

Identification as infrastructure: the challenges of establishing the Legal Entity Identifier data standard for financial markets

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New frontiers in the interdisciplinary study of finance
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Theoretical motivation: infrastructure as a process

- ◎ We pay attention to infrastructure when it stops being present-at-hand (Heidegger's *vorhanden*).
- ◎ But, this calls for maintenance and repair (Graham and Thrift, 2007).
- ◎ Infrastructures occur when intersubjective acceptance is achieved of the different roles of the stakeholders the interests (Akrich, 1992; Akrich and Latour, 1992 - 'enrolment'; Bowker et al 2010)

Tensions inherent to infrastructure-making

- ◎ On one hand, promoters of infrastructures aim to bring about inter-subjectivity: making rational modalities and practices part of the taken-for-granted organisational reality (lit. about IS alignment, lit. about performance management)
- ◎ On the other hand, acceptance of the infrastructure may marginalise the promoters. (Hall et al 2015)

Puzzle: infrastructure-making as a 'self-destructing' project?

- ⊙ If the establishment of infrastructures carries a risk of diminishing the promoters, then:
- ⊙ *What are the conditions that affect the emergence of such risk?*
- ⊙ *What strategies do promoters of infrastructures follow to avoid the risk?*
- ⊙ **We examine these questions through the case of the Legal Entity Identifier – LEI.**

Challenges related to identification infrastructures?

- ◎ identification infrastructures have high degree of pivotal-ness
- ◎ As a result, there a lot is a lot of resistance

Motivation and lit review

- ◎ **How should we understand identification in financial markets?**
- ◎ **Techno-social identification practices** rely on the existence or the development of *identification infrastructures*
- ◎ Central to this development is the identifier and the ability to link such identifier to different organisational context.



An Identification crisis...

City National Bank in California

- ⦿ 14 banks named City National Bank
- ⦿ 147 banks with a variant of the name City National
ID_RSSD = 63069
- ⦿ FDIC Certificate id = 17281
- ⦿ SEC CIK = 275216
- ⦿ SWIFT id = CINAUS6L
- ⦿ Various vendor ids = Proprietary
- ⦿ And that's just in the United States!

3 Questions that needed to be answered

- ◎ Who is who?
- ◎ Who owns who?
- ◎ Who owns what?

Conditions that affect the attainment of inter-subjectivity:

Pivotal-ness

- ◎ Pivotal information demand organizational systems and practices to **change** when the format or content of such information is undergoing a change.
- ◎ Identifiers carry a high degree of *pivotal-ness*: expensive – in terms of cost/effort – to revise or alter formats
- ◎ Examples BIC code (ISO 9362:2014) and the story of “position 8” and BIC1 (SWIFT, 2014).

