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

#### 36th SESSION

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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
  - o 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- Updated as information becomes available (i.e., sometimes outdated)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
  - o 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.
  - o 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 ad deal with different sources and types of documents

### Obstacles and suggested solutions



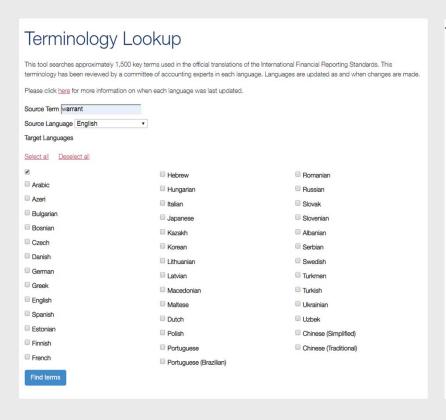
#### **Accuracy**

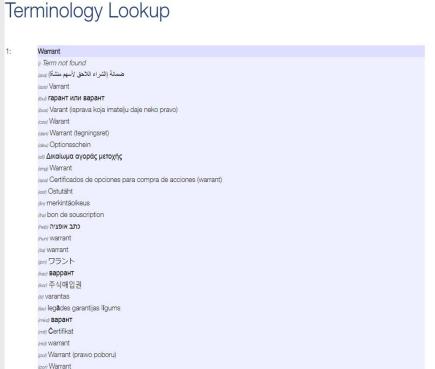
- Poor quality documents on websites (e.g. scanned documents, inconsistently formatted PDFs)
  - ➤ Jurisdictions and the IASB could provide us with better quality documents (HTML or doc format).
- Acceptable cut off points to trigger a red flag
  - ➤ Native speakers assistance (regulators, academics, 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





## 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