: other IT checks; consistency checks; inter-temporal plausibility checks
- ❖ Consistency and inter-temporal plausibility checks are based not only on the information being transmitted but also use other data available in the BdP database (previously reported by the MFI)



**The reporting system of MFIs
for Monetary and Financial Statistics:
Channel - BPnet**



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL



BPnet

Channel

- ◆ System of electronic communication
- ◆ Platform: private network, interface web, and mechanisms of security and notification.
- ◆ Security components: availability, confidentiality, integrity, authenticity, non-repudiation
- ◆ Set of facilities (vg file transfer, webmail)
- ◆ Pool of services (statistical reporting, central credit register, restriction to the use of cheques, supervision, ...)
- ◆ Flexible system
- ◆ Direct costs shared between BdP and other participants
- ◆ Only financial institutions are participating



REPORTING STANDARDS FOR STATISTICAL PURPOSES THE EXPERIENCE OF BANCO DE PORTUGAL



BPnet

Benefits:

- ◆ Costs decreased for both BdP and participants
- ◆ The lags for feedback were shortened
- ◆ Facilities of access and communication were enlarged
- ◆ Reporting burden were reduced
- ◆ Security and confidentiality were improved
- ◆ On-line access to technical support is ensured

Future enlargements to other participants/services:

- ◆ Improve standardisation and benefits
- ◆ Enable integration of applications



**The future reporting standard of NFCs
for other statistical production:
*Background***



Background

Goal of Other statistical production:

- Understand the evolution of NFC
- Provide a background where other statistics integrate
- Publish microeconomics reports

16,000 data reporters

- more diversified in size and financial soundness
- of whom the BdP is not the accounting standard setter
- the data collected by the BdP is profoundly GAAP based and is collected by other institutions as well

Harmonization of data reporting standards



**The future reporting standard of NFCs
for other statistical production:
*Concepts and their legal framework***



The concepts – the PT GAAP

The PT-GAAP follows a Continental European accounting tradition: “models of balance sheet and income statement contain detailed elements”, (Ding 01)

Fundamental prerequisite for compilation of financial information from different companies into databases, which is useful for:

- **Statistical production**
- **Comparison of individual companies against their peers, useful for management teams (AMMBIT) and the production of tax packages**
- **Investors when choosing their investment portfolio (Financial research - fundamental analysis for risk diversification?)**



The concepts – the IAS GAAP + Format + NCD

Anglo-Saxon approach: “simplified balance sheet and income statement”

Consequences of lack of formats:

- Comparison among companies within a country only possible at a much less detailed level of conceptual depth
- Materiality!!! Non disclosed item \neq Zero Summation of immaterial items for all the companies in the country is a material amount for many Statistical variables

Alternatives followed by Anglo-Saxon Statisticians:

- Detailed questionnaires => + time consuming, costly and error-prone => + respondents' burden
 - Use smaller samples (=> greater sampling error) and/or
 - Use physical data (=> decrease of usefulness of accounting data)

“Greater payoffs will come from more data than more techniques to analyse existing data”, Alan Greenspan(2001)



**The future reporting standard of NFCs
for other statistical production:
Syntax - XBRL**



The syntax - XBRL

“XBRL can help us model GAAPs to produce GAAP consistent electronically tagged data”
Teixeira et al. 03
with the advantages of XML: flexible ex-ante; rigid ex-post

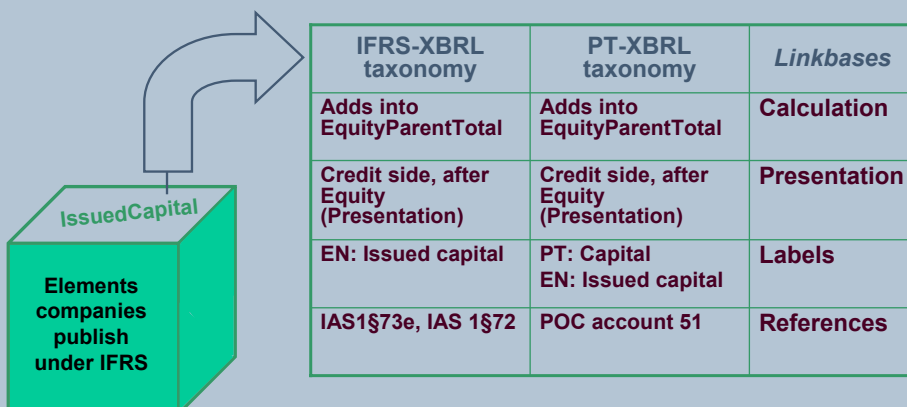
To model GAAPs with XBRL we need:

A list of the elements that are commonly published under the GAAP, identified with an ID	IssuedCapital
The arithmetic constraints that relate it to other items (calculation linkbase)	Adds into EquityParentTotal
The position within financial statements the element is expected to appear in (presentation linkbase)	Credit side, after Equity (Presentation)
The label that describes it under each language (label linkbase)	EN: Issued Capital
The relevant legislation that defines the element (reference linkbase)	IAS1§73e, IAS 1§72

(...)