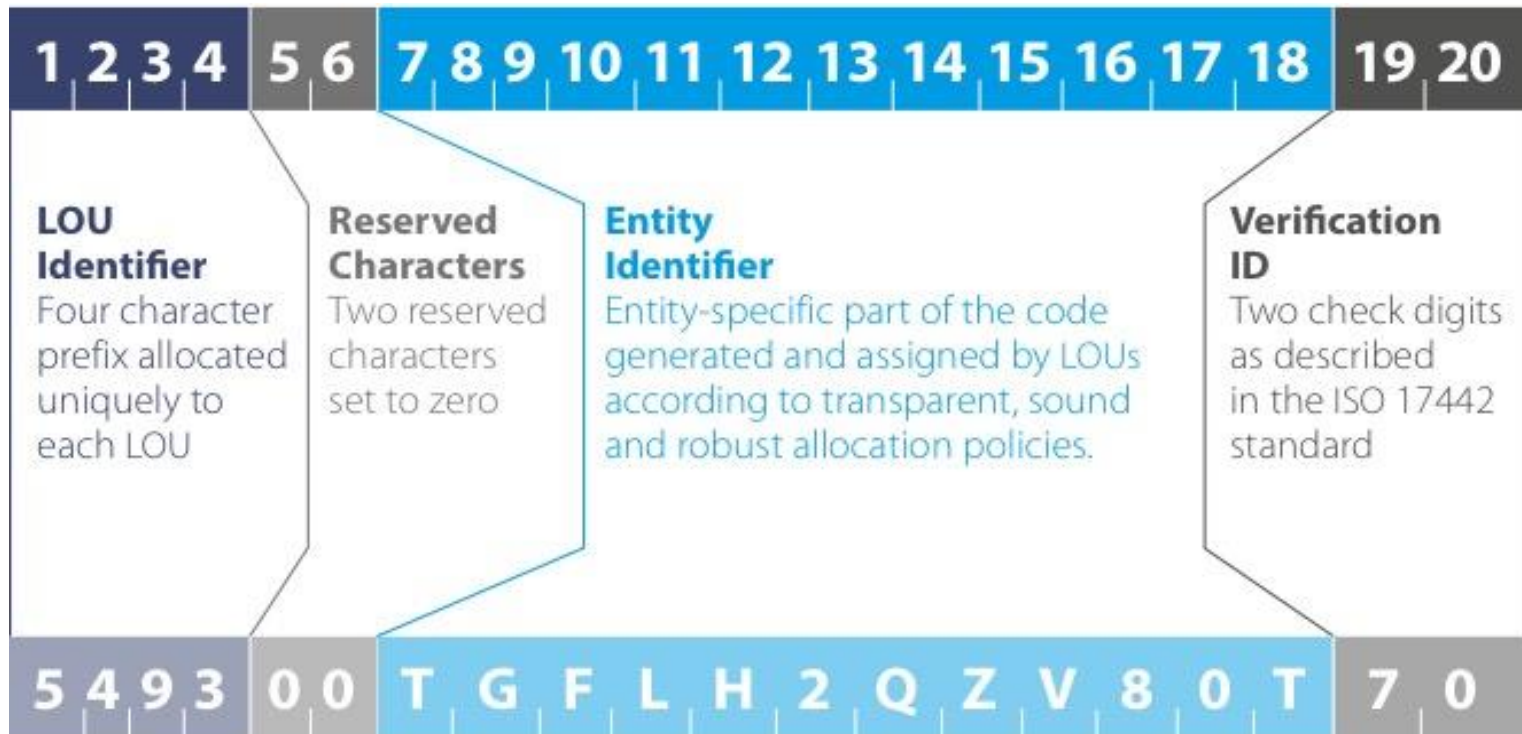
Timeline

- © 2010 - Regulators start discussing how to create a universal digital Legal Entity Identifier
- © November 2011 - G20 mandated the Financial Stability Board (FSB) to convene an Expert Group to develop a framework for a LEI
- © March 2012 – ISO 17442 adopted

Structure of LEIs (1)

- ⦿ The ISO requires a 20-digit alphanumeric number with no 'embedded intelligence'.
- ⦿ All such entity specific information will be recorded in separate reference fields.
- ⦿ Four-digit prefix, two-digits reserved, 12 random digits for assignment and two-check digits.
- ⦿ *Under the GLEIS charter LEI itself and the data associated with it are and will remain a public good.*

Structure of LEIs (ISO 17442)

