

# **Thematic Review on Implementation of the Legal Entity Identifier**

## **Peer Review Report**

**28 May 2019**

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# Thematic Review on Implementation of the Legal Entity Identifier

## Review Report

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## Foreword

Financial Stability Board (FSB) member jurisdictions have committed, under the FSB Charter and in the *FSB Framework for Strengthening Adherence to International Standards*,<sup>1</sup> to undergo periodic peer reviews. To fulfil this responsibility, the FSB has established a regular programme of country and thematic peer reviews of its member jurisdictions.

Thematic reviews focus on the implementation and effectiveness across the FSB membership of international financial standards developed by standard-setting bodies and policies agreed within the FSB in a particular area important for global financial stability. Thematic reviews may also analyse other areas important for global financial stability where international standards or policies do not yet exist. The objectives of the reviews are to encourage consistent cross-country and cross-sector implementation; to evaluate (where possible) the extent to which standards and policies have had their intended results; and to identify gaps and weaknesses in reviewed areas and to make recommendations for potential follow-up (including through the development of new standards) by FSB members.

This report describes the findings of the peer review on implementation of the Legal Entity Identifier, including the key elements of the discussion in the FSB Standing Committee on Standards Implementation (SCSI). It is the fifteenth thematic review conducted by the FSB, and it is based on the objectives and guidelines for the conduct of peer reviews set forth in the April 2017 version of the *Handbook for FSB Peer Reviews*.<sup>2</sup>

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<sup>1</sup> See [http://www.fsb.org/2010/01/r\\_100109a/](http://www.fsb.org/2010/01/r_100109a/).

<sup>2</sup> See <http://www.fsb.org/2017/04/handbook-for-fsb-peer-reviews-2/>.

## Definitions of key terms used in the report

**“Beneficial owner”** – a single individual with significant responsibility to control, manage or direct a legal entity.

**“Central counterparty”** – an entity that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the performance of open contracts.

**“Child”** – entity that is owned or otherwise controlled by another entity within a corporate group.

**“Counterparty”** – entity that takes the opposite side of a financial contract or transaction – for example, the borrower in a loan contract, or the buyer in a sales transaction.

**“Current LEI”** – an issued LEI that is actively maintained by the entity through a contract with an accredited LEI issuer (LOU), so that changes in the entity data (e.g. name, address, parent entities) are reported on a timely basis by the entity, challenges by third parties are addressed by the LOU and the entity, and the accuracy of the entity data is recertified by the entity and validated by the LOU at least yearly. This excludes LEIs that are duplicates, lapsed, retired, annulled or merged.<sup>3</sup>

**“Digital authentication”** – the process of establishing confidence in user identities presented digitally to a system.

**“E-invoicing”** – the exchange of an electronic invoice document between a supplier and a buyer. An electronic invoice (e-invoice) is an invoice that has been issued, transmitted and received in a structured data format which allows for its automatic and electronic processing.

**“Gross notional outstanding”** – gross notional value of all derivatives contracts concluded and not yet settled on the reporting date.

**“Know your customer”** – the process of verifying the identity of one’s customer.

**“Lapsed LEI”** – an LEI that is overdue for annual renewal.

**“LEI”** – The Legal Entity Identifier (LEI) is a 20-character, alpha-numeric code that uniquely identifies legally distinct entities that engage in financial transactions.

**“Level 2 data”** – the reporting of parent information by legal entities. Level 2 data provides the answer to the question of ‘who owns whom’. Specifically, legal entities that have or acquire an LEI report their ‘direct accounting consolidating parent’ as well as their ‘ultimate accounting consolidating parent’.

**“Local Operating Unit” (LOU)** – an organisation accredited by the GLEIF to issue LEIs. They supply registration, renewal and other services, and act as the primary interface with registrants for LEIs. An LOU may issue LEIs to legal entities in any country where it is

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<sup>3</sup> Accepted statuses for current LEIs are “issued” and “pending transfer”. An LEI with a registration status “pending\_archival” may also be considered as current when the same LEI is not published with an “issued” registration status by another LOU, which may happen in rare cases.

accredited to do so.

**“Optional”** – situation where the LEI does not have to be reported as part of a transaction, irrespective of whether the entity has one.

**“Parent”** – entity that owns or otherwise controls other entities within a corporate group. In the GLEIS, the “ultimate accounting consolidating parent” of entity X is the highest level legal entity preparing consolidated financial statements that consolidate entity X, based on the accounting definition of consolidation applying to this parent.

**“Payment messaging”** – communication of instructions to credit and debit accounts to transfer money between financial institutions, for instance through the messaging services of the Society for Worldwide Interbank Financial Telecommunication (SWIFT).

**“Reinsurance”** – a mechanism that an insurer uses to obtain protection against some or all risks associated with the insurance policies it issues. Typically, this process involves an assuming reinsurer who, for a consideration, indemnifies the ceding or direct insurer against some or all of the loss it may incur under a policy or policies it has issued.

**“Renewal”** – annual confirmation by the entity of its LEI reference data (e.g. name, address, parent entity) and verification by the Local Operating Unit of that data against authoritative sources, where available. A Local Operating Unit generally charges a fee.

**“Reporting entity”** – the entity that is reporting a transaction (e.g. to a trade repository).

**“Requested”** – situation where the LEI is to be provided/reported if the entity already has one, but the entity is not required to acquire one.

**“Required”** – situation where the LEI is required to enter into a transaction.

**“Resolution (of a financial institution)”** – the exercise of resolution powers, including in particular the exercise of a resolution power specified in the FSB *Key Attributes of Effective Resolution Regimes for Financial Institutions* (Attribute 3),<sup>4</sup> by a resolution authority in respect of a bank that meets the conditions for entry into resolution, with or without private sector involvement, with the aim of achieving the statutory objectives of resolution set out in Key Attribute 2.3.

**“Subsidiaries”** – entities that are controlled by another entity.

**“Supply chain”** – network of providers from which a company buys products and services to produce and deliver a final product.

**“Trade finance”** – the financing of international trade flows.

**“Unique Product Identifier”** – the UPI’s purpose is to uniquely identify any OTC derivative product that an authority requires to be reported to a trade repository.

**“Unique Transaction Identifier”** – the primary purpose of the UTI is to uniquely identify individual OTC derivatives transactions that are required by authorities to be reported to trade repositories.

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<sup>4</sup> See <http://www.fsb.org/2014/10/key-attributes-of-effective-resolution-regimes-for-financial-institutions-2/>.

## Abbreviations<sup>5</sup>

ADIMA	Analytical Database on Individual Multinationals and their Affiliates (OECD)
AML/CFT	Anti-money laundering and combating the financing of terrorism
AnaCredit	Analytical Credit Datasets
AVID	Avox International Business Entity Identifier
BCBS	Basel Committee on Banking Supervision
BIC	Bank identification code
BIS	Bank for International Settlements
BMARS	Bond Market Access Record System (China)
CCP	Central counterparty
CDS	Credit default swaps
CGFS	Committee on the Global Financial System
CIBM	China interbank bond market
CLO	Collateralised loan obligation
CPIS	Coordinated Portfolio Investment Survey (IMF)
CPMI	Committee on Payments and Market Infrastructures
CRILC	Central Repository of Information on Large Credits (India)
CSDB	Centralised Securities Database (ECB)
EMIR	European market infrastructure regulation
EU	European Union
FATS	Foreign Affiliate Statistics, also called Activities of Multinational Enterprise (AMNE) statistics
FDI	Foreign Direct Investment
FSB	Financial Stability Board
GLEIF	Global LEI Foundation
GLEIS	Global LEI System
G-SIB	Global systemically important bank
G-SII	Global systemically important insurer
IAIS	International Association of Insurance Supervisors
IASB	International Accounting Standards Board
IBAN	International bank account number
IFC	Irving Fisher Committee on Central Bank Statistics (BIS)
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
ISIN	International Securities Identification Number
ISO	International Organization for Standardization
KYC	Know your customer
LEI	Legal Entity Identifier
LEI ROC	LEI Regulatory Oversight Committee
LOU	Local Operating Unit (of the Global LEI System)
MIC	Market Identifier Code
MiFID II	Markets in Financial Instruments Directive II (EU)
MiFIR	Markets in Financial Instruments Regulation (EU)
MNE	Multinational enterprise
OECD	Organisation for Economic Cooperation and Development

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<sup>5</sup> See Annex 1 for the abbreviations of national authorities mentioned in this report.

OTC	Over-the-counter (derivatives)
PLI	Privacy law identifier (US)
QIS	Quantitative impact study (BCBS)
Repos	Repurchase agreements
RIAD	Register of Institutions and Affiliates Database
RSSD ID	Research Statistics Supervision Discount ID (US)
S-b-s	Security-by-security
SCSI	Standing Committee on Standards Implementation (FSB)
SWIFT	Society for Worldwide Interbank Financial Telecommunication
UCITS	Undertakings for Collective Investments in Transferable Securities
UIC	Ultimate Investing Country
UK	United Kingdom
UPI	Unique Product Identifier
US	United States
UTI	Unique Transaction Identifier
VAT	Value-added tax
XBRL	eXtensible Business Reporting Language

## Executive Summary

**Since its endorsement by the G20 in 2012, the Global LEI System (GLEIS) has been successfully brought into operation, with over 1.4 million entities uniquely identified by an LEI in more than 200 countries.** Widespread coverage has been achieved in some financial market segments, with LEIs identifying reporting entities for close to 100% of the gross notional outstanding for over-the-counter (OTC) derivative trades in most FSB jurisdictions, and securities issuers for around 78% on average of the outstanding amounts of debt and equity securities in FSB jurisdictions. In these areas, the LEI has come the closest to meeting the G20's objective to "encourage global adoption of the LEI to support authorities and market participants in identifying and managing financial risks".

**Most FSB jurisdictions have implemented rules mandating LEI use in at least one area.** Adoption has been most successful when the LEI has been mandated by regulators as part of an international standard-setting effort (such as reporting of OTC derivatives, where the LEI is used by regulators in some jurisdictions as a reporting entity or counterparty identifier), or across multiple market segments in the same region (European Union (EU)).

**The regulatory uses of the LEI are multiple and the benefits can be substantial.** The LEI standardises identification of legal entities at the global level, to support the management and analysis of large datasets. Benefits derived from LEI implementation include enhancing regulators' surveillance by tracking market abuse across institutions, products and jurisdictions. The LEI can also assist regulators' and market participants' aggregation and more flexible retrieval of granular data on entities from multiple sources (e.g. security-by-security databases), as well as the analysis of counterparty risks, interconnectedness (e.g. through the identification of common exposures or funding sources) and complex group structures (due to the recent addition of so-called "Level 2" data on 150,000 parent relationships). In some jurisdictions, the LEI is also used in reporting to credit registries, and for supporting the resolution of banks.

**Many in the financial industry are supportive of the LEI, citing substantial existing and potential benefits stemming from its use.** Several financial institutions and trade associations have called on authorities to mandate the use (and renewal by entities) of the LEI, both to facilitate regulatory reporting and to increase the efficiency and lower the costs of customer identification, transaction processing and data aggregation.

**Notwithstanding this progress, the LEI has far to go to meet the G20's objective.** LEI adoption remains low outside securities and derivatives markets, which limits the ability to effectively support further regulatory uses or to capture positive externalities and maximise network effects to the market as a whole. More efforts should be made both at national and international levels to promote LEI adoption and enhance the benefits to authorities and market participants from its use by addressing identified obstacles.

**LEI adoption remains uneven across countries.** LEI coverage is concentrated in Canada, the EU and the United States (US), where it spans from 2% to 7% of all eligible legal entities, and is much lower elsewhere. Several FSB jurisdictions – particularly in Asia and emerging economies – have not taken steps to mandate use of the LEI in any area, or have adopted rules requiring LEI use only if the entity already has one. Few jurisdictions have plans for new strategies to increase adoption. Standard-setting bodies have only recommended the LEI in

their policy making for certain areas to date and, in most of those cases – for anti-money laundering and combating the financing of terrorism (AML/CFT), risk data aggregation and correspondent banking – they have not proposed timelines for adoption and the use of the LEI was left as an optional element.

**LEI coverage remains too low to encourage new industry or regulatory uses or to reach a tipping point where voluntary take-up by market participants would suffice to propel further adoption.** Higher LEI coverage (including for non-financial corporations) would support regulatory uses such as for AML/CFT, as well as other business and industry uses such as know your customer (KYC) processes and the transfer of funds, especially across borders. In addition, while the parent entities of all global systemically important banks (G-SIBs) have an LEI, this is not usually the case for all of their subsidiaries or major counterparties. Without higher LEI coverage of G-SIBs’ group entities, for example, the effectiveness of regulators’ and market participants’ analysis of interlinkages and common exposures across these firms, as well as the potential use of LEI in resolution planning for them, may be limited.

**A number of obstacles to further LEI adoption and implementation should be addressed. These include the current business model, which does not clearly align the current benefits and costs of LEI use for participants; a lack of LEI coverage for Level 2 (relationship) data; and insufficient links with other (in particular, business registry) identifiers.** Enhancing the business model by minimising the cost and administrative burden of LEI registration and maintenance for registrants, for instance through a greater reliance on third parties such as banks or business registries for data verifications and updates, may help to address some of these challenges. Exploring further use cases, improving relationship data availability and quality, and mapping to other identifiers would also expand LEI adoption.

### *Jurisdictions’ approaches and strategies to implement the LEI (section 3)*

- All FSB jurisdictions except one have implemented the LEI in at least some contexts. Almost all FSB jurisdictions have regulations referring to the LEI, although the number of rules varies widely. Out of the 101 rules published by FSB members, roughly half (49) mandate all or some of the entities subject to the rules to have an LEI. In other cases, the LEI is to be reported only if the entity already has one, or LEI reporting is optional. Only in 12 FSB jurisdictions is LEI renewal mandatory for at least some uses.
- The evolution and composition of LEI issuance strongly suggests that adoption was driven by regulatory requirements rather than by voluntary or optional programmes. Where regulatory adoption and renewal mandates were absent, LEI adoption and maintenance rates have generally been significantly lower.
- Very few jurisdictions (typically those with large financial markets) have implemented the LEI beyond OTC derivatives and securities transactions. Commonly, priority is given by jurisdictions to the identification of parties to financial transactions.
- Most jurisdictions report having explicit strategies in place to implement the LEI, but the scope of such strategies differs.<sup>6</sup> In some jurisdictions, the strategy is largely based

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<sup>6</sup> A “strategy” is defined here as a structured approach or action plan that would generally include a set of measures supporting LEI adoption (e.g. coordination between relevant authorities, communication with other stakeholders, preparation of laws and regulations).

on supporting voluntary LEI adoption (e.g. by increasing awareness of its benefits to market participants), while in others it includes specific rule setting. When jurisdictions report that they have a strategy in place, these strategies are evenly distributed between national and authority-specific strategies. Six jurisdictions do not have an LEI strategy. No jurisdiction plans for universal adoption of the LEI across all eligible legal entities.

#### *LEI coverage (section 4)*

- While LEI coverage in absolute terms is relatively low, it varies widely across FSB jurisdictions and is far higher for entities involved in OTC derivatives and securities transactions, for supervised financial intermediaries and for large non-financial companies. Coverage is also strong for the parent entities of large financial and non-financial groups, but is not complete for their subsidiaries.
- All but three FSB jurisdictions' central banks have an LEI, and all jurisdictions reported having at least one other public sector body with an LEI (typically, the main public debt issuer).

#### *Achievements and benefits (section 5)*

- The LEI is currently used for regulatory and other public sector tasks such as: monitoring financial risks; exposure aggregation in data reporting; statistical analysis; understanding the structures of multinational companies, market structure and trading networks; and facilitating market surveillance and compliance assessments.
- Benefits derived from LEI implementation include improved data analysis and, in some cases, cost savings. A significant proportion of FSB jurisdictions report that the use of LEI has led to improvements in data quality and analysis. Cost reductions resulting from regulatory LEI implementation were only cited by the FSB jurisdictions with the largest number of uses (EU members and US).
- Other LEI benefits include a uniform identification method for both foreign and domestic entities, and facilitating data aggregation and coordination across multiple jurisdictions and authorities.
- Several commercial market stakeholder responses highlighted the benefits associated with the use of the LEI in KYC and AML processes.

#### *Obstacles to adoption and implementation (section 5)*

- The usability of relationship data still falls short of authorities' expectations, as information on parent entities based on accounting consolidation, which was collected more recently, is inhibited by the absence of LEIs for 56% of the ultimate parent relationships (46% for child entities located in FSB jurisdictions). This is in part due to the fact that parent entities that do not trade certain types of products are outside the remit of financial regulators, which may need to be addressed by legislation, as was done for instance in Mexico. Other issues include the fact that this information cannot currently be collected by the GLEIS when it is confidential and that accounting consolidation rules do not always meet all the needs for relationship data.
- The perceived asymmetry of financial burden and benefits seems to be an issue across jurisdictions. This reflects a view from many in the private sector that those who benefit the most (i.e. financial authorities and some large financial institutions subject to

reporting obligations) contribute marginally to the financing of the system, whereas the entities that have to pay for LEI issuance and renewal – many of which are smaller in size – fail to see clear current benefits on their side, especially given the existence of low-cost business registries and the lack of other process enhancements enabled by having an international standardised identifier (e.g. digital authentication/identity).

- The existence of other identifiers – in particular, no-cost or low-cost national identifiers and of systems built around those identifiers – is seen by several jurisdictions as a barrier to LEI implementation, in the sense that it reduces incentives for jurisdictions to promote mandatory LEI adoption, especially in markets where firms undertake limited cross-border activities.

#### *Way forward in advancing LEI adoption (section 6)*

- Prospective LEI use case examples identified by jurisdictions and market participants include digital authentication, KYC, payment messaging, trade/supply chain finance efficiencies, e-invoicing and financial institution resolution.

## **Recommendations**

The FSB remains committed to a broader use of the LEI globally in order to meet the G20's objective. To accomplish this, and in light of the above findings, there are four sets of recommendations addressed to: FSB member jurisdictions, the FSB itself, relevant standard-setting bodies and international organisations, and the LEI Regulatory Oversight Committee (LEI ROC) and Global LEI Foundation (GLEIF).

#### 1) FSB jurisdictions should:

- a. Follow-up on CPMI-IOSCO guidance that strongly encourages authorities to require the use of LEIs for the identification of legal entities in the data reported to trade repositories for OTC derivatives.
- b. Consider requiring the use and timely renewal of the LEI in reporting or disclosure frameworks, for the identification of all entities in major financial groups, a wider set of financial market participants and infrastructures, their counterparties, and related entities (including direct and ultimate parents), especially in a cross-border context.
- c. Explore ways to promote further LEI adoption, for instance by fostering nationwide implementation strategies to maximise the cross-sectoral benefits of the LEI; communicating on LEI benefits through public outreach initiatives; leading by example in obtaining LEIs for the central bank and other public sector bodies, especially issuers of public debt; and considering the potential for LEI use before introducing new identifiers.

#### 2) The FSB will:

- a. Explore the potential role of the LEI in its work, for instance in the resolution of financial institutions and on financial innovation issues.
- b. Work with standard-setting and industry bodies to facilitate adoption of the LEI for all group entities and major counterparties of global systemically important

financial institutions, as well as for the clearing members of central counterparties (CCPs) and their ultimate parents, in order to support the timely analysis of risk exposures and interdependencies.

- c. Facilitate, by working with standard-setting and industry bodies, the effective implementation of the LEI option in payment messages to help address the decline in the number of correspondent banking relationships.
- 3) The relevant standard-setting bodies (BCBS, CPMI, IAIS, IOSCO) and international organisations (IMF, OECD, World Bank) should review and consider ways to embed or enhance references to the LEI in their work, in order to facilitate the implementation of relevant LEI uses for authorities and market participants. This could involve, for example, guidance on the inclusion of the LEI in disclosures of data on entities as well as promoting LEI use in securities transactions and cross-border payments.
  - 4) The LEI ROC and GLEIF should:
    - a. Consider enhancements to the LEI business model to lower the cost and administrative burden for entities acquiring and maintaining an LEI. These could involve, for instance, adjusting funding approaches to align the benefits and costs for users more closely, and exploring ways to foster complementarity between the issuance and maintenance of the LEI and other processes involving similar tasks.
    - b. Consider data quality process enhancements to increase the reliability of the LEI data so as to improve its usability by market participants and regulators, including processes to encourage and monitor updates of LEI reference data.
    - c. Work with industry and the public sector to raise awareness of the benefits of the LEI and encourage voluntary adoption by documenting existing uses, or by supporting pilot programs or research projects on promising new uses.
    - d. Enhance the scope and usability of Level 2 (relationship) data by:
      - i. considering cost-effective and reliable ways to add relationship data that would increase the value of the LEI (e.g. confidential relationships subject to access rights and appropriate controls; beneficial owners; other definition of parents); and
      - ii. expanding the coverage of such data, for instance by conducting targeted LEI adoption campaigns for large multinational firms and by facilitating relationship reporting by parents of their group entities.

## 1. Introduction

The global financial crisis showed the difficulty of identifying counterparties to financial transactions across borders with accuracy and speed. To address this problem, in 2011 the G20 supported the creation of an LEI and called on the FSB to take the lead in helping coordinate work among the regulatory community to prepare recommendations for the appropriate governance framework for the GLEIS. At the June 2012 Los Cabos Summit, the G20 Leaders endorsed the FSB report *A Global Legal Entity Identifier for Financial Markets* and encouraged “global adoption of the LEI to support authorities and market participants in identifying and managing financial risks”.<sup>7</sup> Since then, the FSB has continued to support the LEI implementation, including by establishing in 2014 the GLEIF as the operational arm of the system that federates local LEI issuers under the oversight of the LEI ROC.

This thematic review offers a timely opportunity to evaluate the progress made by FSB members – both national authorities and international bodies – in response to the G20 Leaders’ call. In particular, the objectives of the peer review are to:

- a. Take stock of the approaches and strategies used by FSB members to implement the LEI, including its adoption for regulatory requirements by FSB member jurisdictions.
- b. Assess whether current levels and rates of LEI adoption are sufficient to support the ongoing and anticipated needs (particularly financial stability objectives) of FSB member authorities.
- c. Identify the challenges FSB members face in further advancing the implementation and use of the LEI, and make recommendations (as appropriate) to address common challenges.

In order to avoid duplication with the LEI ROC and GLEIF work, the peer review does not examine the governance or technical functioning of the GLEIS but rather focuses, across the FSB membership, on LEI implementation approaches and uses for financial stability purposes and on possible strategies to further global adoption.

The primary source of information for the peer review was responses to a questionnaire by FSB member jurisdictions. In addition, the review team collected information from SSBs and international financial institutions on areas in the scope of the review (see Annex 6). In terms of stakeholder outreach, the FSB issued a call for public feedback in August 2018 on the areas covered by the review. The team also held a roundtable with stakeholders in London in December 2018 to exchange views on the benefits/uses of the LEI and related strategies and challenges with respect to global LEI adoption. Annex 5 provides a summary of the main takeaways from the written public feedback and from the roundtable.

The report is structured as follows:

- Section 2 provides some background on the LEI, including its governance and certain key features;

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<sup>7</sup> See [http://www.fsb.org/wp-content/uploads/g20\\_leaders\\_declaration\\_los\\_cabos\\_2012.pdf](http://www.fsb.org/wp-content/uploads/g20_leaders_declaration_los_cabos_2012.pdf) and <http://www.fsb.org/2012/06/fsb-report-global-legal-entity-identifier-for-financial-markets/>.

- Section 3 describes the approaches and strategies of FSB members in implementing the LEI, including regulatory and non-regulatory tools and areas of coverage;
- Section 4 examines LEI coverage in areas relevant for financial stability, describing the evolution of LEI issuance over time and the current rates of issuance by jurisdiction and across sectors;
- Section 5 highlights achievements and challenges in further advancing LEI adoption; and
- Section 6 identifies possible ways to address challenges in advancing LEI adoption.

