
**Intergovernmental Working Group of Experts on
International
Standards of Accounting and Reporting
(ISAR)**

36th SESSION

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Room XIX, Palais des Nations, Geneva

Thursday, 31 October 2019
Afternoon Session

**Agenda Item 4. Review of current developments in
international standards of accounting and reporting in the
public and private sectors**

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INCONSISTENT IMPLEMENTATION OF IFRS: A PROPOSED “TEXT MINING” APPROACH

ISAR 36 CONFERENCE

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Motivation

Any method other than adopting the process adds additional information processing cost to international users (reduces the aspired benefit of increased comparability).

- A user needs to be aware of:
 - Local players and their interactions
 - Platforms of online publication of documents
 - Deviations allowed to occur in each jurisdiction
 - How and where to spot such deviations

These costs vary based on jurisdictions' level of transparency and ease of access to information

- Some jurisdictions provide list of implemented pronouncements, dates of implementation, list of deviations, reference to the original IASB documents...etc).

Motivation

IFRS jurisdictional profiles by the IFRS Foundation (in addition to sources from Big 4) currently represent the **main sources of information on IFRS implementation** around the world. However they are:

- Survey based
- Subjective
- Costly to collect and maintain
- Updated as information becomes available (i.e., sometimes outdated)
- Provide information at a point in time
- Vary in coverage and accuracy
 - Need for **objective, cost saving** tool to monitor inconsistent implementation on a **continues** basis
 - Direct response to the *IFRS Advisory Council* request for input *on **monitoring** and **motivating consistent adoption** and application of IFRS Standards*
 - Our tool is intended to enhance the IFRS profiles, not to replace them

Text mining approach

Description of the tool (English documents)

- Use a **web scraper** to collect all IASB and national pronouncements
- **Map** the **national pronouncement** to the corresponding **IASB pronouncement**
- Perform a **document pair comparison** (IASB document vs. jurisdiction document)
- **Statistics:** For each pair, the following statistics are calculated on a paragraph level:
 - Cosine similarity
 - Difference in the number of sentences
 - Difference in the number of words
- **Detect word structure difference**
- **Manual inspection**, feedback the loop to determine proper cut off point of dissimilarity to serve as red flags.
- **Validation:** Verify detected differences by information on deviations from other sources

Text mining approach

Preliminary outcome example

Illustration: IAS 17 Leases (IASB, 2005) vs. FRS 17 Leases (Singapore, 2005)

sub_sec	cos	nSEN0	nSEN1	dSEN	ntok0	ntok1	dtok	text0	text1
STD13	1.000	3	3	0	127	127	0	lease classification is made at the inception of the lease if at any time the lessee and the lessor agree to change the provisions of the lease other than by renewing the lease in a manner that would have resulted in a different classification of the lease under the criteria in paragraphs 7 - 12 if the changed terms had been in effect at the inception of the lease the revised agreement is regarded as a new agreement over its term however changes in estimates for example changes in estimates of the economic life or of the residual value of the leased property or changes in circumstances for example default by the lessee do not give rise to a new classification of a lease for accounting purposes	lease classification is made at the inception of the lease if at any time the lessee and the lessor agree to change the provisions of the lease other than by renewing the lease in a manner that would have resulted in a different classification of the lease under the criteria in paragraphs 7 - 12 if the changed terms had been in effect at the inception of the lease the revised agreement is regarded as a new agreement over its term however changes in estimates for example changes in estimates of the economic life or of the residual value of the leased property or changes in circumstances for example default by the lessee do not give rise to a new classification of a lease for accounting purposes
STD14	0.745	3	1	2	119	22	97	leases of land and of buildings are classified as operating or finance leases in the same way as leases of other assets however a characteristic of land is that it normally has an indefinite economic life and if title is not expected to pass to the lessee by the end of the lease term the lessee normally does not receive substantially all of the risks and rewards incidental to ownership in which case the lease of land will be an operating lease a payment made on entering into or acquiring a leasehold that is accounted for as an operating lease represents prepaid lease payments that are amortised over the lease term in accordance with the pattern of benefits provided	leases of land and of buildings are classified as operating or finance leases in the same way as leases of other assets

Text mining approach

Description of the tool (Non-English documents)

- Use **translation tools** such as Google translate to translate national pronouncement
- **Map** the translated national pronouncement to the corresponding **IASB pronouncement**
- Perform a **document pair comparison** (IASB document vs. jurisdiction document)
- **Statistics:** For each pair of documents the following statistics are calculated on a paragraph level:
 - Cosine similarity.
 - Difference in the number of sentences.
 - Difference in the number of words.
- **Manual inspection**, feedback the loop to determine proper cut off point of dissimilarity to serve as red flags.
- **Validation:** Perform several **translation accuracy checks** (slides 8&9)

