The Global LEI Initiative

Monthly LEI issuance remains stable while Lapsed LEIs still increasing. FSB's review of LEI confirms a long road ahead and collective action now regulators' problem.

A Research Note by Financial InterGroup

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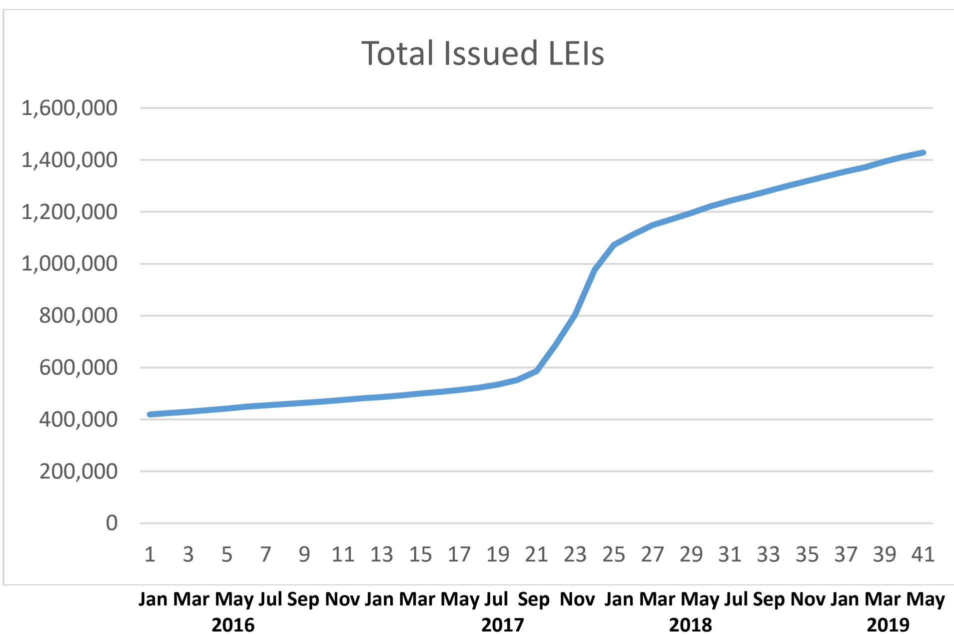
The Global Legal Entity Identification Foundation (GLEIF) has been reporting statistics on Legal Entity Identifier (LEI) data since January, 2016. We are pleased to bring you this Research Note on the GLEIF's May, 2019 month-end and year-to-date reporting of LEI issuance[1]; on the progress of Relationship Data collection; and our Commentary.

LEI ISSUANCE

This month LEI registration reached another all-time high at 1,428,403. We have seen nearly a full year of a steadying of issuance of LEIs, settling in this month at 15,996 vs. the average of 17,685 per month since the beginning of this year.



May was the third month of issued LEIs exceeding lapsed LEIs. This shift appears to be the result of the EU's stricter mandates on LEI registration, which has resulted in EU registrations now overtaking other countries' registrations, most notably those of the US, which until recently had dominated LEI registration.

US registrations have fallen behind those of the EU owing to the slower pace of mandating LEI registrations beyond the original OTC derivatives mandate, which the US was the first to implement. CFTC mandated LEI registrations account for 90% of all US LEIs. This lag has been recognized and new US legislation, the Financial Transparency Act, is currently being considered in Congress.[2]

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[1] GLEIF Data Quality Report – May, 2019, https://www.gleif.org/en/lei-data/gleif-data-quality-management/about-the-data-quality-reports/download-data-quality-reports/download-global-lei-data-quality-report-may-2019, June 7, 2019

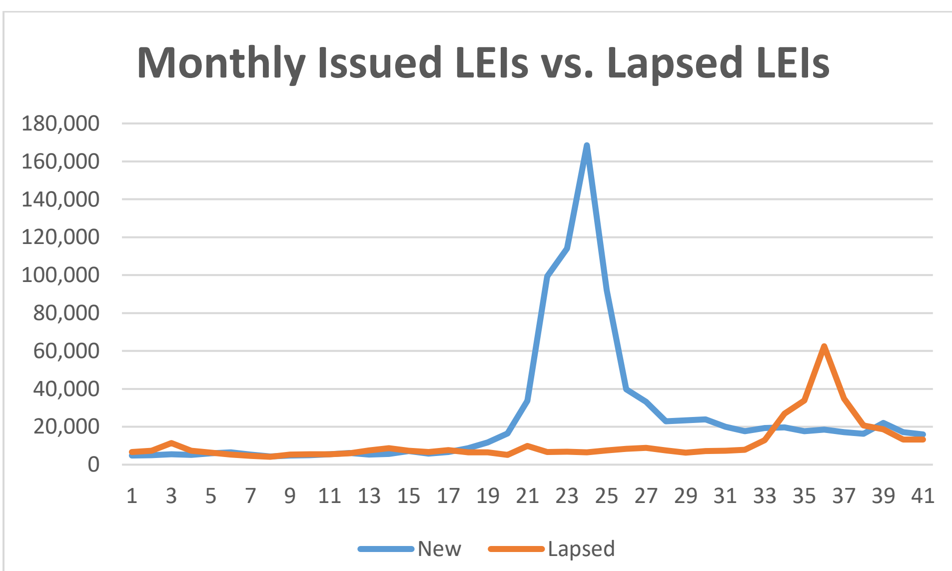
[2] Financial transparency Act, https://www.congress.gov/bill/115th-congress/house-bill/1530, March 15, 2017