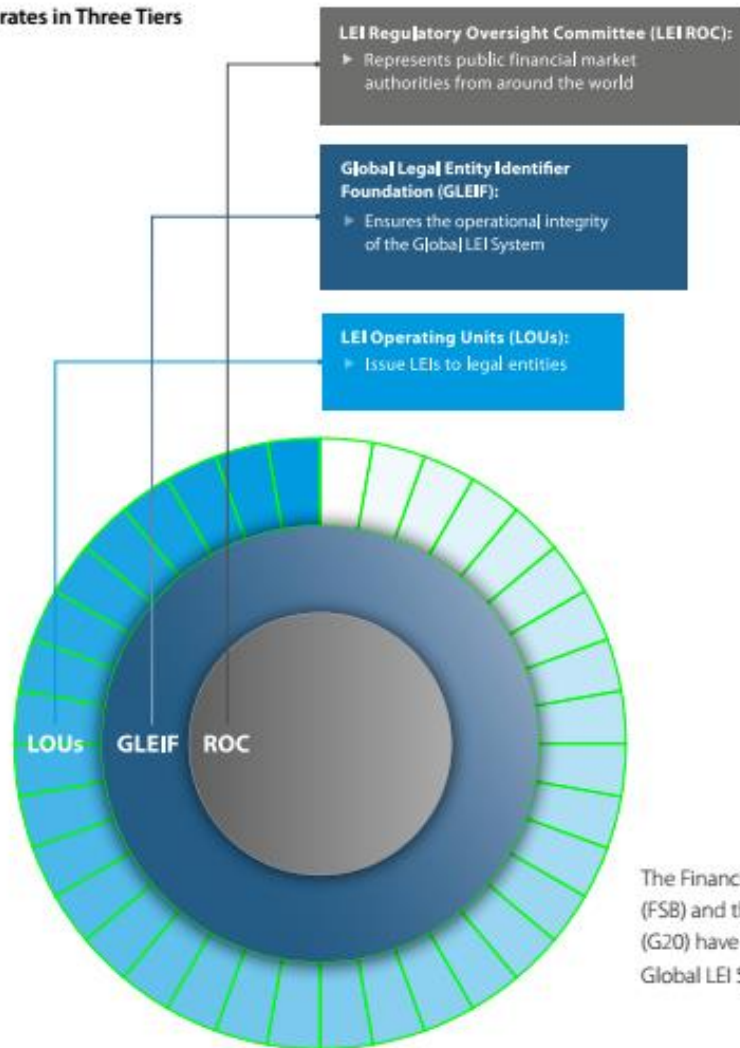


Example: ABB Sécheron S.A., Switzerland

(Source: GLEIF)

Governance structure of the LEI system

The Global LEI System Operates in Three Tiers



The Financial Stability Board (FSB) and the Group of Twenty (G20) have endorsed the Global LEI System and GLEIF

Difficulties to reach inter-subjectivity I: LEI – asset or burden?

- ⦿ While regulators like the universal identification...
... commercial actors are less enthusiastic...
- ⦿ Who should be responsible (and carry the cost) for validating data quality and maintaining the data?
 - Time allowed to refresh the LEI
 - Consequences in case of inaccurate data
 - Intermediary fears about seen to “provide a licence to trade”
- ⦿ Significant adoption costs
 - Changing of legacy systems
 - Interdependencies between systems that must use LEI and others that do not need to
 - Without adoption of LEI throughout an organisation costly mapping of existing internal identifiers and LEI

Difficulties to reach inter-subjectivity II: What will be included in the reference data?

- ◎ The initial intention (2012) was to include the 'ultimate owner' of the trading entity.
- ◎ But...
 - wide range of patterns of share ownership
 - Ownership may not be the same as control
 - subsidiaries may be established as non-corporate legal structures without shareholders
 - entities are also linked by other financial relationships, (e.g. secured and unsecured loans, cash and security deposits, guarantees, derivative contracts)

Difficulties to reach inter-subjectivity II: (Cont.)

- ◎ More recently (September, 2015) GLEIS announced that: Entities would report their “**ultimate accounting consolidating parent**”,
- ◎ ***But...***
 - There is an option to decline providing this information if, for example, the disclosure of this information would be detrimental to the legal entity or the relevant parent.
















Quality evaluation as Infrastructure-making strategy

- ◎ GLEIF considers 'quality of data' key in building a reliable and widely accepted identification infrastructure.
- ◎ GLEIF developed practices to measure and monitor data quality...