XBRL taxonomy building, Portugal





XBRL taxonomy building, Portugal

Which IFRS-XBRL elements to utilize under the PT-XBRL taxonomy?



Equivalency

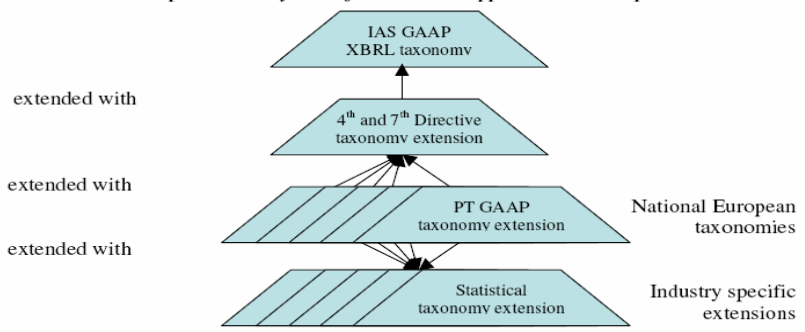
- **Disclosure equivalence** (which elements are required to be disclosed?)
- **Absolute equivalence** (how are the elements measured?)
 - + Aggregation rules (Calculation linkbase)
 - + Valuation rules (References linkbase)
 - + Discretion

Teixeira et al. 03



XBRL taxonomy building, Portugal

Proposed Family tree of taxonomies applicable in Europe:



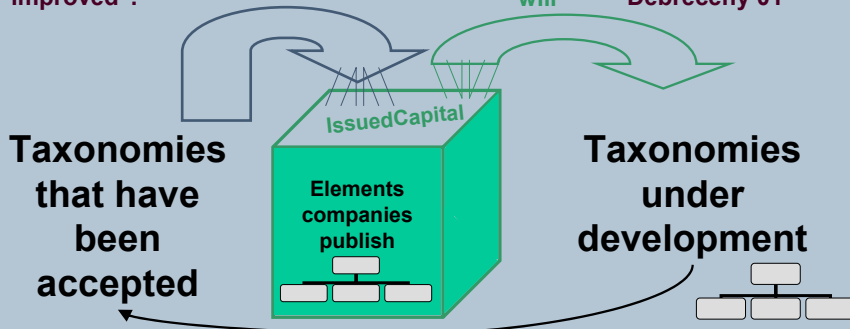
Integrated extension building Teixeira et al. 03



XBRL taxonomy building, worldwide

jurisdiction is

“If every company were free to develop its own labels for its XML tags then the searching for financial information would be only marginally improved”.
Debreceeny 01



Fully integrated extension building



Why (Fully) Integrated Extension Building?

- Facilitate the adoption by companies of comparable accounting detail - Multinationals and software builders operating in the international market
- Reduce one of the two sources of international incomparability of accounting information, i.e. the way items are aggregated (as long as you have the detail, “the data can be shaped in any way”)
- Make taxonomies more robust to changes in national accounting policies
- Facilitate GAAP comparison
- Investors and lenders are able to compare the evolution of key financial indicators among different companies and different countries over time (BACH database)



**The future reporting standard of NFCs
for other statistical production:
*Other issues***



Other issues

Instance document creation:

- Namespaces (e.g. pt:IssuedCapital) specify which GAAP the financial statements comply with
- To facilitate conversion to XBRL by SMEs, an intelligent agent is being built that takes jurisdictional taxonomies as a plug-in source of context specific knowledge (Silva et al. 04)

Channel: Diskette, email, upload, BPnet



Conclusions



Conclusions

Harmonizing reporting standards

- ✦ Reduction of reporting burden (for reporters)
- ✦ Improvement of data quality (for collectors)

XML + BPNet ----- MFI for MFS
XRBL ----- NFC for OSP

Comparable accounting detail is an essential prerequisite

- ✦ Formats
- ✦ (Fully) Integrated extension building