Annex 1 provides a list of abbreviations of financial authorities in FSB jurisdictions; Annex 2 describes identifiers other than the LEI used by jurisdictions; Annex 3 summarises jurisdictions' strategies to implement the LEI; Annexes 4a and 4b provide details on LEI coverage for parties to OTC derivatives transactions and for securities issuers, Annex 4c describes the reasons that entities do not provide information on their direct and ultimate parents, and Annex 4d presents LEI coverage in the customer base of a sample of 21 members of the Global Financial Markets Association (GFMA) and the International Swaps and Derivatives Association (ISDA). Annex 5 provides a summary of public feedback regarding the LEI. Finally, Annex 6 summarises the uses (current and projected) by SSBs of the LEI in policy work, data collection or research projects, as well as any limitations they identified.

## **2. Background**

The LEI is a 20-character, alpha-numeric code that uniquely identifies legally distinct entities that engage in financial transactions. LEIs are linked to reference data which provide basic information on the legal entity itself, such as the name and address, and its ownership (direct and ultimate parent entities). The LEI is the result of joint public and private sector efforts and the structure and fundamental features of the LEI code were defined in a standard set by the International Organization for Standardization (ISO).<sup>8</sup>

The governance of the GLEIS, recommended by the FSB in 2012, has three layers:

- LEIs are issued by 33 Local Operating Units (LOUs), some of which are from the public sector (e.g. business registries, national statistical offices) or the private sector (e.g. numbering agencies issuing the International Securities Identification Number (ISIN), stock exchanges). Any organisation can apply for accreditation. Some LOUs operate in multiple countries, while others specialise in their domestic jurisdiction.
- These LOUs are accredited by the GLEIF, a non-for profit organisation established by the FSB in 2014, which also monitors LOU compliance with LEI standards, collects LEI codes in a centralised database and publishes LEI data.

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<sup>8</sup> See <https://www.iso.org/standard/59771.html>.

- The LEI Regulatory Oversight Committee (LEI ROC), a group of more than 70 member public sector authorities (including the FSB and 34 FSB member agencies) and 18 observers, oversees the GLEIF and establishes policy standards for the GLEIS.<sup>9</sup>

As recommended by the FSB, the LEI is a non-proprietary system with free use of LEIs and related reference data for regulators and the public, and portability of LEIs between competing LOUs, among other features.<sup>10</sup> The GLEIS relies on self-registration, whereby registrants are responsible for the accuracy of their data (see Box 1).

### **Box 1: Self-registration of LEIs**

Only an entity eligible to receive an LEI or its authorised representative may apply for an LEI code. The permission of the LEI registrant to perform an LEI registration on its behalf by a third party is considered to satisfy the requirements of self-registration only if the registrant has provided explicit permission for such a registration to be performed. This feature is meant to reduce the risk that several LEIs could be requested for the same entity, and ensure that entities have the primary responsibility for the accuracy of their data. LOUs are also required to check data against reliable sources (public sources such as a business registry, private legal documents) prior to publishing the LEI and associated reference data, and to encourage updates.

The contractual relationship between LOUs and the entity supports the provision of accurate and up-to-date information by registrants. In particular, entities commit to provide true, full and authentic information, review the accuracy of this information at least annually and promptly submit any changes. These commitments are for the life of the entity, unless the entity chooses to abandon any use of the LEI and terminates the contract without porting its LEI to another LOU.

The GLEIS is funded by fees paid by entities when registering and renewing annually their LEI registration, on a cost-recovery basis: a portion of the fee (\$11 in 2019) funds the GLEIF (paid by LOUs to the GLEIF). LOU fees vary from around \$55-220 for new issuance of an LEI, and \$35-125 for LEI renewals. In almost all jurisdictions, users can acquire an LEI for \$65 (first issuance) and \$50 (renewals) or less, including a zero fee in China (but only for Chinese entities). This is a significant reduction from earlier years, with prices more than halving in many jurisdictions: for instance, in May 2016, the three largest issuers at the time, which were available in most jurisdictions, charged between \$160-219 for first issuance and \$103-159 for renewals, plus VAT where applicable. Prices are expected to be further reduced in 2019 due to the reduction of the GLEIF fee to \$11, from \$17 in 2018.

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<sup>9</sup> See <https://www.leiroc.org/>.

<sup>10</sup> See <https://www.gleif.org/en/lei-data/access-and-use-lei-data>.

### 3. Approaches and strategies to implement the LEI

This section describes the implementation approaches adopted by FSB members, including whether sectoral rules have been issued or whether other approaches have been chosen, and the main areas covered by those rules. It also discusses whether rulemaking was part of a comprehensive strategy at the jurisdiction level or by individual authorities. As almost all regulations in EU member states result from EU-level rulemaking, the EU is presented as a single jurisdiction in this section, except where something specific to a member jurisdiction is described.<sup>11</sup>

#### *Implementation approaches*

**Almost all FSB jurisdictions have regulations referring to the LEI, although the number of rules in each varies widely (see Graph 1).** The EU and US have each adopted more than 20 rules, while Canada and Australia have implemented six and four respectively. Twelve other jurisdictions<sup>12</sup> have issued up to three rules that have been implemented. Two jurisdictions (Indonesia and South Africa) have issued no final rules to date, although South Africa has published a draft rule.

**These regulations have differing expectation of entities.** Under some rules, entities must have an LEI (‘required’). Under other rules, use of the LEI is mandatory only if the entity already has one (‘requested’).<sup>13</sup> Under other rules, the use of the LEI is optional.

**Roughly half (49) of the 101 rules published by FSB members mandate some or all entities subject to their rules have an LEI.** In other cases, the LEI is requested to be reported only if available or LEI reporting is optional. Argentina, Australia, Brazil, China, Japan and Korea have implemented the LEI in their regulations exclusively through provisions that do not mandate entities to acquire an LEI (described as “requested” or “optional” in Graph 1).

The figures in Graphs 1 and 3 suggest that adoption was driven by mandatory regulatory requirements rather than by voluntary or optional programmes. Where regulatory adoption and renewal mandates were absent, LEI adoption and maintenance rates were significantly lower (see section 4). This is consistent with views expressed in public feedback (see Annex 5).

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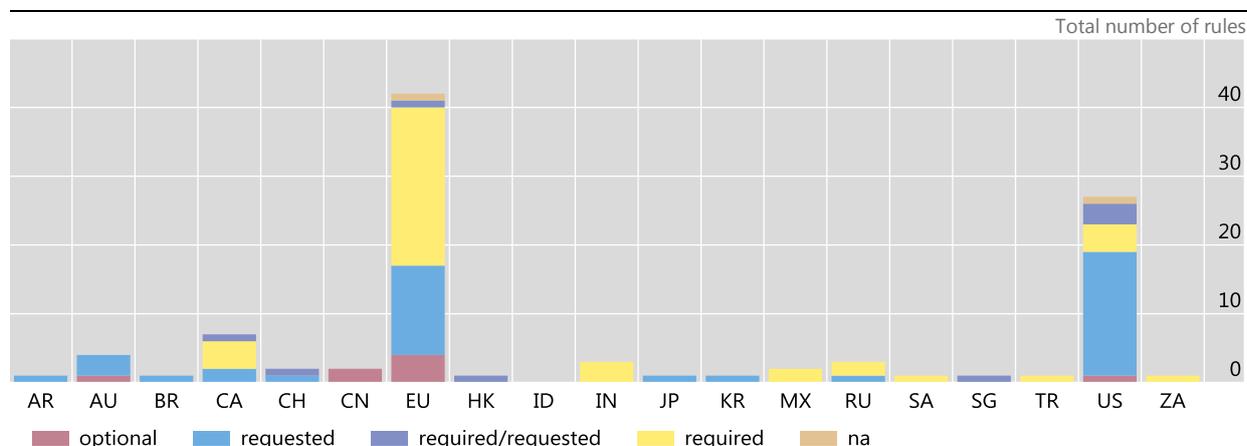
<sup>11</sup> Some other LEI regulations, in addition to those issued at the EU level, were adopted in the United Kingdom.

<sup>12</sup> Argentina, Brazil, China, Hong Kong, India, Japan, Korea, Mexico, Russia, Saudi Arabia, Singapore and Turkey.

<sup>13</sup> The “requested” category includes cases, such as Australia’s OTC derivative transaction reporting rules, where the LEI is mandated as the first of a “waterfall” of the three global standard identifiers (the other options being AVIDs or BICs) for non-natural entities that are parties to a reportable OTC derivative transaction. In practice, Australia noted that parties without one of the three standard identifiers will obtain an LEI to comply. However, entities that have an AVID or BIC are not mandated to obtain an LEI. A similar framework exists in Korea.

## Number of rules implementing the LEI

Graph 1



Notes: “optional” means the LEI does not have to be reported as part of a transaction, irrespective of whether the entity has one; “requested” means that entities have to provide an LEI only if they already have one; and “required” means that entities are mandated to have an LEI. Required/requested means that the regulation combines both approaches depending on the entities. N/A refers mainly to cases where the regulation does not apply to the entities, but to the information provided by regulators in public disclosures or for cooperation between regulators.

Jurisdiction acronyms here and through the remainder of the report are as follows: AR=Argentina, AU=Australia, BR=Brazil; CA=Canada; CH=Switzerland; CN=China; DE=Germany; ES=Spain; EU=European Union; FR=France; HK=Hong Kong SAR; IN=India; ID=Indonesia; IT=Italy; JP=Japan; KR=Korea; MX=Mexico; NL=Netherlands; RU=Russia; SA=Saudi Arabia; SG=Singapore; TR=Turkey; UK=United Kingdom; US=United States; ZA=South Africa.

Source: LEI ROC and survey of FSB members.

**Rationales differ for choosing whether the use of the LEI in a particular sector should be required, requested or optional.** Three authorities sought to minimise the burden: one authority (US SEC), by requiring filers in certain cases to report an LEI only if the entity already has one, and two authorities (Australia – ASIC, Japan) permitting AVID or bank identification code (BIC) as alternatives. Other authorities are of the view that mandatory reporting may be necessary to increase the coverage (Mexico, UK). The analysis of costs and benefits of requiring versus requesting an LEI were reported as taken into account in Canada, Hong Kong, Germany, Italy, Switzerland, and the US. Korea notes the lack of regulatory powers to impose strict obligations on certain types of entities to obtain an LEI, opting for a “requested” approach (although Korea intends to move to an approach where financial investment business entities, collective investment schemes and CCPs would all be required to have an LEI). A phased or differentiation approach (i.e. requiring LEI only from certain types of entities) has been adopted in Hong Kong and Singapore. In the US, the rationale for requiring or requesting an LEI depends on the authority.<sup>14</sup>

<sup>14</sup> The CFTC and the OFR called for mandatory LEI adoption to improve data quality; the SEC mandated LEI reporting in certain cases; and the FRB, OCC, FDIC and other members of the Federal Financial Institutions Examination Council implemented a requested approach. The FRB reported adopting the requested approach given the existence of another, more comprehensive identifier (Federal Reserve’s Research Statistics Supervision Discount ID), while the FDIC and OCC noted the regulatory burden on reporting entities in their

**The scope of LEI implementation has primarily focused on the identification of parties to financial operations** (OTC and exchange-traded derivatives, investment activities, equity markets, repos, securities transactions, securities financing transactions, etc). This is in large part due to international efforts in this area. International SSBs identified early on that the LEI was needed for OTC derivatives aggregation,<sup>15</sup> and requirements were subsequently introduced in major markets.<sup>16</sup> The CPMI-IOSCO final technical guidance to authorities on UTIs<sup>17</sup> has selected the LEI as the code to identify the party generating the UTI. The EU requires use of the LEI in reports of both exchange-traded and OTC derivatives.

- The high correlation between international standard-setting, subsequent national implementation, and the relatively high number of LEIs issued for market participants active in the transactions covered by regulatory requirements, suggests that this has been an effective approach to promote global adoption of the LEI.

Jurisdictions suggested other additional reasons for this focus in scope. Two jurisdictions (China, Indonesia) note that authorities should prioritise LEI implementation in markets with high share of international participation (or where international participation is desirable) and systemic importance. The US Office of Financial Research (OFR) observes that its strategy seeks the adoption of the LEI as the principal identifier for legal entities engaging in financial market transactions in the US, with a priority placed on those actively engaging in such transactions and which may pose, contribute to, or be endangered by financial stability risks. The European Securities and Markets Authority (ESMA) notes that it is easier to require the LEI for the entities under direct supervision of an authority (i.e. regulated entities).<sup>18</sup> A progressive approach, where LEI is first implemented for the financial sector and then to other sectors, is deemed preferable by Italy. The UK notes that a holistic approach to implementation should be considered as some rules may affect others, and prefers a progressive approach like Italy. The US notes that it is easier to implement LEIs in new regulations rather than in existing regulations, where other identifiers already are used to comply with these existing regulations. **Only Australia, Canada, the EU, India, Mexico, Russia, Switzerland and the US have implemented rules on the LEI beyond OTC derivatives (see Table 1).** Argentina, Brazil and China have not implemented rules on derivatives, but have used the LEI in other areas.

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decision to adopt this approach, given the existence of nearly 5,000 small community banks as well as over 2,700 credit unions under \$100 million in total assets.

<sup>15</sup> The FSB noted in its September 2014 *Feasibility study on approaches to aggregate OTC derivatives data* ([http://www.fsb.org/wp-content/uploads/r\\_140919.pdf](http://www.fsb.org/wp-content/uploads/r_140919.pdf)) that “counterparty identifiers (LEI) are required to accumulate accurate position data across TRs. The LEI with hierarchy (for consolidation purpose) is also needed for some mandates at least in a second step when the fully fledged LEI is in place”. This study concluded that “it is critical for any aggregation option that the work on standardisation and harmonisation of important data elements be completed, including in particular through the global introduction of the Legal Entity Identifier (LEI), and the creation of a Unique Transaction Identifier (UTI) and Unique Product Identifier (UPI)”. Subsequently, in September 2015, CPMI and IOSCO have proposed use of the LEI for the identification of the primary obligors and the payer of payment streams of reportable derivative contracts (<http://www.bis.org/cpmi/publ/d132.htm>).

<sup>16</sup> For example, EMIR and MiFID II in the EU.

<sup>17</sup> See <http://www.bis.org/cpmi/publ/d158.pdf>. The final guidance on the UPI was published in September 2017.

<sup>18</sup> In the absence of direct supervision, ESMA suggests clarifying the consequences for a regulated entity failing to report the LEI code of a third party: for example, by clarifying that the regulated entity is no longer allowed to provide a service that would trigger the obligation to submit a report where the LEI of the third party is required, prior to the LEI being obtained from that third party.

Many jurisdictions are following or foresee a step-by-step approach with phased LEI implementation. Moreover, no jurisdiction plans to fully replace existing entity identifiers with the LEI, but the US-OFR noted that the expanded use of the LEI may gradually result in the phase-out of other identifiers, where these identifiers are repetitive and the LEI demonstrates its superiority vis-à-vis data quality and cost (see Annex 2 for more information on other identifiers used by FSB members).

**Table 1: Areas covered by published rules and regulations**

Jurisdiction	derivatives	securities regulations	asset management	credit rating agencies	securitisation	securities financing transactions	bank supervision	insurance supervision	resolution	payment services	credit registries	other	total
AR	0	0	0	0	0	0	1	1	0	0	0	1	3
AU	2	1	0	0	0	0	1	0	0	0	0	0	4
BR	0	0	0	0	0	0	0	0	0	0	0	1	1
CA	3	4	0	0	0	0	0	0	0	0	0	0	7
CH	1	1	0	0	0	0	0	0	0	0	0	0	2
CN	0	0	0	0	0	0	0	0	0	0	0	2	2
EU	1	23	2	2	1	1	4	3	1	1	1	2	42
HK	1	0	0	0	0	0	0	0	0	0	0	0	1
ID	0	0	0	0	0	0	0	0	0	0	0	0	0
IN	1	1	0	0	0	0	1	0	0	0	1	1	5
JP	1	0	0	0	0	0	0	0	0	0	0	0	1
KR	1	0	0	0	0	0	0	0	0	0	0	0	1
MX	1	0	0	0	0	0	0	0	0	0	0	1	2
RU	1	1	0	0	0	1	0	0	0	0	0	1	4
SA	0	0	0	0	0	0	1	1	0	0	0	1	3
SG	1	0	0	0	0	0	0	0	0	0	0	0	1
TR	1	0	0	0	0	0	0	0	0	0	0	0	1
US	5	5	4	1	1	1	6	1	1	0	0	2	27
ZA	1	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	21	36	6	3	2	3	14	6	2	1	2	12	108

Note: the same rule can cover several areas, for instance one rule in Argentina covers three sectors. Hence, totals may differ from Graph 1. Rules adopted by individual EU jurisdictions are not shown here.

A few jurisdictions have issued rules involving LEI use that is not related to financial regulation, such as with respect to energy markets in the US<sup>19</sup> and customs in China,<sup>20</sup> where the LEI is also used in the area of movable property pledge financing.<sup>21</sup>

**The extent to which LEI renewal is mandatory differs across jurisdictions.** In 12 jurisdictions (Canada, EU member states, India, Mexico, South Africa, Switzerland, and the US (FDIC, OFR, and FRB)) renewal of the LEI is mandatory for at least some uses. Some jurisdictions and authorities note that there are implicit requirements that do not directly ask for yearly renewal or reject the reporting if the LEI is lapsed, but require or encourage entities to keep their information up to date (Australia, Hong Kong, Japan, Singapore, US-CFTC and US-SEC<sup>22</sup>). Some other jurisdictions and authorities are considering implementation of renewal requirements in the future (Australia, China, Korea, Russia, Saudi Arabia and US-OFR<sup>23</sup>). The proportionality principle is often considered in this respect (European Insurance and Occupational Pensions Authority (EIOPA), ESMA, and Italy). ESMA distinguishes between entities that are subject to the reporting obligation, which are always obliged to renew their LEI (including the 350,000 financial and non-financial counterparties to derivative contracts, where the proportion of lapsed LEIs in reporting is below 1% for both the reporting counterparty and the other counterparty, some 10,000 investment firms,<sup>24</sup> and 40 credit rating agencies) and entities that are required to be identified in the report by reporting entities (41,000 issuers of financial instruments, potentially several millions of customers). For the latter, reporting entities are not required to ensure that the LEI of these third parties are duly renewed, but ESMA and the EU National Competent Authorities have clarified that, while the legal requirements cannot oblige reporting entities to renew the LEI of third parties, additional contractual obligations can be envisaged between the LOUs and the entity registering for an LEI. Given that it is one of the fundamental principles of the GLEIS, renewal is always part of those contractual arrangements.<sup>25</sup>

**Similarly, there are large differences in renewal rates across FSB jurisdictions, including within the EU (see Table 2).**

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<sup>19</sup> Use of LEIs for the reporting of connected entities by electric market participants.

<sup>20</sup> LEI as one of the enterprise identifiers that are to be provided when products pass through customs.

<sup>21</sup> The People's Bank of China is leading the role to facilitate the issuance and use of LEI in China, and reports developing an implementation strategy and action plan, expected to come into effect in the second half of 2019, covering most banking institutions and many non-bank financial institutions.

<sup>22</sup> The SEC noted that reporting entities should not knowingly submit inaccurate LEIs to the Consolidated Audit Trail (CAT), Order Approving the National Market System Plan Governing the Consolidated Audit Trail, Release No. 34-79318 (15 November 2016) at 200, available at <https://www.sec.gov/rules/sro/nms/2016/34-79318.pdf>.

<sup>23</sup> As of publication date of this report, US-OFR has made renewal mandatory with effect in February 2019.

<sup>24</sup> Many of which are captured in the previous figure, as counterparties of derivative contracts.

<sup>25</sup> See ESMA clarification at GFMA webinar on LEI (<https://www.esma.europa.eu/press-news/esma-news/webinar-new-update-use-lei-now-available>) and the general Briefing note on LEI on ESMA website: "to ensure that the reference data related to its own LEI code is up-to-date, each legal entity is asked to pay an annual maintenance fee" ([https://www.esma.europa.eu/sites/default/files/library/esma70-145-238\\_lei\\_briefing\\_note.pdf](https://www.esma.europa.eu/sites/default/files/library/esma70-145-238_lei_briefing_note.pdf)).

**Table 2: LEI renewal rates in FSB jurisdictions**

Jurisdiction	Renewal rate	Jurisdiction	Renewal rate
India	93%	France	69%
Japan	92%	Turkey	66%
Switzerland	81%	South Africa	58%
Spain	78%	Mexico	57%
Netherlands	77%	Saudi Arabia	57%
Germany	76%	China	57%
Hong Kong	74%	Canada	56%
Indonesia	71%	Russian Federation	53%
Australia	70%	United Kingdom	52%
Italy	70%	United States	46%
Korea	69%	Argentina	45%
Singapore	69%	Brazil	41%

Source: GLEIF, file 3 January 2019. The renewal rate is the proportion of LEIs with a legal address in the given jurisdiction that were due for renewal and have been renewed.

The LEI ROC progress report of April 2018 summarises the data quality concerns associated with lapsed LEIs, notably the risks that a second LEI could be issued to the entity (if for instance a name change was not timely recorded), confusion about the surviving LEI in case of mergers, difficulties in reconciling LEI data with other databases (e.g. different addresses), lack of management of challenges to LEI data by third parties (as LOUs cannot generally update a record without the agreement of the entity). Another concern is that data enhancements are not implemented for lapsed LEIs, for instance the collection of relationship data which is progressively rolled out.

### *LEI implementation strategies (see Annex 3)*

**Most jurisdictions (20) report having explicit strategies in place to implement the LEI.** However, in some jurisdictions, the strategy is largely based on supporting voluntary LEI adoption (e.g. by increasing awareness of its benefits to market participants), while others have implemented more concrete measures (e.g. rule setting) as elements of their strategy. Likewise, some EU members refer to the EU as the relevant jurisdiction to issue regulations/laws and have therefore not reported an explicit strategy at the national level, whereas other EU members have described as their strategy their LEI promotion activities, e.g. the organisation of public conferences targeting the non-financial sector.

**National<sup>26</sup> and authority-specific<sup>27</sup> strategies are approximately evenly distributed.** Argentina and Russia have implemented one or several LEI rules without defining a strategy, while Saudi Arabia reports having a strategy but have not yet issued any rules.

**Four jurisdictions do not have an LEI strategy and only two of them are in the process of developing one.** Argentina notes it is not a priority because of the relatively small depth of the

<sup>26</sup> Brazil, Canada, France, Hong Kong, India, Italy, Mexico, Saudi Arabia and Switzerland.

<sup>27</sup> China, EU, Germany, Japan, Korea, Russia, Singapore, Spain, Turkey, UK and US.

local capital and OTC derivatives markets, and because relevant entities are in any case getting an LEI when required by foreign rules. Indonesia notes that domestic identifiers are sufficient. Russia included the development of incentives to use LEI by market participants and implementation of the national standard, identical to ISO 17442 on the LEI, into the draft *Roadmap on implementation of the key priorities for the development of financial market of the Russia Federation for 2019-2021*, although detailed measures are yet to be developed. In South Africa, a public consultation has been launched, the outcome of which has to be awaited before implementation can start.<sup>28</sup>

**Many of the strategies in place include regulatory mandates for reporting, while others involve encouragement and support for voluntary LEI adoption.**

Many FSB jurisdictions (Canada, EU, India, Mexico, Switzerland, Turkey and US) made the LEI mandatory for certain transaction reporting purposes via adoption of legal acts or regulations. Most jurisdictions (in particular Canada, France, Germany, India, Italy, Japan, Mexico, Singapore, Switzerland, UK, and the US) highlighted as objectives the improvement of data quality in statistical and regulatory reporting, data analysis, facilitation of risk assessment (for both financial entities and authorities) for financial stability purposes, and/or reduction of the reporting burden by financial institutions. Hong Kong refers generally to benefits for the financial sector as a whole and the international trend towards adopting LEI as a global standard, as well as to the FSB's recommendation to actively promote the use of the LEI reporting for OTC derivatives reporting.<sup>29</sup>

Many jurisdictions (Brazil, Canada, Hong Kong, India, Italy, Japan, Mexico, Saudi Arabia, Switzerland, Turkey and US) report close cooperation between relevant national authorities when developing the strategy or drafting the respective legal acts or regulations.