Constructing data quality

- ◎ *Openness* of data (access)
- ◎ *Reliability* of the data (comparing with existing standards)
- ◎ *Trusted* data (continuous improvement of the data quality)

LEI Issuer Data Quality Reports | June 2017

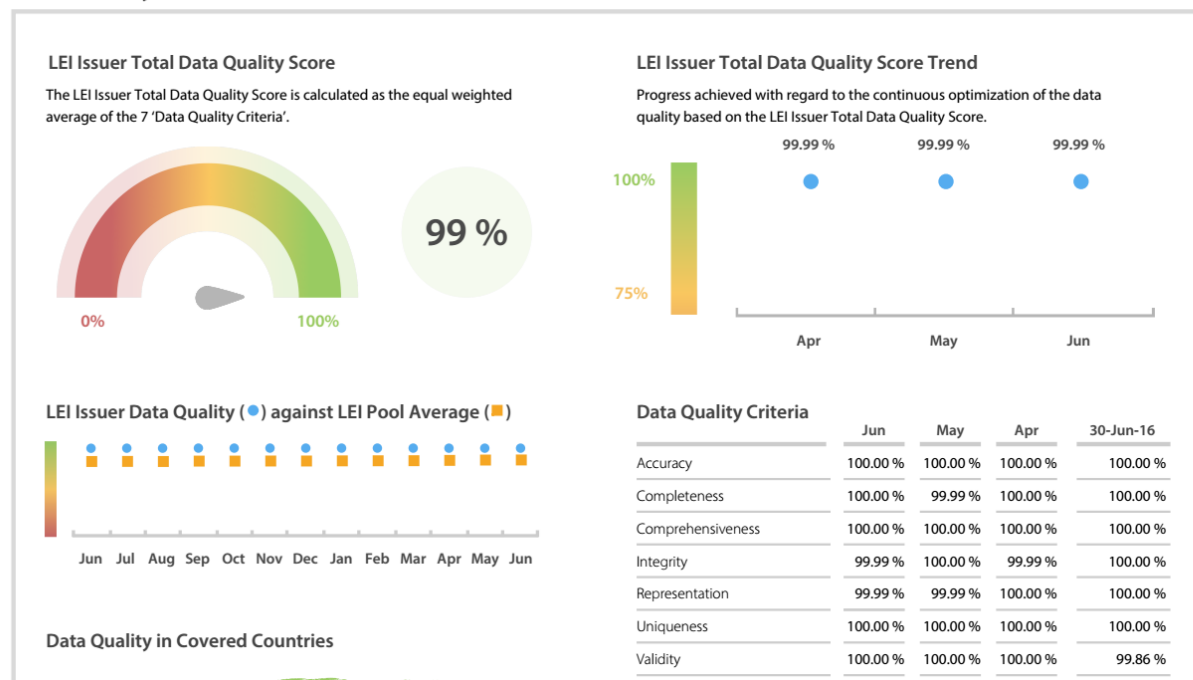
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Central Securities Clearing System plc of Nigeria	Download 	Netherlands Chamber of Commerce (KvK)	Download 
		Registro de Identificación de Entidades del BCRA (Central Bank of Argentina LEI issuing organization)	Download 

Different LOUs are positioned in implicit competition.

LONDON STOCK EXCHANGE PLC | Data Quality Report | June 2017



Data Quality Scores



Quality Maturity Level



Statistics

LEI Issuer Totals	Values
Managed LEIs	48,921 ↑
Active entities managed	47,149 ↑
Inactive entities managed	1,772 ↑
Covered countries	146 →

Challenges	Values
Received challenges	7 ↑
'No change' challenges	4 ↑
Duplicates detected	1 ↑

Quality in competition

Challenge Facility

Enhanced data accuracy by public monitoring

- Challenge to LEI & LE-RD service is available via the GLEIF website. (<https://www.gleif.org/en/lei-data/challenge-lei-data>).
- The centralized online facility is part of the GLEIF data quality management program.



Discussion

- ◎ Promoters of infrastructure try to increase chances of inter-subjectivity by positioning and maintaining themselves as critical points of passage.
- ◎ As such, they aim to establish *validation monopolies* within the infrastructure.
- ◎ Infrastructures depend on a balance of power between actors with monopolistic agendas and actors with universalising agendas.