Obstacles and suggested solutions

Access to documents

- Access could be allowed for subscribed users only
- Access could be banned based on IP address due to copyright issues
 - Solvable by either paying the fees and changing the IP address or preferably by **collaborating with jurisdictions** imposing such restrictions
- Stale information where only the latest version of the accounting standards are made available online while historical documents are removed
 - There is a higher need **to collaborate with Jurisdictions** to obtain such information
- Scattered information over different websites
 - Adjust the program to collect and deal with different sources and types of documents

Obstacles and suggested solutions

Accuracy

- Poor quality documents on websites (e.g. scanned documents, inconsistently formatted PDFs)
 - **Jurisdictions and the IASB** could provide us with better quality documents (HTML or doc format).
- Acceptable cut off points to trigger a red flag
 - **Native speakers** assistance (regulators, academics, auditors)
- Translation tools accuracy level
 - Use the **IASB approved translations** whenever available
 - Use the wordlist available from the IFRS Foundation (*Terminology Lookup* tool)

Text mining approach Terminology Lookup

Illustration of the *Terminology Lookup* tool

Terminology Lookup

This tool searches approximately 1,500 key terms used in the official translations of the International Financial Reporting Standards. This terminology has been reviewed by a committee of accounting experts in each language. Languages are updated as and when changes are made.

Please click [here](#) for more information on when each language was last updated.

Source Term

Source Language

Target Languages

[Select all](#) [Deselect all](#)

<input checked="" type="checkbox"/> Arabic	<input type="checkbox"/> Hebrew	<input type="checkbox"/> Romanian
<input type="checkbox"/> Azeri	<input type="checkbox"/> Hungarian	<input type="checkbox"/> Russian
<input type="checkbox"/> Bulgarian	<input type="checkbox"/> Italian	<input type="checkbox"/> Slovak
<input type="checkbox"/> Bosnian	<input type="checkbox"/> Japanese	<input type="checkbox"/> Slovenian
<input type="checkbox"/> Czech	<input type="checkbox"/> Kazakh	<input type="checkbox"/> Albanian
<input type="checkbox"/> Danish	<input type="checkbox"/> Korean	<input type="checkbox"/> Serbian
<input type="checkbox"/> German	<input type="checkbox"/> Lithuanian	<input type="checkbox"/> Swedish
<input type="checkbox"/> Greek	<input type="checkbox"/> Latvian	<input type="checkbox"/> Turkmen
<input type="checkbox"/> English	<input type="checkbox"/> Macedonian	<input type="checkbox"/> Turkish
<input type="checkbox"/> Spanish	<input type="checkbox"/> Maltese	<input type="checkbox"/> Ukrainian
<input type="checkbox"/> Estonian	<input type="checkbox"/> Dutch	<input type="checkbox"/> Uzbek
<input type="checkbox"/> Finnish	<input type="checkbox"/> Polish	<input type="checkbox"/> Chinese (Simplified)
<input type="checkbox"/> French	<input type="checkbox"/> Portuguese	<input type="checkbox"/> Chinese (Traditional)
	<input type="checkbox"/> Portuguese (Brazilian)	

Terminology Lookup

1:

Warrant

Term not found

(ara) ضمانة (الشراء اللاحق لأشهم منشأة)

(aze) Warrant

(bul) гарант или варант

(bos) Varant (isprava koja imatelju daje neko pravo)

(ces) Warrant

(dan) Warrant (tegningsret)

(deu) Optionsschein

(ell) Δικαίωμα αγοράς μετοχής

(eng) Warrant

(spa) Certificados de opciones para compra de acciones (warrant)

(est) Ostutäht

(fin) merkintäoikeus

(fra) bon de souscription

(heb) כתב אופציה

(hun) Warrant

(ita) warrant

(jpn) WARRANT

(kaz) warrant

(lav) varantas

(lav) legādes garantijas līgums

(mkd) варант

(mkd) сертификат

(nld) warrant

(pol) Warrant (prawo poboru)

(por) Warrant

Obstacles and suggested solutions

Materiality assessment of deviations from IASB-IFRS

- Subjective
 - Perform market reaction tests to get investors perceptions
 - Review comment letters
 - Consult practitioners
 - Make raw data (the tool's graphical output) available to users. However, copyright issues may arise