Other jurisdictions perceive their strategy as providing general support for initiatives aiming at a voluntary adoption of the LEI. This was mainly explained by the lack of authority to set rules (e.g. in the case of EU member states the development of a strategy and the respective rule-setting are not at the national level but at the EU level).

**The majority of jurisdictions are using meetings, seminars, and conferences to increase awareness and promote adoption of the LEI.** Most jurisdictions (all but Argentina, Brazil, Hong Kong and Turkey) report having an ongoing dialogue between public authorities and the private sector. Furthermore, LOUs are striving to increase awareness and promotion via their own work and websites. Such efforts are not possible in some jurisdictions that do not have local LOUs.

**Among those with a jurisdiction-wide strategy, only a few jurisdictions (Canada, Germany, Hong Kong, Italy, and Switzerland) mention that a cost-benefit analysis was carried out in the context of the development of the strategy.** Even in those cases, the analysis was not specifically related to LEI adoption but rather concerned wider regulatory

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<sup>28</sup> See <https://www.fsca.co.za/Regulatory%20Frameworks/Documents%20for%20Consultation/Discussion%20paper%20on%20the%20implementation%20of%20Legal%20Entity%20Identifiers%20-%202019%20November%202018.pdf>.

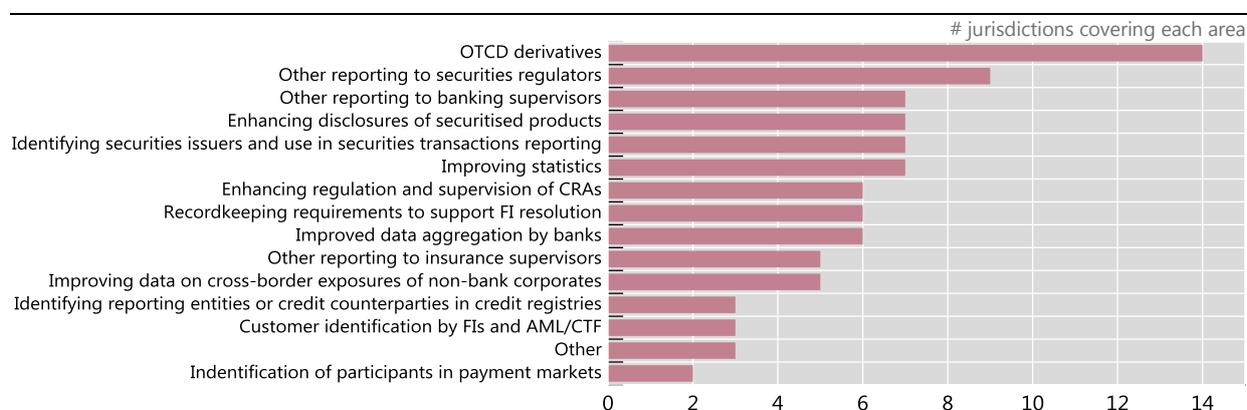
<sup>29</sup> See the February 2018 FSB peer review report of Hong Kong for details (<http://www.fsb.org/2018/02/peer-review-of-hong-kong/>).

measures. In Hong Kong a non-quantitative cost-benefit analysis was undertaken when developing the strategy. Japan notes that, in spite of efforts to raise awareness and promote LEI implementation, entities not subject to trade reporting generally had difficulties in recognising the benefits of a broad adoption of the LEI. Other cost-benefits analyses conducted as part of specific rulemaking, for instance in the EU and US, are described in section 5.

**Implementation strategies most commonly cover OTC derivatives reporting and other reporting to securities regulators.** In contrast, there have been fewer strategies covering identification in credit registries and payments or application for AML/CFT purposes (see Graph 2).

Areas covered (fully or partly) by LEI strategies in FSB jurisdictions

Graph 2



Source: Responses to peer review questionnaire

**Almost none of the jurisdictions with an LEI strategy currently have plans to change their approaches.** The UK intends to raise the profile of the LEI and its applications in the public and private sector to help support broader adoption and application as part of strategic initiatives. In the US, the CFTC has announced that its regulations relating to swap data reporting will be revised, and the revisions may include changes to the sections relating to LEI, though the CFTC expects to continue to require LEIs for the identification of swap counterparties. Many jurisdictions have begun to assess the success of their existing strategy by the number of LEIs issued or the degree and scope of coverage (e.g. France, Italy, Japan, Mexico, Switzerland, and US), or by compliance in reporting (India, Italy, and Mexico). Other jurisdictions are, however, still in a wait-and-see mode as they consider assessing the success of the chosen strategy as premature. This holds for jurisdictions that have developed their strategy recently (e.g. Saudi Arabia).

**The LEI has replaced or been linked with existing identifiers in a few jurisdictions (see Annex 2), but no jurisdiction plans for universal adoption of the LEI (i.e. implementing the LEI for all eligible entities including those outside financial sector).** Germany intends to discuss the issue as part of work to reduce the administrative costs in statistics, and Saudi Arabia is considering it as part of the process of introducing a unifying identification system (the 10 numeral identification system) that would be compatible with the LEI. Two

jurisdictions (Mexico and Switzerland) considered, but decided against, implementing a plan for universal adoption. In Mexico, there have been discussions with the federal tax authority on incorporating the LEI into the tax registry, but no final decision has been taken and cost is one of the main issues. In Switzerland, the Unique Business Identification Number system is run by the Federal Government and is free of charge. Adopting the LEI as the (legal) universal identifier would require substantial amendments to existing legislation, processes, and existing infrastructure used by a large number of users and could entail data quality issues.

## 4. LEI coverage in areas relevant for financial stability

### *Evolution of LEI issuance*

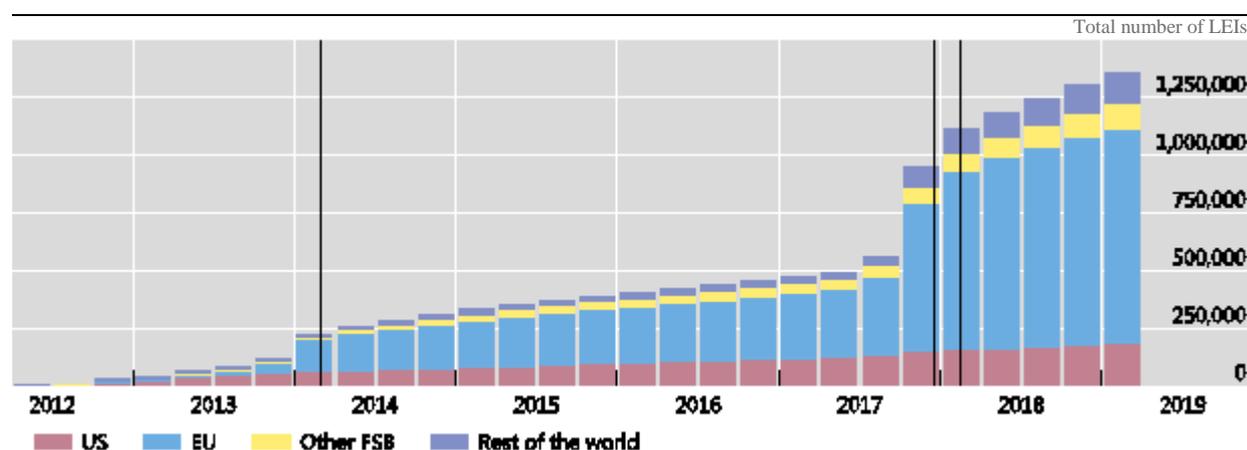
**The evolution of LEI issuance reflects the large role played by regulations in promoting its adoption (see Graph 3).** The number of issued LEIs, particularly but not exclusively in the EU, increased markedly with the adoption of EMIR (and its subsequent revision) and of MiFID II in the EU. Similarly, the number of LEIs is the largest in the EU and US, which have adopted multiple rules referring to the LEI.

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#### Cumulative issuance of LEIs by group of jurisdictions

End-of-quarter figures

Graph 3



The vertical lines indicate the January 2014 EMIR reporting requirements, the November 2017 EMIR revision and the January 2018 MiFID II implementation, respectively.

Source: GLEIF.

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### *Overall rates of issuance*

**The issuance of LEIs, in terms of number of codes and percentage coverage of eligible legal entities, is mainly concentrated in Canada, the EU<sup>30</sup> and the US (see Graph 4).** LEI codes have been issued for legal entities incorporated in more than 220 countries; however, more than 50% of the jurisdictions have less than 100 codes (see Graph 5).

**LEI coverage in absolute terms is still relatively low and varies widely across FSB jurisdictions.** It is estimated that coverage in Canada, the EU, and the US ranges from 2% to 7% of all eligible legal entities.<sup>31</sup> A second group of jurisdictions (Australia, Hong Kong, Japan, Korea, Saudi Arabia, Singapore and Switzerland) has an estimated coverage between

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<sup>30</sup> 10% of LEIs are from entities in the UK, 8.7% in Germany, 7.5% in Italy, 7.4% in the Netherlands, 7% in Spain and 5.4% in France.

<sup>31</sup> The total number of eligible entities has been calculated with reference to corporates only, i.e. excluding sole proprietors that may in some cases be LEI eligible but whose number is not always available at country level. Note that calculating precise coverage ratios does not always lead to exactly comparable results due to the different sources and methodologies used to identify the eligible entities population.

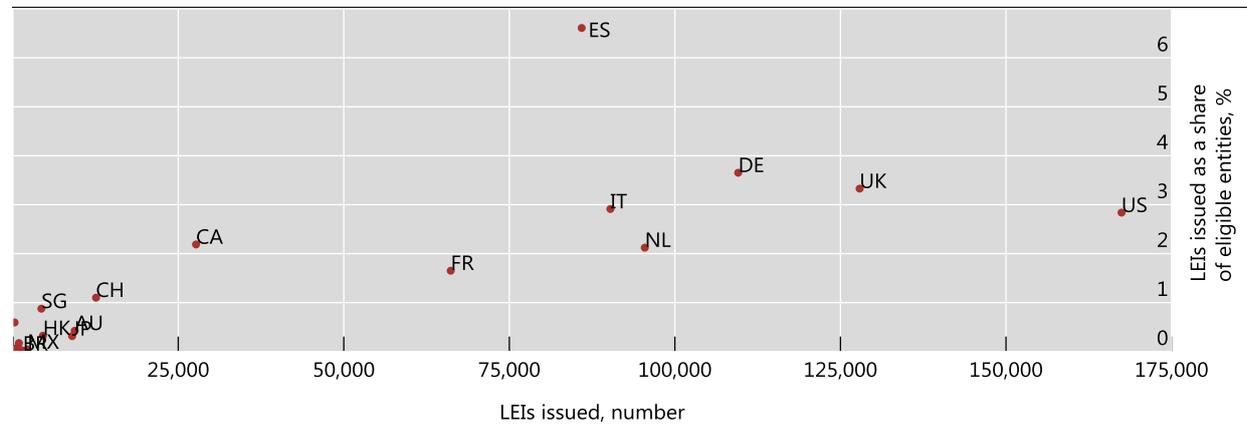
0.2% and 2%; the remaining jurisdictions have a coverage lower than 0.1% (Brazil, Indonesia, Mexico, Russia and Turkey) or is unknown (Argentina, China, India and South Africa).

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### LEI adoption (by count and % of eligible entities) in FSB jurisdictions

As at November 2018

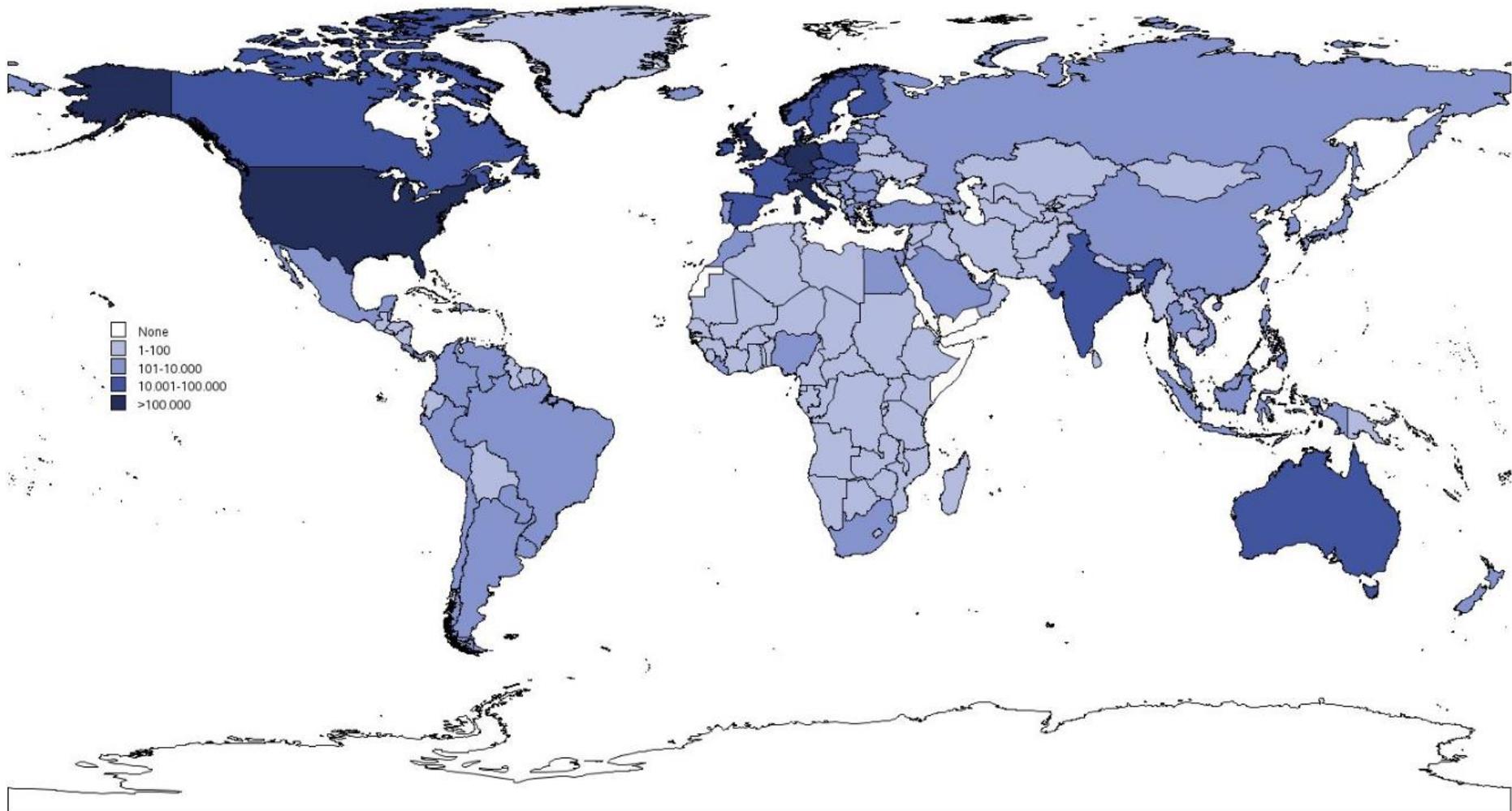
Graph 4



Source: GLEIF and responses to peer review questionnaire.

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Graph 5: LEI issuance by jurisdiction as of 31 March 2019



Notes: Graph shows LEI issuance by jurisdiction. Source: <https://www.gleif.org/en/lei-data/global-lei-index/lei-statistics>.

### *Sectoral coverage*

**LEI coverage is far higher for entities involved in OTC derivatives and securities transactions, as well as for financial intermediaries.** This is because, as noted in section 3, these sectors have been the focus of legislation mandating LEI adoption, largely driven by financial stability objectives.

With regard to OTC derivatives, many FSB jurisdictions report coverage close to 100% for trades where the reporting entity is identified with an LEI, although lower rates are reported by some jurisdictions for the LEI coverage of the transactions' counterparties (see Table 3).

**Table 3: Percentage of new OTC derivatives trades (by gross notional outstanding) where the reporting entity or counterparty is identified with an LEI**

<b>Transaction coverage</b>	<b>For reporting entities</b>	<b>For counterparties</b>
96-100%	AU, CA, FR, DE, HK, IN, IT, JP, MX, NL, RU, SG, ES, UK, US, TR	CA, ES, EU, FR, DE, HK, IN, IT, NL, RU, UK, US
90-95%	-	JP, SG
80-89%	-	AU, TR
50-79%	-	-
<50%	-	MX
Unavailable	AR, BR, CH, CN, ID, KR, SA, ZA	AR, BR, CH, CN, ID, KR, SA, ZA

Source: Jurisdiction responses to peer review questionnaire. See Annex 4a for detailed figures.

In addition, a very large portion of securities issuers in terms of outstanding amounts is covered by an LEI. A detailed table produced by the European Central Bank (ECB) on the basis of its Centralised Securities Database (CSDB) suggests that, at the global level, more than 70% of securities in terms of outstanding amounts issued may be issued by entities with an LEI (79% for FSB jurisdictions vs 65% in the rest of the world). Based on these ECB estimates, FSB jurisdictions with the lowest overall LEI coverage for securities issuers (in terms of outstanding amounts) are Brazil, China, Hong Kong, India, Indonesia, Mexico and South Africa, with coverage between 36% (China) and 65% (South Africa), whereas other jurisdictions are assessed to have a coverage above 70%, including nine jurisdictions above 90% (see Table 4 below, and Annex 4b).

**Table 4: Estimated percentage of LEI coverage for securities issuers in FSB jurisdictions, by outstanding amount**

<b>Outstanding amount</b>	<b>Non-financial corporations</b>	<b>Financial institutions*</b>	<b>General government</b>	<b>Total economy*</b>
90-100%	CH, DE, ES, EU, FR, IT, NL, UK, US	AU, CA, CH, DE, ES, EU, FR, HK,	AR, AU, BR, CA, DE, ES, EU, FR, HK, ID, IT, JP, KR, MX, NL,	AR, CH, DE, ES, EU, FR, IT, NL, UK

Outstanding amount	Non-financial corporations	Financial institutions*	General government	Total economy*
		IT, NL, RU, SA, SG, TR, UK	RU, SA, SG, TR, UK, US, ZA	
50-89%	AR, CA, IN, JP, KR, MX, RU, SA, SG, TR	AR, CN, ID, IN, JP, KR, MX, US, ZA	CH	AU, BR, CA, HK, ID, IN, JP, KR, MX, RU, SA, SG, TR, US, ZA
<50%	AU, BR, CN, HK, ID, ZA	BR	CN, IN	CN

Notes: LEI coverage is based on data from the ESCB's CSDB. For non-EU FSB member jurisdictions, the CSDB data cannot be checked with the same depth as for the EU countries, and there may be some coverage gaps for securities and their issuers. Thus, for non-EU FSB jurisdictions, the coverage information should be treated as approximate estimates.

\*: Data cover all subsectors but money market funds and non-money market investment funds. See Annex 4b for detailed coverage by jurisdiction.

### Coverage varies widely for other sectors and is skewed towards financial sector entities.

Although very few jurisdictions report sectoral breakdowns, the coverage of the financial sector is reportedly not lower than 10%, and reaches 80% in the case of an EU jurisdiction. The coverage is even higher in some financial sub-sectors: for example, 91% of EU credit institutions (according to ECB)<sup>32</sup> and 88% of EU insurance companies (according to EIOPA)<sup>33</sup> have an LEI. In the US, out of the 1,261 national banks and federal savings associations supervised by the OCC, only 330 have an LEI (26%).

The lower figures reported by jurisdictions for the overall coverage in Graph 4 (less than 7%) are due to the non-financial sector, which includes many more legal entities and is less impacted by the regulations adopted to date. In absolute terms, the ratio between non-financial and financial entities owning an LEI spans from 1:1 to 10:1 depending on the jurisdiction.

Similarly, coverage appears higher among customers of cross-border financial institutions compared to the average of corporate entities, perhaps because the former are more likely to use financial instruments subject to LEI requirements. For instance, a large international bank noted at the peer review roundtable that LEI coverage reached 69% for its European customers, 29% for its US customers, and 4% for customers in the Asia-Pacific region. A survey subsequently conducted by GFMA and ISDA confirmed this was not an isolated case.<sup>34</sup>

**Public sector LEI adoption is progressing slowly but is still incomplete.** Twenty one jurisdictions noted that their central bank has an LEI (the exceptions being China, Hong Kong, and the US), while all jurisdictions reported having at least one other public sector body with

<sup>32</sup> See [https://www.ecb.europa.eu/stats/financial\\_corporations/list\\_of\\_financial\\_institutions/html/daily\\_list-MID.en.html](https://www.ecb.europa.eu/stats/financial_corporations/list_of_financial_institutions/html/daily_list-MID.en.html).

<sup>33</sup> See <https://eiopa.europa.eu/publications/register-of-insurance-undertakings>.

<sup>34</sup> Respondents in North America, Asia Pacific and Japan from 21 institutions reported that they had on average an LEI coverage of their corporate customers above 50% in Europe and North America and above 30% in Asia, with a few of those institutions having 100% coverage (see Annex 4d for more details).

an LEI. This often includes the issuers of general government debt and based on the estimates presented in Annex 4b, LEI coverage exceeds 90% of amounts outstanding for the general government in all FSB jurisdictions except India (3%), China (42%) and Switzerland (65%).<sup>35</sup>

### *Coverage by size and type of institution*

**Firm size is another parameter influencing the LEI coverage.** For Italy and Spain that reported size class distributions, large entities (i.e. more than 250 employees), considering the aggregate of the financial and non-financial sector, show coverage of 40% and 77%, respectively. This is a much higher proportion than medium-sized firms in those jurisdictions (27% and 56% respectively).

**LEI adoption is common among the top entities of large banks, insurers and non-financial groups (see Table 5), but most subsidiaries of these firms generally do not have an LEI.** When considering the 20 largest domestic banks/deposit-taking institutions, 15 jurisdictions report 100% LEI coverage, seven jurisdictions report less than 100% coverage, while the remaining two were unable to provide data. On average across all jurisdictions, 94% of the 20 largest such entities have an LEI. For insurers, 10 jurisdictions report 100% LEI coverage for their 20-largest entities and 12 jurisdictions report partial coverage. On average across all jurisdictions, 75% of the 20 largest such entities have an LEI. For the 20 largest non-financial groups headquartered in their jurisdiction, eight jurisdictions report 100% LEI coverage, another 12 report partial coverage, while the remaining four were unable to provide data. On average across all jurisdictions, 78% of the 20 largest such entities have an LEI.

**Table 5: Share of top entities of the 20 largest banks, insurers, and non-financial groups with an LEI**

Jurisdiction	Banks / Deposit Taking Institutions		Insurers		Non-Financial Groups	
	LEI in place (count)	%	LEI in place (count)	%	LEI in place (count)	%
AR						
AU	20	100%	12	60%	7	35%
BR	15	75%	3	15%	10	50%
CA	17	85%	19	95%	18	90%
CN						
FR	20	100%	20	100%	20	100%
DE	20	100%	20	100%	20	100%
HK	20	100%	19	95%	20	100%
IN	20	100%	3	15%	18	90%
ID	16	80%	1	5%		
IT	20	100%	20	100%	20	100%
JP	20	100%	20	100%	20	100%

<sup>35</sup> ESMA reports that China and India were among the three jurisdictions (as measured by the number of ISINs) with the largest number of sovereign securities traded in the EU without an LEI. For China, the Ministry of Finance obtained an LEI in August 2018.

KR	16	80%	20	100%	14	70%
MX	20	100%	8	40%	17	85%
NL	20	100%	20	100%	20	100%
RU	18	90%	12	60%	8	40%
SA	20	100%	20	100%	3	15%
SG	20	100%	16	80%	11	55%
ZA	12	60%	15	75%	11	55%
ES	20	100%	20	100%	16	80%
CH	20	100%	19	95%	19	95%
TR	18	90%	5	25%	10	50%
UK	20	100%	20	100%	20	100%
US	20	100%	20	100%	20	100%
<b>Average</b>	<b>18.7</b>	<b>94%</b>	<b>15.1</b>	<b>75%</b>	<b>15.6</b>	<b>78%</b>

Notes: These figures only show the top entities of these firms that have an LEI, but not their subsidiaries. Grey shading indicates no data available. Green shading indicates 100% coverage.

**Coverage among the parent entity of G-SIBs and global systemically important insurers (G-SIIs) is especially strong.** All G-SIBs identified in 2018 and headquartered in FSB member jurisdictions have an LEI. All but one of the G-SIIs identified in 2016 and headquartered in FSB jurisdictions have an LEI.

**However, LEI coverage generally does not extend to all relevant entities of the large banks, insurers and non-financial groups.** In the banking sector, G-SIBs have an LEI for the top entities within their group structure, but not necessarily for all their subsidiaries. The LEI was provided for 73% of the legal entities included in the group structure of the insurance groups participating in the IAIS data collection undertaken to support the development of the Insurance Capital Standard, but only one third of the insurance groups were covering almost all their entities. While all EU-located (insurance and reinsurance) subsidiaries of EU headquartered G-SIIs have an LEI, only 70% of their foreign (insurance and reinsurance) subsidiaries have an LEI. And although coverage was reported to be close to 100% for large corporate borrowers in the EU, the coverage is much lower in other regions, especially Asia. In several projects targeting non-financial companies, for instance an analysis by the Bank for International Settlements (BIS) of corporate loans, or the pilot project by the Organisation for Economic Cooperation and Development (OECD) on an Analytical Database on Individual Multinationals and their Affiliates (ADIMA), low LEI coverage is reported as an obstacle to LEI uses.

**Similarly, there is evidence that larger entities more frequently have LEIs.** In addition to the data on securities issuers, AnaCredit (which is a dataset providing detailed information on individual bank loans in the euro area) shows that while 7% of debtors have an LEI, these account for 48% of the total outstanding amounts. Although this is still preliminary data based on nine EU member states, 18% of the value of credits without LEIs is to entities from outside the EU, while these only represent 0.2% of debtors without an LEI. This is an indication that (i) non-EU debtors may represent a significant amount, and that the LEI, as a global unique identifier, is an appropriate tool to aggregate banks' exposures, and; (ii) these non-EU exposures may come primarily from large entities, such that there would be merit in promoting through international cooperation greater LEI coverage of large entities.

## 5. Achievements and challenges in further advancing LEI adoption

### *Regulatory uses*

The LEI ROC progress report of April 2018 provides a comprehensive overview of regulatory uses of the LEI.<sup>36</sup>

Implementation of the LEI has enabled a variety of uses by authorities, including:

- i. **Monitoring financial risks** – The use of the LEI in regulatory reporting can significantly improve the ability of the public sector to understand and identify the build-up of risk across multiple jurisdictions and across complex global financial processes. For example, the LEI has allowed the US CFTC to identify the counterparties of the majority of swaps reported to the CFTC, permitting it to analyse the swap trading activity and exposure of entities via a single, harmonised and validated identifier.
- ii. **Exposure aggregation/entity reporting to credit registries** – The LEI can facilitate the aggregation of data across all relevant entities.<sup>37</sup> This information can then be used for various types of analysis such as in the case of the ECB for monetary policy (see Box 2).<sup>38</sup>

Another example is the use of credit exposure aggregation in risk analysis. For example, the ECB notes that supervisors need to identify and monitor risks stemming from significant borrower concentrations. In order to do so, the LEI code is used – when available – to uniquely identify the counterparties to supervised institutions. Exposures to a single counterparty can then be mapped across institutions in order to understand the overall exposure of each counterparty to the banking sector. This type of analysis can be useful, for instance, to assess the impact on the sector stemming from stress in a particular counterparty, or at a more aggregated level from economic sectors/countries to which counterparties are mapped (contagion risk). This is made possible because the LEI is globally available (compared to domestic identification codes) and consistently used across data reports.<sup>39</sup>

Australia uses the LEI in its large exposures reporting framework that came into effect from 1 January 2019. The reporting standard instructs banks and other deposit taking

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<sup>36</sup> See the *Progress report by the Legal Entity Identifier Regulatory Oversight Committee* (April 2018, [https://www.leiroc.org/publications/gls/roc\\_20180502-1.pdf](https://www.leiroc.org/publications/gls/roc_20180502-1.pdf)).

<sup>37</sup> The consolidated exposures to key counterparty groups often involve multiple individual entities and, in some cases, a non-linear relationship between entity-level exposures and consolidated exposure. For aggregating simple risk exposures across these linked entities, a simple sum of exposure will provide the appropriate aggregate exposure. For more complex risk profiles such as derivative positions subject to netting arrangements, a simple sum of entity-level exposures will not suffice.

<sup>38</sup> This is based on Cornejo Pérez and Huerga, *The Centralised Securities Database (CSDB) - Standardised micro data for financial stability purposes* ([https://www.bis.org/ifc/events/ws\\_micro\\_macro/perez\\_paper.pdf](https://www.bis.org/ifc/events/ws_micro_macro/perez_paper.pdf)). This paper is part of the IFC Bulletin No 41 of May 2016 (<http://www.bis.org/ifc/publ/ifcb41.htm>) on Combining micro and macro statistical data for financial stability analysis, which describes the proceedings of the IFC Workshop on “Combining micro and macro statistical data for financial stability analysis. Experiences, opportunities and challenges” Warsaw, Poland, 14-15 December 2015.

<sup>39</sup> In the EU, the LEI is requested, when available, to identify banks’ counterparties in the credit registry held by the ECB (AnaCredit). See <https://www.ecb.europa.eu/explainers/tell-me-more/html/anacredit.en.html>.

institutions to report the LEI of the counterparty for each exposure or the LEI of the principal counterparty if the exposure is to a group of connected counterparties (or N/A if the counterparty does not have an LEI). Canada is considering using the LEI for identifying counterparties under its new large exposures guideline.

Similarly, in India, the Reserve Bank of India (RBI) requires banks to make it mandatory for corporate borrowers to obtain an LEI if they have aggregate fund-based and non-fund based exposures above a certain threshold from any bank. The LEI will be captured in the Central Repository of Information on Large Credits (CRILC). The objective is to facilitate assessment of aggregate borrowing by corporate groups, and monitoring of the financial profile of an entity/group.

### **Box 2: LEI use in the ECB's Centralised Securities Database (CSDB)**

Operational since 2009, the CSDB is a security-by-security (s-b-s) database with the aim of holding complete, accurate, consistent and up-to-date information on all individual securities relevant for the statistical and, increasingly, non-statistical purposes of the European System of Central Banks (ESCB, comprised of the ECB and national central banks of all EU Member States). It contains reference data on securities (e.g. outstanding amounts, issue and maturity dates, type of security, coupon and dividend information, statistical classifications, etc.), issuers (identifiers, name, country of residence, economic sector, etc.) and prices (market, estimated or defaulted) as well as information on ratings (covering securities, issuance programmes, and all rated institutions independently of whether they are issuers of securities). The CSDB is a multi-source system that receives approximately 2.5 million prices and 400,000 records of reference information per day. The compilation of s-b-s data requires the existence and application of unique identifiers, namely the International Securities Identification Number (ISIN) and the LEI.

Besides various statistical uses, including the compilation of securities holdings statistics, securities issues statistics, balance of payments statistics, investment fund statistics and financial vehicle corporation statistics, the CSDB supports the analytical and policy work of a number of central banking functions such as monetary policy, financial stability analysis, market operations, risk management, the monitoring of fiscal policy and economic research. For example, the CSDB supports the analysis of entities' refinancing needs, the funding structure of deposit-taking corporations, their cost of funding or changes in the credit ratings of financial instruments.

An s-b-s database, like the CSDB, offers a flexibility that cannot be matched by pre-aggregated data. Micro-data can be compiled on a multipurpose basis and be customised ex post for each specific analysis or used to produce new aggregates in a flexible way without multiple requirements to reporting agents. The CSDB also offers attributes not covered in aggregate data and the possibility to combine them.

The LEI is currently being introduced as a 'grouping identifier' in the CSDB, which is used to group securities under the same issuing entity. The use of the LEI significantly supports the linking of the CSDB with other micro databases. This linking with other data sets has in the past often been difficult due to the unavailability of an entity identifier that is universally applied across different data sets and jurisdictions. The LEI, as the only truly global entity identifier, significantly facilitates this linking of CSDB entity information with other ECB micro databases as well as other micro data sources.

- iii. **Statistical analysis** – The LEI can facilitate a broad range of statistical analyses by providing explicit identification of legal entities. For example, the IMF is exploring the use of LEI in its Coordinated Portfolio Investment Survey (CPIS) database to provide users with from-whom-to-whom CPIS positions by economy and sector of holder and issuer.<sup>40</sup> The LEI has been used by the BIS in a methodological paper exploring how to construct bank-firm lending relationships through large corporate loans, although the insufficient LEI coverage has been an impediment.<sup>41</sup>
- iv. **Understanding company structures** – The LEI can support the reliable identification of company structures. For example, the OECD’s ADIMA leverages the LEI and other data sources to better understand multinational enterprise (MNE) company structures and activities for statistical and supply chain assessment purposes.<sup>42</sup> The Bank of Russia used LEIs to build the accounting structure of Russian holding companies (including foreign subsidiaries, whose identification based on legal entity name had proved unreliable) and monitor the loans granted by Russian banks to entities at a group level.
- v. **Understanding market structures** – The LEI enables better understanding of market structures through unambiguous identification of OTC derivatives market participants in trading networks and market structures. For example, the Monetary Authority of Singapore uses the LEI, along with other identifiers, to identify entities in the OTC derivatives market and to construct networks, facilitating a better understanding of the structure of those markets.

ESMA explained that the identification of clearing members across CCPs was highly improved with the use of LEIs in EU-wide CCP stress tests, which assess among other things interconnectedness among 900 clearing members identified with their LEI, as well as their liquidity providers and custodians.<sup>43</sup> The stress tests assess for instance the degree of interconnectedness of CCPs through common clearing members.

ESMA also used the LEI to connect information from derivatives reporting to information from data vendors on features of investment funds in a paper analysing the use of Credit Default Swaps by Undertakings for Collective Investments in Transferable Securities (UCITS).<sup>44</sup> Similar analysis by the European Systemic Risk

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<sup>40</sup> See the IMF Statistics Department paper on *Project on a Centralized Database of Issuers and Sectors for CPIS Reporting: What Comes Next?* (October 2018, <https://www.imf.org/external/pubs/ft/bop/2018/pdf/18-08.pdf>).

<sup>41</sup> Serena Garralda, J.M. *Cross-country bank-firm lending relationships: How can the Legal Entity Identifier help?* in *IFC Bulletin, Are post-crisis statistical initiatives completed?* volume 49 [https://www.bis.org/ifc/publ/ifcb49\\_13.pdf](https://www.bis.org/ifc/publ/ifcb49_13.pdf).

<sup>42</sup> See the OECD Statistics Directorate paper on *Measuring MNEs using Big Data: The OECD Analytical Database on Individual Multinationals and their Affiliates (ADIMA)* (March 2018, [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=COM/STD/WPTGS/DAF/WGIIS\(2018\)1&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=COM/STD/WPTGS/DAF/WGIIS(2018)1&docLanguage=En)).

<sup>43</sup> See [http://firds.esma.europa.eu/webst/ESMA70-151-1154\\_EU-wide\\_CCP\\_Stress\\_Test\\_2017\\_Report.pdf](http://firds.esma.europa.eu/webst/ESMA70-151-1154_EU-wide_CCP_Stress_Test_2017_Report.pdf), in particular figure 22.

<sup>44</sup> *Drivers of CDS usage by EU investment funds*, in ESMA Report on Trends, Risks and Vulnerabilities, n° 2, 2018, <https://www.esma.europa.eu/press-news/esma-news/what-drives-use-cds-eu-investment-funds>.

Board presented in that paper used the LEI to show for instance that UCITS do not trade among themselves, but rely mainly on 13 dealers for their access to CDS markets.<sup>45</sup>

- vi. **Market surveillance** – The LEI can facilitate market surveillance and compliance assessments. For instance, MiFIR mandates the use of the LEI to identify persons referred to in transaction reports. This has enhanced the UK Financial Conduct Authority’s ability to monitor market abuse across different financial markets (e.g. cross-product manipulation, or in cases where orders are placed with multiple brokers) as the LEI provides a consistent and robust means to uniquely identify the entity involved in a transaction. Previously, an entity could be identified using multiple identifiers, making it difficult to reconcile information and hence the detection of potential instances of market abuse. The benefits of unique identification for the purposes of monitoring market abuse also apply to market participants. Similarly, the Netherlands has used the LEI as a primary key to join different transaction reports in order to get a full view of the order chain of a specific transaction, identifying all participants in the chain. France has also used the LEI in market surveillance. It is using the new MiFIR transaction reporting framework to instantly identify entities that engage in suspicious behaviour. The Autorité des marchés financiers created pattern detection algorithms that check whether an entity repeatedly tried to or did manipulate the market of a given financial instrument. Authorities note the LEI is of real added value for the surveillance work because of its universality (across Europe).
- vii. **Support transparency for the benefit of investors** – The LEI can augment the information provided to investors on securitised products and their underlying assets. For instance, in the United States, a rule issued jointly by six agencies requests that the LEI be used, if available, to identify the obligor of loans or assets held or to be held by an open market collateralised loan obligation (CLO), in the information provided to potential investors. The LEI also supports the transparency of credit ratings: for instance, in the EU the LEI is required for the identification of (i) credit rating agencies; (ii) entities for which credit ratings have been issued; (iii) in case of the subsidiary of a rated parent, the parent entity; and (iv) in case of credit ratings on structured finance instruments, the identification of the originator. Publishing information on entities with an LEI makes it easier for market participants to retrieve the information and use it in their own analysis.

The LEI also underpins other transparency measures: ESMA uses the LEI in some cases to run calculations on liquidity of financial instruments in order to establish whether or not orders and/or transactions in financial instruments should be subject to real-time transparency.<sup>46</sup> For instance, ESMA uses the LEI to identify underlying reference entity for single name Credit Default Swaps (CDSs) and to identify the issuers of the underlying bond for bond futures.

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<sup>45</sup> See Figure V.27 of [https://www.esma.europa.eu/sites/default/files/library/esma\\_50-165-632\\_report\\_on\\_trends\\_risks\\_and\\_vulnerabilities\\_no.2\\_2018.pdf#page=66](https://www.esma.europa.eu/sites/default/files/library/esma_50-165-632_report_on_trends_risks_and_vulnerabilities_no.2_2018.pdf#page=66).

<sup>46</sup> See <https://www.esma.europa.eu/policy-activities/mifid-ii-and-mifir/transparency-calculations>.

viii. **Resolution of financial institutions** – To support the resolution of financial institutions, the EU authorities request that the LEI be included (when available) in the recordkeeping of designated financial contracts by certain financial institutions in financial groups, to facilitate access to information by competent authorities and resolution authorities.<sup>47</sup> Similarly, in the US, certain insured depository institutions are required to have an LEI, and the counterparties of qualified financial contracts of these institutions are requested to be identified with an LEI if they have one. Having a unique identifier across entities, products and geographies supports a more comprehensive and faster analysis of contagion risks, and also a more timely analysis of the quality of the assets of the failed institution, e.g. by using a standardised international identifier for third party data on these assets without facing the delays of manually reconciling different proprietary identifiers.

**Benefits**

**A significant proportion of jurisdictions report that the use of LEI has led to improvements in data quality and analysis,** as shown in Table 6.

**Table 6: Member views of LEI impact on data quality and analysis**

	Yes	No	Incomplete, no response, or cannot assess yet
Is the implementation of the LEI or use of LEI data improving the quality, efficiency and/or accuracy of financial regulatory reporting, data analysis or other financial regulatory activities in your jurisdiction? Has it enabled new financial regulatory projects?	CA, CN, EU, <sup>48</sup> ES, FR, DE, HK, IT,JP, NL, SG, CH, UK, US	AU, MX	AR, BR, ID, IN, KR, RU, SA, ZA, TR

**Other LEI benefits cited by jurisdictions include the improved identification of entities, data aggregation, and the provision of information on parent entities (see Table 7).**

The most common benefit (reported by 20 jurisdictions) is the usefulness of the LEI in identifying foreign and domestic entities. For example, both China and Russia highlight the usefulness of the LEI in identifying foreign entities, while Russia notes that the LEI has provided a better means of mapping the foreign subsidiaries of Russian entities. Korea also indicates that the LEI eased risks in transacting with foreign entities. In Italy, the inclusion of the LEI in reporting templates has significantly improved the identification of non-resident banks’ counterparties. Italy also reports significant improvements in the accuracy of identifying counterparties and of financial reporting/data aggregation, with use of the LEI reducing

<sup>47</sup> ‘Financial contracts’ are defined in Article 2(1)(100) of the Bank Recovery and Resolution Directive, and include securities contracts, commodities contracts, futures and forwards contracts, swap agreements, short-term inter-bank borrowing agreements, and master agreements for these.

<sup>48</sup> For Tables 6-8, the EU denotes one or several EU authorities, such as the ECB, the Single Resolution Board (SRB), the European Banking Authority (EBA), EIOPA and ESMA. EU member states are shown (and counted) separately.

significantly the errors in the aggregation of data and the calculation of entities' positions (see Box 3). The US OFR highlights that the LEI's principal value lies in its use across borders and across different types of transactions, and that the LEI is particularly valuable for non-bank corporates, which, as the 2008 financial crisis demonstrated, historically is an area with significant financial regulatory data gaps.

### **Box 3: Example of benefits to Italy**

Before the introduction of the LEI, the Italian Central Credit Register relied on the company name and on the country of incorporation only for the unique identifications of banks' non-resident counterparties (while resident entities were easily identified by their tax code). Since the description of the same counterparties made by different reporting entities could vary – e.g. names as “ABC S.A.” and “ABC Société anonyme” could be considered as different entities – the duplication phenomenon was pretty frequent, causing underestimates when calculating the global risk position of the banking system vs. the counterparty, as the total loan amounts would be split between the duplicated entities. The opposite case (two different entities “merged” into one due to very similar company names) could also happen, with symmetric erroneous results in data aggregation.

The introduction of the LEI (where available) in the reporting requirements has reduced the risks of entity duplication or merging. Similarly, the introduction of the LEI in the AnaCredit and EMIR reporting allows a better identification of counterparties of loans contracts and OTC derivatives transactions at the European level.

Nineteen jurisdictions note that the LEI is useful in facilitating data aggregation and coordination across multiple regulators. Seventeen jurisdictions indicate that they benefit from the LEI's non-proprietary nature. Sixteen jurisdictions respond that they see benefit in the LEI being unique to an entity and remaining with the entity for its lifetime, including moving to any eventual successor entity.

In this context, Japan and the UK note that the LEI could play a key role in making it easier for firms to satisfy obligations under KYC or AML regulations. Several market participants also highlight the LEI benefits associated with KYC and AML processes (see Annex 5), echoing BCBS guidance on customer due diligence, as well as FSB and CPMI recommendations on the use of the LEI in correspondent banking.<sup>49</sup>

Lower costs of financial regulatory reporting, data analysis or other regulatory activities from LEI implementation were cited by a few jurisdictions (EU, France, Germany, Italy, Netherlands and the US). The US notes industry feedback suggesting efficiencies created by LEI work to lower compliance costs. Italy notes that in the context of AnaCredit the LEI reduced costs by rendering manual counterparty checks unnecessary. France notes that the requirement for clients to obtain an LEI reduces the costs by investment firms in maintaining

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<sup>49</sup> ISDA and GFMA note that “banks perform due diligence as part of KYC processes and LOUs do the same as part of the LEI issuance process. As part of the client on-boarding as well as other due diligence processes, financial firms are generally required to use external sources to validate information about their clients, even if they have the client's LEI. If regulators were to permit reliance on LOU due diligence, the utility of LEI could be greatly enhanced and could help streamline the client on-boarding process”. See [https://www.isda.org/a/brvEE/ISDA\\_GFMA\\_FSB-Peer-Review\\_LEI-Implementation\\_3-October-2018\\_FINAL\\_Public.pdf](https://www.isda.org/a/brvEE/ISDA_GFMA_FSB-Peer-Review_LEI-Implementation_3-October-2018_FINAL_Public.pdf).

multiple identifiers per client. Finally, Germany relays industry feedback suggesting that use of LEI reduces the burden of reporting other entity attributes (e.g. industry sector).

**Table 7: Other LEI benefits**

<b>Benefit</b>	<b>Jurisdictions reporting benefits</b>	<b>% of responding jurisdictions</b>
Support the identification of foreign and domestic entities	20	80%
Support data aggregation	19	76%
The LEI is a non-proprietary system	17	68%
Uniqueness of the LEI; information on successor entities	16	64%
The LEI provides direct and ultimate parent information	15	60%
The LEI allows for recording of international branches	14	56%
Support of multiple languages and character sets	10	40%
The LEI is not locked in with a particular service provider	10	40%

***Obstacles to adoption and implementation***

FSB jurisdictions also highlighted various obstacles to further LEI adoption and implementation. These are displayed in Table 8, with the most notable ones summarised below:

- i. Lack of LEI coverage** – Ten jurisdictions report that a lack of LEI coverage is an obstacle to LEI use, and some (Canada, EU, France, India, and Italy) specifically note that a lack of LEI for foreign counterparties creates problems in their reporting regimes. Other jurisdictions (EU, China, and Singapore) cite a lack of coverage of parent entities, funds, and international branches respectively as obstacles. On the other hand, several jurisdictions report that LEI coverage is not an obstacle (Hong Kong, Japan, Mexico, and Switzerland), in particular following the implementation of MiFID II (UK).
- ii. Lack of Level 2 data**<sup>50</sup> – Many jurisdictions and authorities<sup>51</sup> report that Level 2 (relationship) data is insufficient for their needs due to a lack of coverage of entities or a lack of relevant information. Canada notes that only a small proportion of entities currently report direct and ultimate parent data, and that the level of corroboration of the information by the LOUs is lower than with the Level 1 data. China notes that fund

<sup>50</sup> Whereas ‘Level 1’ data refers to the business card information available with the LEI reference data, ‘Level 2’ data includes relationship data to answer the question ‘who owns who’, such as their direct and ultimate accounting consolidation parent.

<sup>51</sup> Australia, Brazil, Canada, China, EU authorities, Germany, Hong Kong, Italy, Mexico, Saudi Arabia, Spain, and the UK.

relationship data is incomplete and that the quality of the data is not guaranteed.<sup>52</sup> Germany cites a lack of information for G-SIFIs as a problem, while Hong Kong notes that only 10-20% of the relevant entities for its regime are reporting relationship data. Italy states that the lack of an LEI for the parent entity undermines the reliability of the data. Mexico notes inconsistencies in international branches (i.e. whether or not the branch has its own LEI) as a challenge and ESMA underlines that in some of its reporting regimes, entities are incorrectly reporting the LEI of the branch instead of the LEI of the headquarters, which underlines the importance of being able to connect reliably the two LEIs. The UK and US note that information about control, as opposed to accounting consolidation, would be more useful, while acknowledging the challenges of collecting such information. The US observes that currently joint ventures or companies with interlocking directors are currently not captured. The EU-EIOPA suggests that an approach based on Solvency II might be more useful to them. The US CFTC notes that the lack of non-public information limits the usefulness of the data.<sup>53</sup> Canada notes that it expects Level 2 data to be useful for understanding interconnectedness, and the US notes that more complete parent data would be useful.

Annex 4c shows that ultimate parent information is provided only for 6.2% of entities for all FSB members taken together and is below that level for Japan and the EU as a whole as well as for FSB members from the EU (except France). This information is provided in more than 14% of cases for 11 FSB members<sup>54</sup> but all have a small number of LEIs (less than 6,000) and tend to have less regulatory requirements mandating the LEI. It may be that companies with LEIs in these countries are more frequently subsidiaries of large groups.

The reasons provided by entities for not reporting parent information to the GLEIS (based on GLEIF data – see Annex 4c) vary significantly depending on the jurisdiction. The fact that the records have not been updated by the entity since the reporting of parent entities was introduced is the first cause of the absence of information in the US and Russia, affecting in both countries approximately one third of records (against 12% for FSB members as a whole).<sup>55</sup> Regarding ultimate parents, a lack of consent from the parent entities is by far the most significant reason in Australia and Brazil, representing a third of exceptions (though only 9% of exceptions for all FSB members taken together). This case is also very significant in the US (affecting 22% of records). The existence of other legal obstacles is cited by less than 1% of entities across FSB

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<sup>52</sup> The LEI ROC issued in November 2018 a [Second Consultation Document on Fund Relationships in the Global LEI System](#).

<sup>53</sup> The CFTC views the proliferation of opt-outs (to not reporting Level 2 data) as the biggest obstacle to improving overall quality of Level 2 data, and believes that action by LEI ROC to revise Level 2 data standards to reduce the allowable opt-outs will do the most to improve overall quality of Level 2 data

<sup>54</sup> Argentina, China, Hong Kong, Indonesia, Korea, Mexico, Russia, Saudi Arabia, Singapore, and South Africa.

<sup>55</sup> These cases appear in Annex 4c under the line “No parent reported and no exception given”.

members, and below 10% for each of them.<sup>56</sup> The absence of an LEI for the parent is one of the main reasons in countries that have not adopted regulatory requirements, or have done so only recently (between 10 and 20% of LEIs in Argentina, China, Indonesia and South Africa). Other reasons given are the absence of a parent meeting the definition of accounting consolidation used in the GLEIS since, for example, control by natural persons is high in India (54% of LEIs) and Italy (39% of LEIs); that the controlling parent is not subject to consolidation (which can be the case of investment entities or government entities) is very high in the Netherlands (78% of LEIs) and Spain (84%); and that there is no parent controlling the entity according to accounting standards (e.g. a listed entity with diversified shareholders) is the most significant factor in Japan and Germany.

- iii. **LEI costs** – Feedback on LEI costs was mixed, with 13 respondents<sup>57</sup> reporting that costs are a barrier to implementation, while 10 respondents<sup>58</sup> report that they are not an obstacle. In particular, eight respondents<sup>59</sup> note that LEI fees (acquisition and renewal) may be a barrier for small entities. Some respondents note that the cost-benefit<sup>60</sup> analysis may focus on existing process and control issues (e.g. onboarding, credit assessments, and KYC) and thereby may not fully include those benefits associated with new capabilities and features afforded by a fully implemented LEI (e.g. digital identities, commercial smart contracts, etc.), particularly for entities outside of the financial sector. Further, the timing for realising these benefits may depend on more complete adoption and thereby provide relevant incentives in the longer term.

**Cost-benefit analyses have tended to use the then current cost of the LEI, although in retrospect this cost has decreased sharply.** For instance, the EBA recommendation on the LEI took into account the current average cost of registration, which was in effect in early 2014 of €129 for the first issuance and €74 for the annual maintenance fee.<sup>61</sup> In the adoption release of Regulation SBSR in 2015, the SEC also factored in the then current cost for registering a LEI, which it assessed (presumably for the US market, hence the difference with the EU estimate that included LOUs operating exclusively in Europe) at approximately \$220, with an additional cost of \$120 per year for maintaining an LEI.<sup>62</sup> As of early 2019, some LOUs offer annual maintenance fees of \$50 or less in most jurisdictions. Therefore, although this may be a difficult exercise, there would be merits including in calculations the fact that given the steady expansion of the GLEIS,

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<sup>56</sup> These other cases are a binding legal commitment not to disclose the information, the fact that disclosure would be detrimental or detriments are not excluded if the information was disclosed and other legal obstacles. They are presented together with the case where consent was not obtained in Annex 4c.

<sup>57</sup> Australia, Brazil, EU-EIOPA, Germany, Indonesia, Italy, Japan, Netherlands, Singapore, Spain, Switzerland, UK, and US.

<sup>58</sup> Canada, China, EU-ESMA, EU-SRB, France, Hong Kong, India, Korea, Mexico, and Saudi Arabia.

<sup>59</sup> Australia, Brazil, Germany, Indonesia, Italy, Japan, Korea, and Spain.

<sup>60</sup> See <https://lei.info/portal/resources/lei-benefits/>.

<sup>61</sup> See <https://eba.europa.eu/documents/10180/561173/EBA-REC-2014-01+%28Recommendation+on+the+use+of+the+Legal+Entity+Identifier%29.pdf>

<sup>62</sup> See <https://www.sec.gov/rules/final/2015/34-74244.pdf>.

a further reduction in fees is likely, especially if the regulation being considered would lead to higher LEI issuance and renewals.

**Double counting of costs should be avoided in cost-benefit analyses.** In the examples above, both the EBA and SEC took into account that many entities were subject to other regulations mandating the LEI or already had one, thereby reducing the cost attributable to the new regulations.

**The administrative burden for entities is also a relevant cost.** For instance, the reporting of Level 1 and Level 2 reference data was assessed to take two hours in the cost-benefit analysis for the Swap Data Recordkeeping and Reporting Requirements in the US.<sup>63</sup> Some LOUs aim at cutting the time required to obtain an LEI, for instance by pre-populating the forms with data extracted automatically from business registries.<sup>64</sup> By making sure that their national registry data is easily retrievable, authorities can contribute to reducing the administrative costs of LEI issuance.

Jurisdictions also report that cost and a perceived lack of benefits for the legal entities are the most important obstacles to voluntary adoption by market participants who are aware of the LEI (see discussion of private sector views below).

**iv. Existence of other identifiers** – Several jurisdictions (Australia, Brazil, Canada, Germany, Hong Kong, Indonesia, Italy, Korea, Netherlands, Singapore, Spain, Switzerland, Turkey, and EU-EBA) and some private sector respondents note that the existence of other identifiers – in particular, no-cost or low-cost national identifiers and of systems built around those identifiers (see Annex 2) – is a barrier to LEI implementation. Their existence also reduces incentives for jurisdictions to promote mandatory LEI adoption,<sup>65</sup> especially in markets where firms undertake limited cross-border activities. Two jurisdictions (Germany and Switzerland) noted that while these other identifiers exist, they might not be barriers because they can be used alongside the LEI, establishing the appropriate links; nevertheless, some jurisdictions (Italy, Spain, and France) observed that establishing those links is only possible if the (mandatory) information on the Registration Authority Entity ID is correctly reported by the LOUs to the GLEIF database. At present, some LOUs seem to be not compliant with this obligation; this problem, if not quickly addressed by the GLEIF, represents a serious obstacle for LEI use. In this context, some stakeholders also noted that the proposed publication of a European unique identifier of companies and branches as part of a proposal on the use of digital tools and processes in company law<sup>66</sup> may inadvertently compete or distract from the global LEI initiative.

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<sup>63</sup> See <https://www.govinfo.gov/content/pkg/FR-2012-01-13/pdf/2011-33199.pdf>, p. 41.

<sup>64</sup> For instance, <https://rapidlei.com/>, and also some LOUs that are business registries.

<sup>65</sup> See, for example, the April 2017 FSB peer review report of Brazil (<http://www.fsb.org/2017/04/peer-review-of-brazil/>).

<sup>66</sup> See *Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2017/1132) as regards the use of digital tools and processes in company law* (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2018%3A239%3AFIN>).

**Table 8: Obstacles to LEI implementation**

Question	Obstacle	No Obstacle	Other or Blank
Is the lack of LEI coverage an obstacle to use?	55%	17%	28%
Is the availability of parent relationship data sufficient for your needs?	55%	17%	28%
Is cost an obstacle to LEI implementation?	45%	34%	21%
Is the existence of other identifiers an obstacle to LEI implementation or use?	41%	41%	17%
Is there need for relationship data beyond accounting consolidating parents?	28%	38%	34%
Are there any other obstacles to LEI implementation?	28%	34%	38%
Are there other issues related to the availability of relationship data?	24%	38%	38%
Is LEI data quality an obstacle to LEI adoption?	21%	52%	28%
Is there relevant information not currently captured in the LEI data?	17%	45%	38%
Is the lapsed LEI rate an obstacle to LEI adoption?	14%	62%	24%

*Uses, benefits and obstacles to LEI implementation – private sector view (see Annex 5)*

**Market participants indicate that LEI uptake in the OTC derivatives market, and to a lesser extent in securities markets, has been a considerable achievement.** Large financial institutions consider the LEI as beneficial for their own processes. The main mechanism by which the LEI benefits such institutions is by reducing the costs of manually reconciling data on entities, which is otherwise complicated by variations in the use of names, the translation or transliteration of different languages and character sets, or the multiplicity of other identifiers. The LEI also facilitates the access to information on legal entities.

More specifically, the LEI reduces the costs associated with entity identification and verification by:

- reducing the likelihood of duplicative due diligence efforts being conducted multiple times on the same entity;
- making it easier to ensure that the relevant entity has been adequately identified and has up-to-date contractual documentation, especially if the LEI is included in transactions;

- providing a mapping with national business registries, making it easier to access business registry data. Industry associations estimated the time saving at up to 30 minutes per customer;<sup>67</sup>
- facilitating the management of information on group structures. For instance, Citi recorded in the GLEIS all the entities included in its consolidated US GAAP direct and ultimate parent structure, totaling approximately 700 LEIs, and has a process to keep this data up-to-date, for the benefit of their clients, counterparties and other stakeholders. This group also feeds LEI hierarchy information on other entities in its central client master data, providing visibility into other firms' accounting consolidated corporate hierarchies; and
- making it easier to identify which entity requires a contractual update, when regulatory changes affect only certain entities. Industry associations mentioned the example of margin requirements for non-centrally cleared derivatives: if the LEI had been embedded in the legal documentation, it would have been easier for financial institutions to identify cases where ISDA agreements had to be re-documented.

The LEI can also help to manage risks for market participants by:

- facilitating the aggregation of exposures to the same counterparty (or group of counterparties) across borders by use of a globally consistent and unique identifier;
- reducing operational risks, e.g. the use of the LEI in settlement instructions avoids ambiguity as to the entity the instructions are referring to; and
- monitoring limits applying to an entity, as well as various restrictions applying to trading on some entities (e.g. reducing false alerts that have to be cleared manually).

The LEI also supports straight-through processing and avoids delays for customers. If applied to payment messages, the LEI would support the screening of messages against sanction lists.

Thanks to reduced costs for customer identification and in middle- and back-office activities in the processing of capital and debt securities, McKinsey and the GLEIF have assessed that global LEI adoption could yield annual savings of over \$150 million within the investment banking industry.<sup>68</sup> As illustrated in section 4, LEI coverage is already high in this area, but fully reaping these benefits would require an LEI for all counterparties, and not just the larger ones. The same study assessed that costs savings could reach up to \$500 million for banks in the issuance of letters of credit. Another source assesses that the private benefits of the GLEIS (i.e. the direct “bottom line” benefits in terms of reduced costs or enhanced revenues) stem

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<sup>67</sup> See the contribution by ISDA and GFMA to the FSB Thematic Peer Review on Implementation of the LEI. [https://www.isda.org/a/brvEE/ISDA\\_GFMA\\_FSB-Peer-Review\\_LEI-Implementation\\_3-October-2018\\_FINAL\\_Public.pdf](https://www.isda.org/a/brvEE/ISDA_GFMA_FSB-Peer-Review_LEI-Implementation_3-October-2018_FINAL_Public.pdf).

<sup>68</sup> See McKinsey and GLEIF, *The Legal Entity Identifier: The Value of the Unique Counterparty ID* (October 2017) at <https://www.gleif.org/en/lei-solutions/mckinsey-company-and-gleif-creating-business-value-with-the-lei>. The report estimates that introducing the LEI into capital market onboarding and securities trade processing could reduce annual trade processing and onboarding costs by 10 percent. This would lead to a 3.5 percent reduction in overall capital markets operations costs, amounting to over \$150 million in annual savings for the global investment banking industry alone. This does not take into account the cost of implementing the LEI, which presumably includes one-off costs (first issuance and introducing the LEI in systems and processes) but also annual costs (LEI maintenance fee).

primarily from the implementation of the LEI in basic operational processes and are in excess of \$1 billion per year.<sup>69</sup>

**However, a key obstacle to voluntary adoption by market participants is the lack of alignment between the perceived costs and the perceived benefits of having an LEI.** In particular, there is a belief expressed by some private sector respondents to the peer review that those who benefit the most are large financial institutions (e.g. those subject to reporting obligations), while the costs accrue to all legal entities that have to pay for LEI issuance and renewal. Smaller entities with local customers see fewer benefits in the LEI because they either undertake fewer transactions where an LEI is used, or have less need for a unique and global identifier.

**Many of the other challenges reported by market participants mirror those described by FSB jurisdictions.** They include: insufficient coverage (e.g. the lack of regulatory mandates impacting coverage and renewals); differences in the timing and scope of requirements across jurisdictions; difficulties in accessing relationship data; and the high level of lapsed LEIs.

- Many noted that awareness of the LEI is growing but driven largely by regulatory mandates. Consequently, they considered such requirements as a necessary and preferred approach for increasing LEI take-up.
- Stakeholders agree that differences in the timing and scope of requirements across jurisdictions may complicate LEI adoption. A number of LEI uses (e.g. regulatory reporting, assessment of exposures for prudential supervision, resolution and financial stability work, and the identification of customers for AML/CFT) require not only the regulated entity to have an LEI, but also its counterparties domestically and abroad to have one. Those counterparties themselves may not be required, by their principal regulator, to have an LEI, however. Indeed, not all authorities are in a position to mandate an LEI for entities in the scope that would be necessary, although in some cases mandating the LEI within their limited scope could be effective if other regulators do the same.<sup>70</sup> Some authorities frequently require the LEI only if the entity already has one or opt for voluntary adoption of the LEI. As previously discussed, voluntary adoption is impeded by the lack of full alignment of the benefits and costs of LEI use for participants, in particular the belief that those who benefit the most are large financial institutions (e.g. those subject to reporting obligations), while the costs accrue to all legal entities that have to pay for LEI issuance and renewal.

On the high level of lapsed LEIs, a number of stakeholders expressed concerns relating to the maintenance of reference data over time and noted the absence of consistent guidance or requirements on renewals across regulatory agencies and jurisdictions resulting in diverse requirements for entities operating across multiple agencies and jurisdictions (see Section 3).

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<sup>69</sup> Ka Kei Chan and Alistair Milne, The Global Legal Entity Identifier System: How Can It Deliver? *Journal of Risk and Financial Management*, 7 March 2019, <https://www.mdpi.com/1911-8074/12/1/39/htm>.

<sup>70</sup> For example, in the EU a large number of sectoral rules at the regional level have achieved a good level of coverage. The EU are the only ones mandating the LEI for all issuers of financial instruments, and for non-EU financial instruments, the coverage achieved as of 17 October 2018 was approximately 60% (217,000 instruments with an LEI and 147,000 without) but the coverage was much higher when taking into account EU instruments, with a total of nine million instruments with LEIs.

Recommendations received from public feedback included mandating LEI usage, pursuing joint education efforts by regulators and industry where take-up is low, using the LEI in as many areas as possible (including for tax purposes), incorporating additional data elements into the GLEIS, reducing costs and duplication of processes (especially with other identifiers), addressing the issues of lapsed LEIs, and increased public-private cooperation on new areas for LEI usage.

Ways to address these challenges are discussed in the next section.

## 6. Way forward in advancing LEI adoption

The feedback from member authorities, analysis of LEI data and discussions with stakeholders suggest three main common challenges that need to be addressed:

- LEI adoption across jurisdictions has been uneven and is low outside securities and OTC derivatives markets.
- LEI coverage remains too low to encourage further regulatory uses or to reach a potential tipping point where voluntary take-up by market participants would suffice to propel further adoption.
- Other obstacles to further LEI adoption and implementation, including the LEI business model, content and processes.

Concerning the first challenge, there is a recognition that not all jurisdictions or market participants have the same needs. While universal LEI coverage may remove the need to maintain multiple identifiers, some jurisdictions/markets may see less benefits in LEI use, especially if they have already invested in a domestic identifier. It would therefore be useful to focus efforts in those areas and markets that would benefit the most from broader LEI adoption.

**Standard-setting bodies are well placed to support the identification of areas where coordinated LEI adoption would bring the most benefits, and propose appropriate timelines.** With regard to identification, this has already been the case for OTC derivatives, although some regulators have yet to mandate the LEI for the identification of all legal entities in the data reported to trade repositories.<sup>71</sup> For example, with regard to timelines, in December 2017 the FSB recommended that member authorities implement the UTI (which embeds the LEI) by end-2020.<sup>72</sup> In addition to requiring the LEI as a component of the forthcoming UTI, among other things, CPMI-IOSCO critical data elements technical guidance recommended the use of LEIs for the identification of legal entities in the data reported to trade repositories for OTC derivatives.

- FSB member jurisdictions should follow-up on CPMI-IOSCO guidance that strongly encourages authorities to require the use of LEIs for the identification of legal entities in the data reported to trade repositories for OTC derivatives (**recommendation 1a**).

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<sup>71</sup> See the April 2018 CPMI-IOSCO [Technical Guidance for the Harmonisation of critical OTC derivatives data elements \(other than UTI and UPI\)](#) “The CPMI and IOSCO consider the consistent use of LEI codes in OTC derivative transactions reported to TRs to be crucial to achieve global consistency and meaningful aggregation of OTC derivative transactions reported to TRs. Therefore, the CPMI and IOSCO strongly encourage authorities to require the use of LEI codes as published by the Global LEI Foundation (GLEIF) for the identification of legal entities in the data reported to TRs”. Section 2.7 and 2.8 make clear that values other than the LEI are not allowed for counterparties that are eligible to obtain an LEI. Argentina, Brazil, China, Indonesia, Saudi Arabia and South Africa have yet to use the LEI in derivatives reporting. Australia, Hong Kong, Japan, Korea, Mexico, Russia, Singapore and Switzerland request or require the LEI in some cases but have yet to require the LEI for all LEI-eligible entities, including non-reporting counterparties, even when they do not already have an LEI (except for natural persons other than individuals acting in a business capacity).

<sup>72</sup> See the FSB report on [Governance arrangements for the unique transaction identifier \(UTI\): Conclusions and implementation plan](#) (December 2017).

**However, while standard-setting bodies have included the LEI in their policy making for certain areas, in most of those cases (AML/CFT, risk data aggregation and correspondent banking) LEI uses are left as an optional element and the standard-setting bodies have not proposed a timeline for adoption.** For instance, the use of the LEI to support the unambiguous identification of originators and beneficiaries of cross-border wire transfers, as recommended by CPMI and FSB in their work on correspondent banking,<sup>73</sup> is an area with strong support from regulators and industry. The LEI would increase the reliability and cost-efficiency of screening payment messages against lists of entities subject to asset freezes or other sanctions. This would more generally support compliance monitoring, and also reduce the risks of payments being delayed, making LEI benefits tangible for companies of all sizes. The CPMI recommendation is that “the use of the LEI as additional information in payment messages should be possible on an optional basis in the current relevant payment messages”, and “also, as part of a potential future migration to message formats based on the ISO 20022 standard, relevant stakeholders (i.e. ISO and SWIFT) are encouraged to consider developing dedicated codes or data items for the inclusion of the LEI in these payment messages”.

**The upcoming completion of options to insert the LEI into payment messages may be an opportunity to propose an international timeline for the effective use of the LEI in payment messages.** The SWIFT Board recommends that a migration of correspondent banking payment messages to ISO 20022 should start in November 2021, and the LEI is in the process of being embedded in ISO 20022. This migration timeline could be the opportunity for a coordinated adoption of the LEI, on an optional basis, in payment messages by the industry. The FSB, working with other members of its Correspondent Banking Coordination Group and industry bodies such as the Wolfsberg Group and Payments Market Practice Group (PMPG),<sup>74</sup> as well as LEI ROC and GLEIF, could document the efficiency gains to determine whether the information currently available in or through the GLEIS is adequate to assist with due diligence, and whether there are types of entities that should be given priority to cover with LEIs. It is also important that any improvement in LEI issuance and maintenance processes recommended in this report be considered in time for the ISO 20022 migration, as a large number of LEIs would presumably be needed, and these would need to be kept up-to-date. Timely information on potential reductions in LEI costs for entities that would result from such improvements would be important especially if some jurisdictions were to consider requiring the LEI in the area of payments, as envisaged by the UK in its recent consultation.<sup>75</sup> The FSB will facilitate, by working with standard-setting and industry bodies, the effective

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<sup>73</sup> See the November 2018 [FSB action plan to assess and address the decline in correspondent banking: Progress report to G20 Summit](#) and July 2016 CPMI [Correspondent Banking – final report](#).

<sup>74</sup> In its discussion paper *LEI in the Payments Market* of November 2017 ([https://www.swift.com/sites/default/files/resources/swift\\_paper\\_pmpg\\_lei\\_paper\\_industryupdate.pdf](https://www.swift.com/sites/default/files/resources/swift_paper_pmpg_lei_paper_industryupdate.pdf)), the PMPG noted that “the ability to clearly identify the originating and beneficiary parties with LEI (and therefore having additional transparency on these parties) could bring significant quantitative and qualitative benefits on a strategic basis, mainly for compliance and risk management functions”, for instance, “eliminating potential delays during payment processing from false hits in compliance and sanctions screening; optimized and more accurate AML controls and detection of suspicious activities and ability to identify ordering and beneficiary customer as meaningful information for correspondent banks acting as intermediary in the payments chain”.

implementation of the LEI option in payment messages to help address the decline in the number of correspondent banking relationships (**recommendation 2c**).

**The LEI may support a number of regulatory objectives in FSB initiatives.** Under the right circumstances, the LEI can facilitate timely data processing in the case of an authority having to deal with a failed financial institution and all of its related legal entities. It could also be useful in issues relating to financial innovation, such as RegTech and SupTech.<sup>76</sup>

- The FSB will also explore the potential role of the LEI in its work, for instance in the resolution of financial institutions and on financial innovation issues (**recommendation 2a**).
- More generally, the relevant standard-setting bodies (BCBS, IAIS, CPMI, and IOSCO) and international organisations (IMF, OECD, and World Bank) should review and consider ways to embed or enhance references to the LEI in their policy and implementation work, in order to facilitate the implementation of relevant LEI uses for authorities and market participants. This could involve, for example, guidance on the inclusion of the LEI in disclosures of data on entities as well as promoting LEI use in securities transactions and in cross-border payments (**recommendation 3**).

**Market participants have identified several areas where the LEI would provide benefits and that are not necessarily related to regulatory uses.** Several of these new uses may relate to the transition to a more digital economy, where the certainty of identity for non-face-to-face transactions, and the efficient management of large amounts of data are paramount – for example:

- The LEI can support more efficient disclosures of data on entities, where data is structured according to widely accepted standards and easily usable in automated processes, instead of being provided as text. Including the LEI in disclosures on entities makes these disclosures interoperable with each other.<sup>77</sup> For instance, the LEI was introduced in the XBRL taxonomy,<sup>78</sup> which will help standardise how entities are referred to in areas such as regulatory reporting, registration in business registries, financial disclosures, tax reporting, compliance, smart contracts, and digital identifiers. Adding the LEI to the taxonomy will encourage XBRL users to use the LEI when they need to identify entities. Another possibility would be that electronic financial statements identify with an LEI the entity issuing the statements as well as all related entities, and that the electronic signature of the auditors that certified the statements and of the regulators that received them also include the LEI. Market authorities, IOSCO and market regulators could foster such use, along with accounting firms and industry

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<sup>76</sup> RegTech means any range of applications of FinTech for regulatory and compliance requirements and reporting by regulated financial institutions. This can also refer to firms that offer such applications. There is also a close link with “SupTech,” or the use of FinTech by supervisory authorities.

<sup>77</sup> See Rick A. Fleming, SEC Investor Advocate, Improving Disclosures with Smart Data, speech 24 October 2016, <https://www.sec.gov/news/speech/improving-disclosure-with-smart-data.html>.

<sup>78</sup> XBRL is used in some 70 countries, with 142 mandates covering 20 million companies. See <https://www.xbrl.org/the-standard/what/taxonomies/>.

bodies, for instance when implementing structured reporting with the IFRS taxonomy.<sup>79</sup> The availability of mappings with other identifiers, such as the BIC and more recently the ISIN,<sup>80</sup> supports the role of the LEI as a lynchpin to access entity data from multiple sources, and the work of GLEIF and their mapping partners should be encouraged. Together with the business registry number already included in the LEI reference data, these mappings are the ones most frequently needed by financial institutions, at least according to the survey of a small number of ISDA and GFMA members, when excluding proprietary identifiers.<sup>81</sup> Some FSB members encouraged mapping the LEI with vendors' identifiers (see Annex 6).

- The LEI can be used as a building block for more secure on-line transactions. The LEI has already started to be included in digital certificates,<sup>82</sup> which are a key feature for secure websites and for electronic transactions more generally. Digital certificates generally refer to names of entities, which means that, given the cryptographic link between the components of the certificate, the certificate needs to be changed when the name of the entity changes (or in case of mergers).<sup>83</sup> The LEI would avoid this issue and would allow connecting reliably all certificates used by an entity with reliable data on the entity's identity. Relatedly, the signature and encryption of documents providing the application of security at a more granular (e.g. document or disclosure) level than the application of security at the repository level can improve the security of filing platforms and related registrant filings. This would require high quality and up-to-date identity data in the GLEIS, and would also make the benefit of regularly confirming their data more tangible to entities using the LEI.
- The LEI can facilitate the seamless processing of trade, including trade financing, invoicing, and compliance with customs requirements. The LEI would allow a complete and integrated audit trail for both financial institutions and their business clients. McKinsey and GLEIF have, for instance, illustrated the benefits of the LEI in trade finance.<sup>84</sup> From an industry perspective, the benefits of the LEI in trade would be

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<sup>79</sup> For instance, the CFA Institute has stated that all companies should be required to maintain and report the LEI of a registrant and its major subsidiaries, as this would increase investors' ability to identify and analyse the risks of registrants and their subsidiaries. However, even taking an initial step of only those that currently maintain a LEI to report it would be beneficial to the marketplace and would impose minimal burden on registrants. The CFA Institute also noted that LEIs should be used in additional areas throughout the filing to aid investors; for example, a company should be required to use the appropriate LEI when referring to another legal entity. See <https://blogs.cfainstitute.org/marketintegrity/2018/01/23/requiring-the-use-of-the-legal-entity-identifier/>.

<sup>80</sup> The first ISIN mappings started to be published in April 2019, although these cover initially only a few numbering agencies. See <https://www.anna-web.org/standards/lei/>.

<sup>81</sup> According to a GFMA and ISDA survey of 21 of their members, the LEI is mapped to an internally generated entity identifier or a code (other than the LEI) assigned by a trade repository in two thirds of cases and mapped with the BIC in around half of cases. Some 20% map the LEI with an ISIN, and a similar proportion map it with a local business registry number, and with a tax number.

<sup>82</sup> See, for example, InfoCert (<https://infocert.digital/>).

<sup>83</sup> For a discussion of this issue, and how having to change digital certificates after a change in the details of the company can be a source of costs and risks, see Why the Certificate Authority world should embrace Legal Entity Identifiers, part ii, <https://www.ubisecure.com/legal-entity-identifier-lei/lei-is-live-legal-entity-data/>.

<sup>84</sup> See McKinsey and GLEIF, *The Legal Entity Identifier: The Value of the Unique Counterparty ID* (ibid).

magnified if it were used consistently by all participants including customs authorities. Entities that currently have an LEI are likely to overlap significantly with importers and exporters, which frequently hedge their risks with derivatives subject to reporting requirements that include the LEI. At a minimum, mapping the LEI with other identifiers used in trade would avoid manual reconciliation and support more efficient data management.

The LEI ROC and GLEIF should work with industry and the public sector to raise awareness of the benefits of the LEI to encourage voluntary adoption, by documenting existing uses, or supporting pilot programs or research projects on promising new uses (**recommendation 4c**).

**Another challenge to address is that LEI coverage remains too low to effectively support some regulatory uses, or to capture** the benefits of broader coverage to the market as a whole. As highlighted by the FSB in its 2012 report, the benefits from the system increase as more and more parties acquire an LEI. At the launch, however, as with other examples of network goods, the private incentives for potential early movers to acquire an LEI are low, and decision makers may not always be able to take into account the benefits that LEI adoption would have for third parties (positive externalities). One way to foster LEI adoption would be to maximise benefits by focusing efforts on certain populations of entities that play a central role in the global financial system. For instance, while the parent entities of all G-SIBs have an LEI, this is not the case for the majority of their subsidiaries or major counterparties. This prevents the analysis of interlinkages and common exposures across, as well as use of LEI in resolution planning for, these firms.

- To that end, the FSB will work with standard-setting and industry bodies to facilitate adoption of the LEI for all group entities and major counterparties of global systemically important financial institutions, as well as for the clearing members of CCPs and their ultimate parents, in order to support the timely analysis of risk exposures and interdependencies (**recommendation 2b**).
- For the same reasons, FSB members should consider requiring the use and timely renewal of the LEI in reporting or disclosure frameworks, for the identification of all entities in major financial groups, a wider set of financial market participants and infrastructures, their counterparties, and related entities (including direct and ultimate parents), especially in a cross-border context (**recommendation 1b**).
- FSB members should also explore ways to promote further LEI adoption, for instance by fostering nationwide implementation strategies to maximise the cross-sectoral benefits of the LEI; communicating on LEI benefits through public outreach initiatives; leading by example in obtaining LEIs for the central bank and other public sector bodies, especially issuers of public debt; and considering the potential for LEI use before introducing new identifiers (**recommendation 1c**).

**Other identified obstacles to further LEI adoption and implementation relate to the LEI content, processes and business model.**

First, the usability of relationship data has been considered insufficient by many public sector

users.<sup>85</sup> The steps taken to increase coverage, especially among parent entities, would contribute to addressing this issue. The LEI ROC and GLEIF could facilitate reporting by the parent entity, introduce flags acknowledging the completeness of relationship data at entity and group level, determine criteria in consultation with relevant bodies (such as the OECD and BIS) to identify corporate groups that should be a priority target (e.g. large multinational enterprises), and promote voluntary adoption campaigns or possible new regulations that would cover these groups.

It was also noted that the addition of relationship data (beyond accounting consolidation, funds/pooled investment vehicles and branches) would make the LEI more useful. For instance, information on beneficial owners would support AML/CFT and the compilation of foreign direct investment statistics based on the Ultimate Investing Country. Information on directors would also support AML/CFT and digital signatures that would make the link between the signature and the entity that is represented. Industry sector information would support transaction monitoring, and facilitate the exchange of information on the holders and issuers of securities in the IMF Coordinated Portfolio Investment Survey. However, some stakeholders caution that issuance and renewals would be more complex if more information is added in the GLEIS. A solution could be in some cases that data on entities be published with LEIs by third parties, which would allow the data to be retrieved more easily, without the need to have all data elements included in the GLEIS database and verified by LOUs. Such links to other sources outside the GLEIS may be considered as a possibility when adding confidential data such as some relationship data.<sup>86</sup>

- The LEI ROC and GLEIF should enhance the scope and usability of Level 2 (relationship) data by:
  - considering cost-effective and reliable ways to add relationship data that would increase the value of the LEI (e.g. confidential relationships subject to access rights and appropriate controls; beneficial owners; other definition of parents); and (**recommendation 4d.i**)
  - expanding the coverage of such data, for instance by conducting targeted LEI adoption campaigns for large multinational firms and by facilitating relationship reporting by parents of their group entities (**recommendation 4d.ii**).

Another issue relates to data quality. While only about 20% of authorities noted quality was an issue (see section 5), responses from the public noted that quality is better than many other sources, but can still be improved in a number of areas: for instance the legal address given is frequently identical to the headquarters address, and there is not a common understanding of

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<sup>85</sup> Some of the barriers highlighted in section 5 suggest that, to improve relationship data, several avenues may need to be pursued, e.g. making it easier for the parent entity to provide consent, or include the collection of confidential information; increase LEI coverage among parent entities; record relationships under other definitions than accounting consolidation; and include relationship with natural persons.

<sup>86</sup> The FSB had already noted in 2012 that the GLEIS “must also provide appropriate protection of data covered by confidentiality and privacy restrictions governing some potentially important reference data in some countries, particularly regarding information on corporate relationships and ownership structures”. See <http://www.fsb.org/2012/06/fsb-report-global-legal-entity-identifier-for-financial-markets>. One of the objectives of the LEI ROC is to ensure that “confidential data should be safeguarded and with due regard for any applicable data protection legislation” (LEI ROC Charter Art. 2 (a) (1) (iii)).

the field to use to determine the jurisdiction of an entity. The proportion of lapsed LEIs was also raised as a source of concern for the quality of LEI data, as information may become out of date. Industry participants also encouraged regulators to more frequently mandate LEI renewals. The LEI ROC could continue monitoring, as part of its inventory of LEI related rules, the inclusion of explicit requirements to keep LEI reference data up-to-date and work on processes encouraging renewals.

- The LEI ROC and GLEIF should consider data quality process enhancements to increase the reliability of the LEI data so as to improve its usability by market participants and regulators, including processes to encourage and monitor updates of LEI reference data (**recommendation 4b**).

Another key issue is the current business model, which does not fully align the benefits and costs of LEI use for participants. Some academic literature has noted that “bottom line return are the most powerful reason for adoption” without regulatory compulsion and also compare with the adoption of GS1 bar codes:<sup>87</sup> “Individual firms have a strong private incentive to adopt and use these standards because without them they cannot participate in global supply as either a supplier or customer. Regulatory compulsion is not needed to make the system work. LEI must offer similar benefits to wholesale financial market participants”.<sup>88</sup>

- The LEI ROC and GLEIF should consider enhancements to the LEI business model to lower the cost and administrative burden for entities acquiring and maintaining an LEI, for instance adjusting funding approaches to align the benefits and costs for users more closely, and exploring ways to foster complementarity between the issuance and maintenance of the LEI and other processes involving similar tasks (e.g. issuance of domestic identifiers and digital certificates, financial institutions’ customer due diligence) (**recommendation 4a**).

Finally, there would be scope to minimise potential duplication between activities performed by the GLEIS and similar processes performed by market participants, for instance by allowing banks to perform verification of customer information on LEI records (something they already do to comply with regulatory requirements), or through greater integration with business registries (who already require notification of name and address changes, for example). This would enhance, rather than replace, the current business model, as for instance LOUs could outsource some verifications to banks, and some LOUs are already business registries. In addition, it is likely that different variations of the business model would coexist depending on the country and type of entities.

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<sup>87</sup> See <https://www.gs1.org/standards/barcodes>.

<sup>88</sup> Ka Kei Chan and Alistair Milne, The Global Legal Entity Identifier System: How Can It Deliver? *Journal of Risk and Financial Management*, 7 March 2019, <https://www.mdpi.com/1911-8074/12/1/39/htm>.

## **Annex 1: Abbreviations for financial authorities in FSB jurisdictions cited in this report**

### ***Australia***

ASIC Australian Securities and Investments Commission

### ***European Union***

EBA European Banking Authority

ECB European Central Bank

EIOPA European Insurance and Occupational Pensions Authority

ESMA European Securities and Markets Authority

SRB Single Resolution Board

### ***Hong Kong***

HKMA Hong Kong Monetary Authority

SFC Securities and Futures Commission

### ***India***

RBI Reserve Bank of India

### ***Japan***

JFSA Japan Financial Services Agency

### ***Korea***

FSC Financial Services Commission

### ***Singapore***

MAS Monetary Authority of Singapore

### ***United States***

CFTC Commodity Futures Trading Commission

FDIC Federal Deposit Insurance Corporation

FRB Federal Reserve Board

FSOC Financial Stability Oversight Council

OFR Office of Financial Research

SEC Securities and Exchange Commission

## **Annex 2: Non-LEI identifiers used by jurisdictions**

**Jurisdictions use a variety of identifiers other than the LEI.** Some jurisdictions (Brazil, France, Italy, Switzerland, Turkey, and Spain) appear to have a main domestic identifier covering all or most legal entities, which are largely used for multiple purposes. Other jurisdictions have a plurality of identifiers, with no clear “main” identifier (India, Saudi Arabia, and the US).

**These identifiers are generally not linked to the LEI, though there are some exceptions.** For example, identifiers of lenders and borrowers of the ECB’s recently established granular database on credit (AnaCredit) are mapped to the LEI in the context of its Register of Institutions and Affiliates Database (RIAD). EIOPA’s code is linked at an entity level in the EIOPA’s reference database. In the US, the OCC has mapped its Charter ID, the FDIC’s Certificate Number, and the Federal Reserve’s RSSD Number to the respective financial institutions’ LEI. Mapping with the LEI allows to access richer datasets.<sup>89</sup> The identifier of the entity in the business registry in which the entity was formed, where applicable, is part of the mandatory data elements in the GLEIS. However, the interpretation of the qualifier “where applicable” seems to have led to diverging practices by LOUs, in the process of being addressed by GLEIF. The incomplete mapping with domestic identifiers resulting from this divergence was seen as an important obstacle by a number of FSB members, and some have developed their own mapping outside the GLEIS (e.g. Brazil). Other identifiers in Brazil, Germany, Hong Kong, Spain, Switzerland and the US are mapped to the LEI.

**A variety of identifiers, both proprietary and others, are used for entities incorporated or established in foreign jurisdictions.** Some of the most common such identifiers are the BIC and international bank account number (IBAN) for banks and accounts, respectively. European authorities mention the LEI, Le (a national identifier issued to foreign entities), financial regulator proprietary codes, and financial institution proprietary client codes. For trade repository data and EMIR data the LEI and Market Identifier Code (MIC) are used. For EMIR reporting, some market participants had requested that the BIC be accepted during a transition period, but analysis showed that the proportion of trades reported with a BIC was minor or negligible, and a substantial number of such trades originated from jurisdictions where the LEI was already implemented. The generalisation of the LEI requirements for derivatives reporting in November 2017 in the EU led to replacing 9,362 BICs, national codes and client codes (out of some 130,000 entities). In Russia, there are the LEI, legal name, and tax IDs. In the US, the CFTC allows, if necessary to comply with foreign law, reporting of a privacy law identifier (PLI), a proprietary client code created by the reporting counterparty. The FDIC uses the entities’ legal names and home country national identifiers. In Mexico and Saudi Arabia, foreign entities are identified by copies of the articles of incorporation or business registration certificate.

**Many identifiers could be eliminated if the LEI was more widely adopted across jurisdictions and agencies within jurisdictions.** Some identifiers already in use are being replaced or complemented by the LEI.

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<sup>89</sup> For instance, the SEC staff publishes Investment Adviser Information Reports that contain information about investment advisers who are registered with the SEC or who are filing reports as Exempt Reporting Advisers with the SEC, and the LEI is included in the file if the adviser has one.

**Table A2: Identifiers replaced by, to be replaced by, or mapped to the LEI**

<b>Jurisdiction</b>	<b>Identifier replaced/planned to be replaced by the LEI</b>	<b>Identifier mapped to the LEI</b>	<b>Comments</b>
Brazil		National Registry of Legal Entities (CNPJ), a unique ID number assigned by the national tax authority	Brazilian entities with an LEI must include it into the CNJP.
France	BIC		The LEI has fully replaced the BIC code for the identification of investment firms taking part in the execution of a transaction within MiFIR regulation.
France	CIB		In November 2018, banks were consulted on the project to identify with an LEI to report the ACPR instead of CIB. Implementation is foreseen end 2020.
France	SIREN		In October 2018, insurers were consulted on the project to identify with an LEI to report the ACPR instead of SIREN. Implementation is foreseen end 2020.
Germany		Creditor ID and Borrower ID of the Central Credit Register	Mapping done by the Bundesbank.
Germany		RIAD code	Mapping done by the Bundesbank.
Hong Kong	HKTR member code		For OTC derivatives trade reporting, when the first phase of mandatory use of LEI commenced (1 April 2019), the HKMA and SFC removed the HKTR members codes (which currently has the same priority as LEIs) from the waterfall of identifiers in the Supplementary Reporting Instructions (SRI).
Hong Kong		HKTR member code	TR Member has to provide all its third party codes (if any) when registers with the HKTR and is responsible to review and update their identifiers regularly. HKTR will map all these third party identifiers to the LEI under the HKTR system accordingly.

Spain		All identifiers in RIAD (NIF, REN, BIC, RIAD)	NIF is the legal unique Spanish identifier provided in Spain by the Tax Office. REN is the official code provided by Banco de España to financial institutions.
Switzerland		UID	An automatic mapping of the UID number to the LEI occurs if a Swiss enterprise applies for an LEI from the Swiss LOU operated by the Federal Statistical Office (who also operates the UID registry). LOUs can also achieve a mapping by including the UID in the reference data when issuing an LEI.
United States	CFTC Interim Compliant Identifier (CICI)		As the CFTC swap data reporting rules became effective prior to the establishment of the GLEIS, swap counterparties were initially required to be identified using a CICI. Once the GLEIS was developed, the CFTC mandated that swap counterparties be identified instead with the LEI.
United States		The OCC's Charter ID, the FDIC's Certificate Number, and the Federal Reserve's RSSD Number	The OCC has mapped these identifiers to the respective financial institutions' LEI (when the LEI has been provided on the Bank/BHC Call Report).

### Annex 3: Strategies for LEI implementation per jurisdiction

Jurisdiction	Strategy features			
	Adopted at national, supranational or authority level	Developed how?	Motivation/Objective	Description
Australia	National	Dialogue and consultation between authorities and financial institutions and local Registration Agents	Facilitate the aggregation of transaction data at the entity level for measuring and monitoring trading and clearing activity and large exposures	Adoption of LEI is promoted by inclusion as a required identifier for OTC trade reporting (with AVIDs or BICs as alternatives) and as requested field for reporting by regulated entities under market integrity rules (securities markets), clearing rules and prudential standard for reporting of large exposures
<b>Brazil</b>	National	Dialogue between authorities	Information for tax and other domestic authorities	Legal entities with an LEI must include it in the national registry
<b>Canada</b>	National	Dialogue between authorities	Facilitate the aggregation of transaction data at the entity level for measuring and monitoring trading activity and interconnections between entities	LEI requirements for OTC derivatives, exchange-traded derivatives and securities markets
<b>China</b>	Authority (Shanghai Head Office of People's Bank of China and some market infrastructure	Dialogue and consultation between authorities and financial institutions	Guarding against macro systemic financial risks, strengthening the identification of foreign institutions to participate in Chinese market	Foreign institutions in the Bond Market Access Record System (BMARS), China Interbank Bond Market (CIBM) and in the interbank market financial derivatives CCP clearing report would (starting in 2020) need to provide an LEI, if available

Jurisdiction	Strategy features			
	Adopted at national, supranational or authority level	Developed how?	Motivation/Objective	Description
	including the China Foreign Exchange Trade System/National Interbank Lending Center, the Shanghai Clearing House and the China Central Depository & Clearing Co. Ltd.)			
<b>EU (EBA)</b>	Supranational	EU decision making process	Quality of reporting, better data analysis, facilitating risk analysis	Promote LEI use
<b>EU (ECB)</b>	Supranational	EU decision making process	Better data analysis	Require entries into RIAD be identified with an LEI
<b>EU (EIOPA)</b>	Supranational	EU decision making process	Effective supervision through data quality	Promote LEI use
<b>EU (ESMA)</b>	Supranational	Stakeholder dialogue + EU decision making process	Consistent approach across all sectoral legislations under ESMA's mandates	Mandatory (i.e. required also if the entity does not already have a LEI) for financial and non-financial counterparties to OTC derivatives contract, investment firms trading in financial instruments, trading platforms, credit rating agencies, central securities depositories and settlement internalisers. Reporting by the above must (i.e. required also if the entity does not already have a LEI) include an LEI for: clients of investment firms; CCPs;

Jurisdiction	Strategy features			
	Adopted at national, supranational or authority level	Developed how?	Motivation/Objective	Description
				intermediaries and counterparties of the reporting entities; entities for which a credit rating have been issued; issuers of financial instruments; participants in the CSD system and settlement banks
<b>Hong Kong</b>	National	Stakeholder dialogue	Follow international trend, benefits for financial sector as a whole	Phased-in approach to mandating LEI use in OTC derivatives trade reporting, starting April 2019
<b>India</b>	National (interagency)	Consultation (Inter Regulatory Technical Group)	Helps to achieve financial stability objectives, better risk management (in particular across jurisdictions)	Phased-in approach to mandating use of LEIs for OTC derivatives trading, for entities with large credit exposures, and for non-derivative markets. Entities that do not obtain an LEI as schedules are restricted from bank credit
<b>Japan</b>	Authority (JFSA)	Stakeholder consultation	Facilitates aggregation of trading volumes, enhancement of cross-border transactions	JFSA to communicate benefits of LEI to Financial Instruments Business Operators and encourage the use of the LEI
<b>Korea</b>	Authority (FSC)	Stakeholder consultation	Compliance with G20 call, improve management of systemic risk	Request the use of LEI in periodic reporting of OTC derivatives contracts. Will soon require the use of the LEI as a unique identifier for financial institutions in trade repository and gradually phased in
<b>Mexico</b>	National	National financial authorities (in Financial Stability Council)	Improvement in the identification of risks for both, financial entities and authorities.	Require LEIs for all the parties and counterparties operating in financial markets, and gradually incorporate regulation to require use of the LEI as

Jurisdiction	Strategy features			
	Adopted at national, supranational or authority level	Developed how?	Motivation/Objective	Description
				identifier for reporting to Banco de México financial market operations
<b>Saudi Arabia</b>	National	National financial authorities.	n/a	Phased requirements to obtain an LEI, first by financial institutions, next certain financial transactions
<b>Singapore</b>	Authority (MAS)	Public consultation	Enables authorities to better view and analyse potential systemic risk (in particular as regards business across multiple legal entities)	Require by regulation reporting entities and (where available) counterparties to report the LEI in reporting of derivatives contracts
<b>Switzerland</b>	National	Legislative procedure with stakeholder involvement (authorities and industry)	Improvement of the financial data quality facilitates assessment of systemic risks, contributes to reinforce financial stability	Participate on LEI ROC; update legislation to allow Federal Statistical Office to become an LOU; include LEI in OTC derivatives and securities transactions reporting
<b>Turkey</b>	Authority	National financial authorities	Compliance with other countries practices to improve data quality	Requiring the use of the LEI as a unique identifier in OTC derivatives trade reporting
<b>United Kingdom</b>	Authority	EU decision making process, stakeholder consultation	Consistent, efficient and effective supervisory practices to ensure high quality, reliable and comparable data, bridging data silos and better monitoring systemic risk	Support for LEI requirements in EU requirements e.g. CRR, Solvency II and MiFID II/MiFIR and EMIR; incorporation of LEI in regulatory reporting and other collected datasets wherever possible

<b>Jurisdiction</b>	<b>Strategy features</b>			
	<b>Adopted at national, supranational or authority level</b>	<b>Developed how?</b>	<b>Motivation/Objective</b>	<b>Description</b>
<b>United States</b>	Authority (OFR, OCC, FRB, CFTC, SEC)	Stakeholder involvement	Lowering regulatory compliance costs and improving data quality	Encourage the use of the LEI in new US and global financial regulation (OFR); mandate that all entities that are counterparties to swap transactions be identified with an LEI (CFTC); require all participants of security-based swaps to use the LEI for reporting (SEC); investment advisers report an LEI if they have one (SEC); require registered investment companies to obtain and report an LEI (SEC); including recommendations about the use of LEI in regulation in the FSOC Annual Report of Congress
<b>Jurisdictions with no strategy in place yet: Argentina, Indonesia, Russia, South Africa.</b>				

**Annex 4a: Percentage of OTC derivatives trades where the reporting entity or counterparty is identified with an LEI**

	Open transactions (stock)		New transactions (flow)		Open transactions (stock)		New transactions (flow)	
	By transaction count	By gross notional outstanding	By transaction count	By gross notional outstanding	By transaction count	By gross notional outstanding	By transaction count	By gross notional outstanding
Jurisdiction	Percentage of all OTC derivative trades where the <u>reporting entity</u> is identified with a current LEI				Percentage of all OTC derivative trades where the <u>counterparty of the reporting entity</u> is identified with a current LEI			
AU	100	100	100	100	90	Not available	87	87
CA	96	97	98	96	94	98	86	98
Euro area	99	96	100	100	90	99	97	99
FR	100	100	100	100	79	100	74	100
DE	99	100	100	100	93	100	99	100
HK	100	100	100	100	92	98	89	97
IN	100	100	100	100	89	98	96	97
IT	99	99	100	100	97	NA	100	100
JP	100	100	100	100	67	94	63	94
MX	100	100	100	100	3.8	6	4	47
NL	100	100	100	100	100	100	100	100
RU	NA	NA	100	100	NA	NA	100	100
SG	100	100	100	100	75	86	77	90
ES	99	100	100	100	90	99	93	100
UK	100	100	100	100	93	99	96	99
US	100	100	96	100	98	100	92	100
TR	100	100	100	100	89	89	86	86

Source: Responses to FSB peer review questionnaire. Data unavailable for Argentina, Brazil, China, Indonesia, Korea, Saudi Arabia, South Africa and Switzerland. For Russia, data on open transactions is not available but is estimated by its authorities to be between 90-100%.

## Annex 4b: LEI coverage for securities issuers in FSB jurisdictions (end-September 2018)\*

	Non-financial corporations			Financial institutions**			General government			Total economy**		
	LEI coverage in % of			LEI coverage in % of			LEI coverage in % of			LEI coverage in % of		
	issuers	instruments	outstanding amounts	issuers	instruments	outstanding amounts	issuers	instruments	outstanding amounts	issuers	instruments	outstanding amounts
<b>AR</b>	6%	4%	75%	22%	24%	75%	55%	87%	99%	9%	10%	90%
<b>AU</b>	9%	3%	39%	25%	73%	90%	43%	96%	100%	13%	23%	71%
<b>BR</b>	0%	1%	25%	8%	54%	42%	10%	99%	100%	0%	24%	50%
<b>CA</b>	6%	5%	84%	16%	57%	90%	6%	24%	97%	7%	25%	89%
<b>CH</b>	3%	3%	91%	18%	90%	96%	6%	23%	65%	5%	42%	91%
<b>CN</b>	1%	2%	5%	6%	27%	68%	2%	24%	42%	2%	15%	36%
<b>DE</b>	14%	14%	99%	47%	99%	99%	94%	66%	100%	19%	97%	99%
<b>ES</b>	18%	8%	93%	61%	92%	100%	100%	100%	100%	27%	29%	98%
<b>EU</b>	17%	12%	94%	48%	98%	97%	38%	78%	100%	22%	88%	97%
<b>FR</b>	8%	8%	99%	21%	86%	99%	62%	95%	100%	10%	33%	99%
<b>HK</b>	9%	8%	43%	53%	84%	91%	100%	100%	100%	22%	50%	63%
<b>ID</b>	7%	4%	30%	18%	71%	85%	100%	100%	100%	10%	20%	62%
<b>IN</b>	5%	14%	85%	7%	45%	81%	5%	5%	3%	5%	22%	58%
<b>IT</b>	45%	50%	93%	69%	93%	97%	12%	28%	100%	47%	69%	98%
<b>JP</b>	7%	14%	56%	44%	88%	87%	2%	12%	92%	9%	46%	77%
<b>KR</b>	1%	3%	53%	2%	90%	81%	4%	13%	96%	1%	48%	70%
<b>MX</b>	9%	10%	54%	26%	65%	59%	25%	95%	100%	13%	35%	61%
<b>NL</b>	26%	32%	100%	83%	100%	100%	89%	95%	100%	56%	97%	100%
<b>RU</b>	1%	4%	66%	32%	46%	91%	4%	58%	93%	4%	11%	75%
<b>SA</b>	6%	1%	60%	62%	68%	97%	100%	100%	100%	21%	8%	78%
<b>SG</b>	12%	3%	65%	44%	82%	92%	100%	100%	100%	18%	28%	80%
<b>TR</b>	8%	3%	65%	34%	5%	92%	67%	100%	100%	14%	7%	88%
<b>UK</b>	25%	4%	91%	57%	99%	94%	42%	85%	100%	34%	84%	94%
<b>US</b>	6%	4%	92%	21%	40%	61%	13%	43%	95%	10%	24%	83%
<b>ZA</b>	2%	4%	48%	10%	46%	69%	13%	82%	99%	3%	24%	64%
<b>FSB total***</b>	<b>9%</b>	<b>6%</b>	<b>75%</b>	<b>26%</b>	<b>80%</b>	<b>76%</b>	<b>15%</b>	<b>44%</b>	<b>89%</b>	<b>12%</b>	<b>58%</b>	<b>79%</b>
<b>Rest of the world****</b>	<b>3%</b>	<b>4%</b>	<b>49%</b>	<b>29%</b>	<b>53%</b>	<b>76%</b>	<b>61%</b>	<b>22%</b>	<b>86%</b>	<b>7%</b>	<b>30%</b>	<b>64%</b>
<b>World total</b>	<b>8%</b>	<b>6%</b>	<b>73%</b>	<b>27%</b>	<b>78%</b>	<b>76%</b>	<b>17%</b>	<b>38%</b>	<b>89%</b>	<b>11%</b>	<b>55%</b>	<b>78%</b>

**Notes:**

\* LEI coverage statistics are calculated on the basis of micro data from the ESCB's Centralised Securities Database (CSDB). The CSDB is a multi-source security-by-security database that automatically combines security and issuer information from multiple data sources and derives a "golden copy" for each security and issuer. It is jointly operated by the ECB and 27 ESCB national central banks under a clearly defined data quality management framework. It should be noted that the data for the non-EU FSB member jurisdictions cannot be checked with the same depth as for the EU countries and that there may possibly be some coverage gaps for the non-EU FSB jurisdictions. Thus, the LEI coverage statistics for the non-EU FSB members should be treated as approximate estimates and interpreted with these caveats in mind.

\*\* Data cover all subsectors except for money market funds and non-money market investment funds (i.e. SNA sectors S.123 and S.124).

\*\*\* The FSB total includes all EU member states as part of the EU aggregate.

\*\*\*\* Rest of the world refers to jurisdictions which are not members of the FSB (non-FSB EU member states are covered in the FSB total as part of the EU aggregate).

## Annex 4c: Reasons given by entities for not providing information on their direct and ultimate parents

% of issued and lapsed LEIs (except last line)	AR	AU	BR	CA	CH	CN	DE	ES	FR	GB	HK	ID	IN	IT	JP	KR	MX	NL	RU	SA	SG	TR	US	ZA	EU	allFSB	ROW
<b>Ultimate parent</b>																											
Ultimate parent reported	18	12	14	10	9	22	6	4	7	6	14	27	10	4	5	23	22	3	14	22	19	26	6	16	6	6	6
of which lapsed	1	8	30	11	8	12	9	11	13	38	13	14	0	7	2	10	8	10	8	11	11	7	10	22	14	13	14
Ultimate parent not reported and exception given	62	76	70	64	86	59	84	91	81	92	78	66	78	83	90	69	66	84	53	55	67	69	58	56	86	80	87
of which:																											
Consent not obtained or other obstacles	12	32	23	15	8	18	2	1	6	4	18	14	3	2	2	12	12	1	6	11	19	5	22	7	4	7	14
Natural persons	11	8	7	12	19	7	7	1	27	11	18	7	54	39	1	26	7	0	26	13	14	33	6	10	21	19	25
Non-consolidating parent of which funds	8	16	7	17	14	14	8	84	32	37	19	14	10	11	6	16	29	78	5	21	13	14	14	11	32	28	23
of which funds	2	7	1	6	5	1	0	3	8	1	6	1	0	0	1	9	2	0	0	1	3	1	4	3	2	3	3
No known person controlling the entity (e.g diversified shareholding)	17	14	27	12	40	8	64	3	9	37	11	11	5	27	81	10	11	1	11	6	10	7	9	11	25	22	18
of which funds	0	3	22	2	5	0	5	0	1	1	2	1	0	0	0	3	0	0	0	0	1	0	2	3	2	2	2
Parent has no LEI	14	6	6	7	5	12	2	2	7	3	13	20	5	3	1	6	7	3	6	5	11	9	7	19	4	5	8
<b>Direct parent</b>																											
Direct parent reported	16	11	12	9	7	17	5	3	8	5	12	20	9	4	3	19	17	3	18	19	16	29	5	13	5	6	5
of which lapsed	1	1	1	1	0	2	0	0	1	0	1	2	0	0	0	2	1	0	1	2	1	2	0	1	0	0	0
Direct parent not reported and exception given	65	77	72	64	87	64	85	91	81	93	80	73	79	82	92	73	70	85	50	57	70	66	60	59	86	81	88
of which:																											
Consent not obtained or other obstacles	13	32	23	15	8	19	2	1	6	4	18	14	3	2	3	13	15	1	6	12	21	5	22	8	4	7	14
Natural person	10	8	7	12	20	6	7	1	26	10	15	7	54	39	1	26	6	0	18	13	13	30	6	10	21	18	24
Non-consolidating parent of which funds	10	17	8	17	16	16	9	84	32	38	20	17	11	11	6	19	30	79	6	21	14	12	15	12	32	28	24
of which funds	2	6	1	6	5	1	0	3	8	1	6	0	0	0	1	9	2	0	0	1	3	1	4	2	2	3	3
No known person controlling the entity (e.g diversified shareholding)	16	14	27	12	37	8	64	3	9	37	10	11	5	27	81	10	11	1	8	6	10	6	9	10	25	22	18
of which funds	0	3	22	2	5	0	5	0	1	1	2	1	0	0	0	3	0	0	0	0	1	0	2	2	2	2	2
Parent has no LEI	15	6	8	7	6	15	2	2	7	4	15	23	6	3	1	6	8	3	12	5	13	14	8	19	4	5	8
No parent reported and no exception given	9	11	15	27	5	15	10	5	11	2	6	5	0	14	5	7	12	10	33	15	12	5	35	11	8	12	6
<b>Cases where no accounting consolidation parents should be reported</b>																											
Sole proprietors	10	1	1	0	1	4	0	1	0	0	2	2	12	0	0	0	0	2	0	6	1	0	0	12	1	1	1
Branches	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	0
<b>Total number of issued and lapsed LEIs*</b>	511	12175	1663	28872	14409	1668	114019	94646	67914	133677	5031	649	19924	98926	8084	1054	3299	97622	1266	381	4716	1598	179668	1239	914554	1200761	126835

Source: GLEIF, files “reporting exceptions v1.1”, LEI-CDF v2.1 Concatenated file, RR-CDF v1.1 as of 3 January 2019, available at <https://www.gleif.org/en/lei-data/gleif-concatenated-file/download-the-concatenated-file#> calculation FSB. Calculations only take into accounts LEIs with an “issued”, “lapsed” or “pending transfer” status (as well as records with a “pending archival status” in the absence of a more recent record). It may happen that several exceptions are reported for the same relationship. ROW: rest of the world.

**Annex 4d: LEI coverage in the customer base of a sample of GFMA and ISDA members**

<b>Respondent based in North America</b>	<b>% of European clients with LEIs</b>	<b>% of North American clients with LEIs</b>	<b>% of APAC (excluding Japan) clients with LEIs</b>	<b>% of Japan clients with LEIs</b>
Low	10	3	5	1
High	100	99	100	100
Average	58	52	42	33
Mode	Not applicable	Not applicable	Not applicable	Not applicable
Median	70	65	20	19

<b>Respondent based in Japan</b>	<b>% of European clients with LEIs</b>	<b>% of North American clients with LEIs</b>	<b>% of APAC (excluding Japan) clients with LEIs</b>	<b>% of Japan clients with LEIs</b>
Low	8	4	1	5
High	100	100	100	100
Average	87	81	59	59
Mode	100	100	Not applicable	82
Median	100	100	90	67

Note: The survey was conducted by ISDA and GFMA in March and April 2019 and the results are based on 21 responses (mostly from the sell side). No responses were received from Europe, while one response from an institution in the APAC region (other than Japan) was excluded as it was considered as potentially not representative. The main business line where LEI implementation was completed is derivatives (around 80%, where the LEI is mandated). One-third implemented the LEI for derivatives even when not mandated, with another quarter of respondents in the process of doing so. LEI implementation was also well advanced for client onboarding (around 40% of the sample) but very low for trade finance, interbank payments and securities trading, where two-thirds of respondents had not even started planning implementation.

## **Annex 5: Summary of public feedback and roundtable with market participants**

The FSB invited feedback from the public on the areas covered by the peer review. Over 20 written responses were received. Respondents were overwhelmingly supportive of the LEI and the FSB peer review. Many suggested steps to improve adoption and applying new use cases, with most calling for regulatory mandates (including for LEI renewals). The main points raised in the written public feedback are summarised below, together with the highlights of the roundtable organised in London on 10 December 2018, where the peer review team met with over 50 stakeholders, including representatives of banks, credit unions, securities dealers, investment advisers, stock exchanges, data vendors, the payment industry, participants in the GLEIS, issuers of other types of identifiers or digital certificates, and regulators.

### **LEI implementation: coverage achieved, progress made and lessons learnt from implementation strategies**

The LEI has so far primarily been implemented through regulations, notably to support the reporting of financial transactions and risk aggregation. In general, awareness is growing but driven largely by regulatory mandates; consequently, written responses suggested less awareness in jurisdictions (and sectors) not subject to regulatory mandates for obtaining and maintaining LEIs. In some instances, respondents highlighted confusion among participants over whether they needed an LEI.

Roundtable participants considered that LEI uptake among derivative market participants, and to a lesser extent for securities markets, has been a considerable achievement. Large financial institutions consider the LEI as very beneficial for their own processes, such as making sure that the entity they are dealing with has been adequately identified and has up-to-date contractual documentation, and managing limits applying to that entity. However, small banks with local customers see less benefits in the LEI.

Regulatory mandates were seen by a majority as a necessary and preferred approach, at least until a tipping point of adoption is reached. Otherwise institutions do not have the incentive to rework their processes, especially given the increased benefits that accrue with joint adoption by all participants. One participant noted however that it was unlikely that all countries would mandate the LEI, and that other approaches relying on incentives would therefore be necessary.

The main implementation difficulties were:

**Differences in the timing and scope of requirements across jurisdictions:** Requirements to have an LEI for derivatives applied in a similar timeframe in the US and the EU, which was very effective for LEI adoption in these major markets. However those regulations required market participants from other jurisdictions to have an LEI, although those jurisdictions did not always mandate the LEI for derivatives. This is even more so for some requirements beyond the derivatives space, which tend to be more jurisdiction-specific, such as EU requirements for securities issuers to have an LEI. The issue is compounded when regulated entities in the country that mandates the LEI do not have a contractual relationship with the foreign entities expected to have an LEI: for instance, any broker can list a security on a German stock exchange, without the consent of the issuer. The burden fell on the industry to educate and convince these participants to have an LEI. The difficulties of convincing entities in Asia, due

to the lesser scope of LEI requirements in some Asian jurisdictions, was mentioned several times. Differences in the timing of requirements also put financial institutions in first-mover countries at a disadvantage. A number of industry participants therefore recommended that, within an agreed scope, such as derivatives and listed securities, regulatory requirements have an LEI apply globally to all entities.

**Difficulties in convincing small entities to get an LEI:** Some participants wondered whether it made sense to require the LEI in all cases, especially for small entities that trade infrequently. The cost of acquiring an LEI may be perceived as disproportionate for very small accounts and these entities do not see any use of the LEI. However, a majority of participants considered that it was preferable to cover all entities, as all would ultimately benefit from operational efficiencies, for instance if the LEI supports the straight-through processing of cross-border payments and reduces false positive in sanction screening, which delay payments. Small entities may also be the first impacted in case of a financial crisis, and the LEI helps to assess the impact of a shock, or to ensure that the collateral posted by a customer can be appropriately traced. Some regulators noted that small transactions may be relevant from a conduct perspective, and a large number of small risks can together be systemic. In addition, one regulator observed that the millions of records collected would not be manageable without the LEI.

**Operational issues:** delays in the publication of LEIs, or the update in status, can cause issues and delay transactions.

**Recommendations from participants to increase LEI adoption included:**

- mandating the use of the LEI (discussed above);
- pursuing joint education efforts by regulators and industry where the take-up is not high, such as through webinars, seminars and forums by industry associations. There was a sense that the GLEIF and LOUs have been helpful in the past, as was an industry FAQ made available in multiple languages, but that lawmakers and business registries should be part of the outreach. In this regard FSB country peer reviews also had a positive impact, as had thematic papers by policy makers, such as the consultation by the Bank of England on payments;
- using the LEI for as many uses as possible, including for tax purposes;
- incorporating additional data in the GLEIS: some participants suggested adding data elements that do not change at every trade and currently burden trade reporting, for instance whether an entity is a US person, or adding the industry sector of entities, to support AML/CFT. A solution could be that data on entities be published with LEIs by third parties, which would allow the data to be retrieved more easily, without the need to have all data elements included in the GLEIS data base and verified by LOUs;
- reducing costs and the duplication of processes; especially with other identifiers (for instance embedding issuance at the local business registry), and ideally replacing other identifiers with the LEI. Banks could play a role in issuance and maintenance, although one participant underlined this should not replace the responsibility of the entity to update its data, and another cautioned that we should not go back to situations where a bank could request an LEI for a customer without the customer's authorisation, which led to several identifiers being requested for the same entity;
- addressing the issue of lapsed LEIs. The absence of updates on lapsed LEIs is an issue. For instance, if the name of an entity is not updated, this may result in a new LEI being

issued. Several participants highlighted the need for regulators to clearly mandate renewals; and

- cooperation between the public and private sector on new areas, for instance in payments and KYC, where some suggested the adoption of new regulatory requirements, after consultation with industry groups such as the Wolfsberg Group.

### **Benefits and challenges to market participants from LEI adoption**

In addition to regulatory objectives, the LEI is intended to support improved internal processes and bring other benefits to market participants. In written contributions, identified uses included client/counterparty identification, data aggregation and analysis, systemic risk identification, efficient supply chain management, government-to-business relationships, payments and AML/CFT compliance.

Roundtable participants illustrated the following benefits of the LEI:

- it avoids the costs of manually reconciling data on entities, which is complicated by variations in the use of names, the translation or transliteration of different languages and character sets;
- its use in ISDA documentation facilitates updates;
- its use in settlement instructions avoids ambiguity on entity identification; and
- it allows leveraging of other data points on the same entity within complex institutions.

### **Potential future uses:**

The LEI was introduced in XBRL taxonomy, which will help standardise how entities are referred to in areas such as regulatory reporting, registration in business registries, financial disclosures, tax reporting, and compliance. XBRL is used in some 70 countries, with 142 mandates covering 20 million companies. Adding the LEI to the taxonomy will encourage XBRL users to consider the LEI when there is a need to identify entities. Roundtable participants noted one could imagine that financial statements identify with an LEI the entity issuing the statements as well as the related entities referred to in the statements and that the electronic signature of the auditors that certified the statements, and the regulators that received them, also include the LEI.

Participants noted the LEI is starting to be included in digital certificates, which are a key feature for secure websites and for electronic transactions more generally. Digital certificates generally refer to names of entities, which means that the certificate needs to be changed when the name of the entity changes, or in case of mergers. The LEI would avoid this issue, and would allow connecting reliably all certificates used by an entity with reliable data on the identity of the entity. Embedding the LEI in digital signatures would facilitate the management of contracts.

The identification by accounting firms of the entities their customers are related to would benefit greatly from the LEI, as these processes currently rely on vendors' data from multiple source and a large amount of manual work.

## Challenges

The main obstacles cited in written contributions were the lack of regulatory mandates impacting coverage and renewals, different requirements across jurisdictions, costs, and data quality issues. Some of these challenges were discussed during the roundtable:

Levels of coverage vary widely and remain very low in some regions: A large international bank noted that LEI coverage reached 69% for its European customers, 29% for its US customers, and 4% for customers in the Asia-Pacific region. While some LEI benefits materialise even with partial coverage, a large coverage justifies additional investment in processes. In addition, as long as the LEI cannot be used for all entities, other identifiers need to be maintained.

Quality is better than many other sources, but can still be improved in a number of areas: for instance the legal address given is frequently identical to the headquarters address, and there is not a common understanding of the field to use to determine the jurisdiction of an entity. Furthermore, the business registry number is still frequently absent.

The high level of lapsed LEIs is an obstacle to some uses, such as KYC requirements. Some participants wondered whether a longer time period between renewals would be acceptable if the data does not change. However, this would not inform users as to whether the data is still up-to-date. Other avenues may help reach higher renewal rates: for instance in Spain, where many LEIs are managed by the local business registry, LEI renewals, which are above 90%, are perceived to be part of the annual process by which entities submit their financial statements to the registry.

## Adoption strategies

In the written contributions received, the majority of respondents called for increased use of regulatory mandates. Other proposals include lowering costs to acquiring and renewing LEIs, linking the LEI to other identifiers (such as ISIN), and increasing awareness of the existence and benefits of the LEI.

Roundtable participants discussed how examples from other areas could inspire LEI adoption, and other ways to foster adoption:

- Digital certificates were made compulsory in some jurisdictions, for instance Italy mandated them for the communication of all companies with the government, and this supported additional uses in the private sector.
- Bar codes were required by large retailers, as this helped those retailers to manage more efficiently their sales and inventories. This market requirement forced companies that wanted to sell through them to tag their goods with such codes.

Participants suggested that getting all data vendors to include the LEI in their feeds on entities would support adoption.

## **The perspective of entities acquiring and maintaining their LEIs: Addressing costs, the user experience and other challenges in order to promote wider LEI adoption**

Some industry participants consider the LEI too costly and registration too cumbersome, which may impact the expansion of the LEI and also explain difficulties in achieving the yearly confirmation of LEI reference data by legal entities.

The main costs identified in written contributions were for acquiring an LEI and for accommodating them in internal systems. A few responses made the point that costs are borne entirely by the entity acquiring the LEI but the benefits are widespread (for both the public and private sector). One suggested the goal should be a system with no costs to the entities acquiring an LEI. Some respondents noted instances where mandates covered LEI acquisition, but not renewal, and suspected that given the cost many entities that are not required to renew will let their LEIs lapse. One respondent noted that costs have been falling for renewal and another argued costs are low; in contrast, fund organisations cited the high cost of managers having to acquire LEIs for their funds.

Participants discussed potential ways to address these challenges.

A number of other parties perform similar tasks as LOUs, such as: banks in their customer due diligence; issuers of digital certificates; tax authorities; and business registries. There would be scope for removing some of these duplications, for instance:

- by accepting that LOUs rely on banks to perform the verification of the LEI record: banks already perform such verifications, generally with a frequency of one, two or three years, and go even beyond the information required in the GLEIS. Banks would not replace LOUs, as they would be unlikely to want to manage the LEI record, respond to challenges, etc.; or
- through a greater integration with business registries. One LOU which is also a business registry notifies the contact person of entities when records in the business registry change, so as to be able to modify as well the LEI record. Participants noted that business registries could not entirely replace LOUs: not all entities are in business registries, some business registries do not have sufficient quality, or do not have appetite for the activity.

Competition brings LEI costs down, but may also impact quality: it is important that GLEIF quality monitoring covers not only the formal quality of LEI records, but also the correspondence with public sector groups. The cost recovery principle in the GLEIS avoids excessive prices not justified by costs, and is also seen by LOUs as a recognition that they are not expected to operate at a loss.

### **Exploring the use of LEI in payments and KYC**

Several market participants and public sector groups have noted the potential benefits of using the LEI in correspondent banking. This includes use of the LEI in payment messages (e.g. SWIFT) to facilitate the unambiguous identification of the originator/beneficiary of payments and a more reliable screening of payment messages; and supporting customer due diligence processes. The current screening of text strings is unreliable. The LEI appears as an appropriate medium to exchange information on entities between financial institutions. The LEI could for instance be used in high risk jurisdictions to address the decline in correspondent banking, especially if additional information could be conveyed with the payment message, such as whether a transaction has an Office of Foreign Assets Control (US) license.

A change request is under way to include the LEI in ISO 20022. The migration of correspondent banking messages to ISO 20022 would be the opportunity to use the LEI in payment messages, which would be easier than using the LEI option in current formats, given the lack of space. Four years of coexistence are scheduled from November 2021, but the bulk of the payment

traffic is expected to migrate early. Until all are able to process LEIs, messages will have to include both the LEI and the name and address.

In the UK, the LEI will be made compulsory for payments between financial institutions. The same benefits of avoiding manual checks, facilitating reconciliations, and increasing efficiency would also manifest themselves in retail payments, but the challenge is here the larger number of entities. A participant also noted that the LEI would support the processing of credit card payments, especially for the identification of web merchants.

Roundtable participants discussed that more information may be needed to support due diligence in payments, such as the industry sector, beneficial ownership, whether the entity is regulated and by whom. The cost of such information could be reduced if for instance regulators published lists of the entities they regulate with an LEI. This could apply to other data, such as financial statements signed by auditors, etc.

Using the GLEIS as a utility that banks could rely upon to verify an address is more challenging. Local regulation such as in the UK requires the constituting documents of the company before the banks can open a relationship. Relying on the LEI would require a change in regulations.

## **Annex 6: Questionnaire responses by SSBs and IOs**

Responses were received from the Basel Committee on Banking Supervision (BCBS), the Bank for International Settlements (BIS), the Committee on the Global Financial System (CGFS), the Committee on Payments and Market Infrastructures (CPMI), the International Association of Insurance Supervisors (IAIS), the International Accounting Standards Board (IASB), the International Monetary Fund (IMF), the Organisation for Economic Cooperation and Development (OECD), the World Bank and the International Organization of Securities Commissions (IOSCO).

SSBs and international organisations (IOs) reported that the LEI was used in policy documents relating to enhanced transparency of information on financial markets, especially for OTC derivatives reporting, data aggregation and risk reporting by banks, customer identification, especially in the context of international payments (correspondent banking) and credit reporting. Thanks to the recently added information on parent entities, the GLEIS is also seen as facilitating the understanding and dissemination of information on group structures, thereby supporting insurance supervision, and a better understanding of cross-border flows of capital, goods and services.

The LEI is already used in data collection to support the information on counterparties of G-SIBs, on central clearing interdependencies, and collections on the group structures of insurance groups by the IAIS to support the development of the Insurance Capital Standard. It is also used in a pilot project by the OECD on 100 multinational enterprises.

Additional uses of the LEI are contemplated to support the IMF Coordinated Portfolio Investment Survey (especially facilitate the retrieval of information on the sector of entities holding and issuing securities), the collection of Foreign Direct Investment (FDI) statistics and statistics to improve the understanding of trade depending on the characteristics of enterprises.

The value of the LEI is to identify entities in a non-ambiguous way, especially in a cross border context, make information on the immediate and ultimate parent company of entities more accessible, especially given the non-proprietary nature of LEI data. The LEI also starts providing mapping to other identifiers, although this is limited to date to the BIC and national business registry numbers, and more recently to ISIN.

The main limitation is the insufficient coverage of the LEI. While coverage was reported to be close to 100% for borrowers of large corporate loans in the EU, the coverage is insufficient in other regions, especially Asia. The LEI was provided for 73% of the legal entities included on the scope of the insurance groups participating in the IAIS data collection, but only one third of the insurance groups were covering almost all their entities. In the banking sector, G-SIBs report LEIs to the BIS for their top entities, but only a few firms report the LEI for their counterparties. In several projects targeting non-financial companies, low LEI coverage is an obstacle to LEI uses.

Other limitations include insufficient mapping with other identifiers, especially those by data vendors, which remain necessary to access additional information on entities. The need for additional, proprietary, information also reduces the benefits of the open nature of LEI data. The information on group structures is also seen as insufficient, either because reporting is incomplete, in part due to the lack of LEI for the ultimate parent, or because the definition of parents do not match all needs (for instance, lack of information on publicly available beneficial

owners, including individuals). Finally, in areas where the LEI is more developed (such as derivatives), other obstacles prevent a full use of the LEI.

### 1. Use of the LEI in policy work of standard setting bodies

The BCBS refers to the LEI in two policy documents described in the LEI ROC Progress report of April 2018:

- *Principles for effective risk data aggregation and risk reporting* (2013); and
- the *General guide to account opening*, which is set out in Annex IV of *Sound management of risks related to money laundering and financing of terrorism* (2017).

BCBS explains that LEI could facilitate **customer identification** and **data aggregation**, and therefore help improve banks' risk management and risk assessment.

CPMI and IOSCO also confirmed that the list of policy uses in the LEI ROC progress report is comprehensive, with mentions of the LEI in:

- the *CPMI-IOSCO Technical guidance on harmonisation of the UTI* (February 2017);
- the *CPMI-IOSCO Technical guidance on harmonisation of critical OTC derivatives data elements (other than UTI and UPI)* (April 2018);
- *the CPMI report, Correspondent banking* (July 2016); and
- the FSB-CPMI recommendations from the *Report to the G20 on actions taken to assess and address the decline in correspondent banking* (November 2015).

The LEI supports the objective of CPMI to **promote financial stability through enhanced transparency of information on financial markets and of IOSCO to address systemic risks**. For instance, the CPMI-IOSCO report on OTC derivatives data reporting and aggregation requirements (2012) recommended "the expeditious development and implementation of a standard LEI capable of achieving the data aggregation purposes discussed in the report".<sup>90</sup>

The World Bank refers also to the LEI in two publications on correspondent banking, in connection with CPMI recommendations and the FSB action plan.<sup>91</sup> In the second one, the International Finance Corporation notes that many stakeholders recognise that harnessing emerging technology can enhance financial institutions' risk management capabilities. There is a shift toward a customer-centric infrastructure that takes advantage of multiple disruptive technologies in the areas of enhanced identity verification. This includes biometric technology and LEIs. Central banks have proposed a number of specific changes to **global payments systems to improve safety and lower barriers**, including standards for unique institution identifiers: Proper identification of respondents and their customers in a transaction is essential for correspondent banks to manage risk and ensure regulatory requirements are properly applied. The application of an efficient global standard to identify specific legal entities, such

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<sup>90</sup> See <https://www.bis.org/cpmi/publ/d100.htm>.

<sup>91</sup> World Bank Group, *Withdrawal from correspondent banking where, why, and what to do about it*, November 2015 <http://documents.worldbank.org/curated/en/113021467990964789/pdf/101098-revised-PUBLIC-CBR-Report-November-2015.pdf>; World Bank Group, *De-Risking and Other Challenges in the Emerging Market Financial Sector, Findings from IFC's Survey on Correspondent Banking*, September 2017 <http://documents.worldbank.org/curated/en/895821510730571841/pdf/121275-WP-IFC-2017-Survey-on-Correspondent-Banking-in-EMs-PUBLIC.pdf>.

as LEIs (for which there is already an International Organization for Standardization (ISO) standard).

The World Bank also looked at the use of the LEI in **credit reporting**. Some credit reporting service providers (CRSPs), including credit registries in Germany and Spain, use LEIs to identify firms. However, only a tiny percentage of CRSPs globally use LEIs in credit reporting. More extensive use of LEIs will make firm identification easier and more accurate, generating benefits for small and medium enterprises (SMEs), credit issuers and regulators at both the national and international levels.<sup>92</sup> The World Bank also observes that the LEI could prove helpful in linking databases not only at the domestic level but also and especially for the cross-border dimension, as it provides a mechanism to identify and match the data subjects in each database.<sup>93</sup> The World Bank included a question on the LEI in its Doing business, Getting Credit, Credit Registry Questionnaire, 2018<sup>94</sup> and looked at the LEI in its report on *Implementing a Unique Business Identifier in Government, Guidance Note for Practitioners and Nine Country Case Studies*.<sup>95</sup>

The Irving Fisher Committee on Central Bank Statistics (IFC) hosted by the BIS mentions the LEI on the IFC Bulletin on Trade Repositories data.<sup>96</sup> The report discusses the potential usefulness of the LEI to manage trade repository data. Central banks agree that in many instances counterparties cannot be identified with the LEI thus limiting policy interest within their institutions.

The IAIS underlined, in the context of their data collections, that the **LEI is seen as a facilitator to understand evolutions in group structures over time**.

The IASB responded that IFRS Standards are principles-based and do not include the level of detail that would encompass the LEI. IFRS Standards are primarily applied by listed companies for their consolidated financial statements, and account standards do not require detailed information about subsidiary companies in such financial statements. Such requirements may be stipulated by company law or Listing Rules at a national or regional level. The CGFS had no activity to report related to the LEI.

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<sup>92</sup> World Bank Group, Improving access to finance for SMEs, Opportunities through Credit Reporting, Secured Lending and Insolvency Practices, May 2018, <http://documents.worldbank.org/curated/en/316871533711048308/pdf/129283-WP-PUBLIC-improving-access-to-finance-for-SMEs.pdf>.

<sup>93</sup> World Bank Group, the role of credit reporting in supporting financial sector regulation and supervision, Jan. 2016 <http://pubdocs.worldbank.org/en/954571479312890728/CR-2016-role-credit-reporting-in-supporting-financial-regulation.pdf>.

<sup>94</sup> See <http://www.doingbusiness.org/content/dam/doingBusiness/media/Methodology/Survey-Instruments/DB18/DB18-Credit-Public-questionnaire-en.pdf>.

<sup>95</sup> See <http://documents.worldbank.org/curated/en/471531468196759403/pdf/103570-REVISED-Implementing-a-unique-business-identifier-in-government.pdf>.

<sup>96</sup> See [https://www.bis.org/ifc/publ/ifc\\_report\\_cb\\_trade\\_rep\\_deriv\\_data.pdf](https://www.bis.org/ifc/publ/ifc_report_cb_trade_rep_deriv_data.pdf).

## **2. Use of LEI in data collection or research projects**

### **A. Current uses of the LEI**

The LEI is being used in a number of research projects in BIS Monetary and Economic Department, mostly to track firms' activities in capital markets.

The LEI was also used:

- By the FSB-CPMI-IOSCO Study Group on Central Clearing Interdependencies.
- In IAIS annual data collections conducted since 2014 to support the development of the Insurance Capital Standard whose adoption as part of the Common Framework for Internationally Active Insurance Groups is forecasted to happen in late 2019. The quantitative component of these data collection – known as Field Testing – requests volunteer insurance groups to provide their group-level LEI if available as well as to identify the legal entities included in the scope of their data transmission by their LEI.
- In a pilot OECD project, the ADIMA,<sup>97</sup> which compiles publicly available statistics on the scale and scope of the international activities of MNEs, thus providing a unique 'whole of the MNE' view. ADIMA attempts to meet these goals through the development of three distinct (but related) outputs for 100 of the largest MNEs by sales: a series of economic indicators at both the level of the MNE and the individual countries in which it operates; a register of MNE parent-affiliate structures; and a Monitoring tool that aims to provide a timely flow of information on MNEs restructurings to aid the work of national compilers. the LEI is an integral data source for ADIMA, both in identifying relationships between parents and affiliates as well as assigning the LEI identifier (alongside ISIN, national business identifiers, websites, and other innovative identifiers) to improve identification of MNE entities within and linkage with existing national and international (typically confidential) databases.

The BCBS has not used the LEI in data collections. All the data collected through the BCBS Quantitative Impact Study (QIS) process are anonymised, so using the LEI is not necessary.

### **B. Potential future uses**

- The implementation of the LEI by jurisdictions participating in the IMF CPIS would support the centralised exchange of data on a from-whom-to-whom basis. The Statistics Department of the IMF plans setting up a pilot CPIS database of issuers' sectors that would permit reporters to break down their portfolio assets by (non-resident) issuer sector and eventually provide users with from whom to whom CPIS positions by economy and sector of holder and issuer. It is expected that some reporters will use the LEI.<sup>98</sup>
- IAIS intends to include the LEI in any future data collections as long as they encompass granular information on group structures.
- The OECD observes that the LEI could potentially support the collection and compilation of statistics, particularly international investment and trade statistics.

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<sup>97</sup> See the [OECD Analytical Database on Individual Multinationals and their Affiliates \(ADIMA\)](#).

<sup>98</sup> See <https://www.imf.org/external/pubs/ft/bop/2018/pdf/18-08.pdf>.

The OECD has been examining these potential uses of the LEI. For international investment statistics, the relationship information could be useful for improving the completeness of the statistics and the geographic attribution. Foreign Direct Investment (FDI) statistics are compiled on an immediate investor basis (i.e. the one with a direct influence/linkage to the investment enterprise). The Level 2 data in the GLEIS could be used to identify direct investment relationships not currently captured in the statistics as well as clarifying the country of the immediate investor. In addition, the information on the ultimate investor would be helpful for the supplemental presentation of FDI statistics by ultimate investing country. The complexity of ownership structures within MNEs often impedes the correct interpretation of public FDI statistics as it obscures the ultimate sources and destinations of FDI. The OECD 4<sup>th</sup> Benchmark Definition<sup>99</sup> recommended that countries compile inward investment positions according to the Ultimate Investing Country (UIC) to identify the country of the investor that actually controls the investments in their country. This is done by proceeding up the direct investor's ownership chain, until an entity that is not controlled by another entity is reached, i.e. the ultimate beneficial owner (UBO) of the investment; the LEI information could help with the attribution to ultimate investing countries.

It should be noted that the definitions used in FDI statistics are not completely aligned with the current Level 2 data, as these are based on accounting consolidation terms only and, thus, do not include individuals and minority interests. Therefore, the integration of information on Beneficial Owners would be a useful tool for compiling FDI statistics by UIC. Nevertheless, this relationship information would be useful to address some of interpretation challenges of FDI statistics as well as facilitating data sharing between National Statistical Institutes and International Organisations.

Foreign Affiliate Statistics (FATS), also called the Activities of Multinational Enterprise (AMNE) statistics, are another statistical domain that could benefit from the relationship data from the LEI. As for FDI statistics, the information could be used to improve the coverage and geographic attribution of the statistics, but, unlike FDI statistics, the accounting consolidation concepts used in the LEI are much more closely aligned with the concepts and definitions used in FATS.

As discussed further below, both FDI statistics and FATS would benefit from improved coverage of non-financial entities in the LEI.

Trade statistics disaggregated by ownership (Foreign MNE/Domestic MNE/non-MNE) are a related statistical domain that benefit from the above-mentioned improvement in ownership relationships articulated through the LEI. This data is part of a larger statistical domain, Trade by Enterprise Characteristics,<sup>100</sup> which relies on data linkage between national customs data and national business statistics (often the centralised statistical business register). There is therefore considerable interest at the OECD on any partnerships between GLEIF and national policy and statistics departments to link LEI and customs data.

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<sup>99</sup> The OECD's *Benchmark Definition of Foreign Direct Investment, 4<sup>th</sup> edition* (BD4) was published in 2008. It provides the most complete and detailed guidance on the coverage, collection, compilation, and dissemination of FDI statistics. In addition to providing guidance on the collection of aggregate FDI statistics that is aligned with the IMF's *Balance of Payments and international Investment Positions Manual, 6<sup>th</sup> edition* (BPM6) but also offers guidance on compilation of supplemental FDI series that enhance the usefulness and relevance of FDI statistics.

<sup>100</sup> See <http://www.oecd.org/sdd/its/trade-by-enterprise-characteristics.htm>.

### C. Value of the LEI for data collections and research projects

In a BIS project, the LEI was used as an identifier of entities borrowing in capital markets through corporate loans. For each entity the BIS identified as well the **immediate and ultimate parent company**, and their corresponding LEIs. Then BIS aggregated loans at the entity level, and on a consolidated basis. BIS managed to construct institution-parent relationships.

In the IAIS Field Testing, the LEIs are collected to enable cross checking of data collected through this exercise with other data sources, in a **non-ambiguous** way. The IAIS also noted that adding the LEI request for entities included in the scope of the groups did not add any specific costs while the availability of this information may prove useful to understand the changes in group perimeters over years as a side effect of mergers and acquisitions.

For the IMF, if available within CPIS participating economies, the LEI could be an important component to efficiently identify the sector to which a security's holder belongs, following internationally accepted standards. For this project, the envisaged **links between ISIN/LEI standard identifiers and national identifiers** will be beneficial.

For the OECD ADIMA project, the LEI is a key data source given the **open data** aspect. The data are useful for comparison and sharing purposes. The accessibility/open data serves an important function in compiling data on MNEs, the primary focus of OECD ADIMA.

### D. Limitations of the LEI

The main limitations reported:

*i. Insufficient coverage of the LEI*

The BIS reported that, in the context of a methodological paper exploring how to construct bank-firm exposures through large corporate loans, the main conclusion is that the LEI is not available for all companies; in particular, few companies in Asia have an LEI. Thus as of today it cannot be used as a global identifier, which means that the benefits of the LEI were low in this project, and resulted in the LEI not being used in other projects. In contrast, the common identifiers generated by commercial data providers (Thomson Reuters permanent ID, or Bloomberg FIGI), are useful.<sup>101</sup>

At the time of the BIS research project on bank-firm exposures through large corporate loans, the LEI was available only for half of the entities borrowing in markets, so in practice it was not useful. However, the coverage among EU firms was good, and in many countries as high as 100% and the BIS thinks the LEI is already useful to track developments in the EU, but the BIS focus is generally more global. Separately, BIS explored the availability of LEIs for the top 10,000 companies in market capitalisation and found similar conclusions, and the same regional imbalances in availability. BIS did not find sectoral differences.

There is also incomplete coverage among central banks that are counterparties to the BIS.

For the last IAIS data collection, an LEI was provided for around 73% of the legal entities included on the scope of the groups participating in this data collection. A third of the participating groups were able to provide the LEI for all or almost all the legal entities in their groups while 40% didn't provided any LEI. The remaining groups were in an intermediate

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<sup>101</sup> Serena Garralda, J.M. [Cross-country bank-firm exposures: What can we learn from public data?](#)

position where LEI was only available for a subset of entities included in the consolidation scope.

For the IMF Coordinated Portfolio Investment Survey, the challenges for the use of LEI reside with reporters since there is no obligation for them to use it in the pilot. A generalised absence of LEIs could prove to be a challenge in the creation of a highly operational centralised database.

The LEI will not provide adequate coverage for OECD ADIMA. The absence of a regulatory requirement on non-financial firms per se reduces the likelihood of the LEI covering the ADIMA parent-affiliate universe as these firms register for an LEI when involved in financial transactions. Another is the related challenge of articulating relationships within the LEI between affiliates of the same Parent and between affiliates and their Parent (when the relationship has not been identified/when the Parent does not possess an LEI). Despite these coverage gaps, the LEI focus on data accessibility is highly valuable for the project.

Similarly, for FDI statistics, the OECD has a research project to examine the complex ownership structures of MNEs and to consolidate the FDI positions and present them by the ultimate investing country. Part of this project is to examine these structures and understand the purposes they serve for the companies. The relationship information could be useful for this project in the future if the coverage improves, but could not be used as of now.

*ii. Insufficient mapping with other identifiers*

The authors of the aforementioned BIS research paper for the IFC have accessed the LEIs through Thomson Reuters. This creates important restrictions to data sharing, publication, and distribution. BIS could not conduct their analyses with the LEIs provided by the GLEIF, since GLEIF did not include links between the LEI and other publicly available common identifiers for non-financial companies; in particular, links with Thomson Reuters permanent ID (which is open source) would have been useful. These mappings have been constructed by Thomson Reuters, but are only accessible through their system. The BIS noted that although the GLEIF has a Certification of LEI mapping service, the BIC-LEI mappings are the only available as open source.

The OECD also noted that mapping the LEI to other identifiers (e.g. Thomson Reuters Permid) to facilitate identification and linkage with other databases is important to OECD ADIMA. Therefore, this has been integrated in ADIMA.

*iii. Insufficient information on group structures*

Should the use of the LEI be further considered for future data collection purposes, the BCBS noted that more information on group structure (e.g. information on subsidiary entities) would be needed in order to support risk assessment of banking groups.

The OECD also observes the definitions used in FDI statistics are not completely aligned with the current Level 2 data in the GLEIS, as these are based on accounting consolidation terms only and, thus, do not include individuals and minority interests. Therefore, the integration of information on Beneficial Owners would be a useful tool for compiling FDI statistics by Ultimate Investing Country.

*iv. LEI still too recent to have meaningful data series*

The BCBS-CPMI-IOSCO-FSB Derivatives Assessment Team tried to use LEI data to understand the composition of the OTC derivatives market over time.<sup>102</sup> Unfortunately this was impossible as the relatively recent LEI adoption made a time series impossible to build (along with other challenges).

v. *Other*

For the BIS Banking Department, the LEI could support easier recognition of trading entities at trade entry and confirmation's reconciliation. The BIS Banking Department includes LEI information in its own risk systems and acknowledges the advantages it brings, for instance to manage the basic identification of entities. However, at present, the BIS Banking Department has an impression that the use of LEI has been very limited; for instance, LEI does not appear in SWIFT confirmations, whereas this is technically feasible.

The World Bank Treasury also uses the LEI as it is recorded for MarkitWire trades and in MarkitWire counterparty manager system.

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<sup>102</sup> The Derivatives Assessment Team published in November 2018 an evaluation report on effects of reforms on *Incentives to centrally clear over-the-counter (OTC) derivatives*. See <http://www.fsb.org/2018/11/fsb-and-standard-setting-bodies-publish-final-report-on-effects-of-reforms-on-incentives-to-centrally-clear-over-the-counter-derivatives/>.