2016 – 2018 Year-to-Year & 2019 Month-by-Month Comparison

LEI Issuance and Lapsed LEIs – Year-to-Year & Month- by-Month Comparison	**2016 Year-end**	**2017 Year-end**	**2018 Year-end**	**Jan 2019 Month-end & YTD**	**Feb 2019 Month-end & YTD**	**Mar. 2019 Month end & YTD**	**Apr 2019 Month end & YTD**	**May 2019 Month-end & YTD**
Total LEIs issued at Year-end & YTD	481,522	975,741	1,337,925	1,355,375	1,372,009	1,394,469	1,412,195	1,428,403
Year-to-Year Averages/ Month-by-Month Comparisons								
Newly Issued	5,334	40,237	29,016	17,092	16,250	22,002	17,084	15,996
Lapsed	6,300	7,134	15,894	34,796	20,654	18,701	13,197	13,252
Net Increase/ decrease	-996	33,103	13,122	-17,677	-4,404	3,301	3,887	2,744
Lapsed rate	29.0%	17.4%	23.5%	24.7%	25.2%	25.5%	25.7%	26.0%
Total Lapsed LEIs	139,461	169,778	313,915	334,503	345,544	356,148	363,406	370,774

The overall surge in the LEI population was prompted by new EU regulations, best summarized as the 'no LEI no trade" mandate, part of MiFid II that went into effect in January 2018, then delayed until July 2018. (See chart below). This mandate extended the earlier EU mandate (EMIR) to register LEIs for identifying counterparties in OTC derivatives transactions to all securities, bonds and futures transactions conducted in the EU.

The net increase of issued LEIs exceeding lapsed LEIs was positive over the first three quarters of 2017 progressively decreasing over the entire year of 2018 and then turning negative in the last quarter. Lapsed LEIs are those LEIs that are not renewed at the one year anniversary. We anticipate a continuation of a slowly rising lapsed rate (now at 26% vs April's 25.7%) until renewing LEIs becomes required by regulation or some other means of compulsion surfaces.



Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May
2016 2017 2018 2019

While lapsed LEIs are stabilizing at about 26.0% of all registered LEIs, in the last three (3) months monthly LEI issuance exceeded lapsed LEIs respectively by 3,301, 3,887 and, this month, by 2,744.

Lapsed LEIs are a significant inhibitor to the success of the LEI initiative. The EU, owing to the significant number of lapsed LEIs already used in transactions and fearful that existing transactions with lapsed LEIs would need to be withdrawn, has permitted lapsed LEIs to be used in transaction reporting. In contrast, the LEI Regulatory Oversight Committee has stated its position that lapsed LEIs should not be permitted to be used in transaction reporting. They note that legal entities in a lapsed status may be an entity that has ceased its activity or merged with another entity. This latter case may result in market participants using two different LEIs for what has become the same legal entity (the LEI of the merged entity, and the LEI of the successor entity). Also, there is a risk that changes to the LEIs reference data (name, address, etc.) are not recorded, and that a second LEI may be assigned to the same entity. LEIs with a lapsed status would also affect the funding of the LEI system, as they would not be paying renewal fees. Industry trade associations have recommended that renewals be mandated.

RELATIONSHIP DATA COLLECTION

Relationship data collection, the recording of LEIs for parents and ultimate parents of legal entities, and the reasons for opting out in doing so, has been recorded in the global LEI database since May, 2017. May 2019 is the second year of GLEIF reporting on this relationship data.

The number of immediate and ultimate parent records recorded in the GLEIS are seen in column 1 in the chart below. Of these, GLEIF also reports on how many of each unique LEI registrants reported both a parent and immediate parent (see column 3 in the same chart below).

Level 2 Relationship Data	Number of Immediate & Ultimate LEI Parent Records (1)	Month-to-Month Change (2)	Number of Unique LEIs Reporting both Parent Relationships (3)	% Month-to-Month Change (4)
Year-end 2017	88,198	-	51,944	-
Year-end 2018	152,318	2,523	89,826	1.7%
Month-end Jan 2019	157,131	4,813	92,373	1.0%
Month-end Feb 2019	162,852	5,721	95,379	3.3%
Month-end Mar 2019	173,490	10,638	101,163	6.1%
Month-end Apr 2019	177,811	4,321	103,535	2.3%
Month-end May 2019	181,341	**3,530**	**105,432**	**1.8%**

As can be seen from the Month-to-Month Change Column (column 2) in the chart above, the monthly reporting of the number of registered LEIs with parent relationships shows signs of stabilizing month-over-month. March data appears to be an outlier.

A similar stabilizing pattern has emerged for the number of LEIs reporting both parents (column 3 above), with the percent increase (column 4 above) of 1.8 % this month closer to the average. March data here also seems to be an outlier.

It is hoped that this may be an early indication of a more disciplined approach on the part of registrants to supplying such information and LOUs validating it. However, as noted in earlier FIG Research Notes and in GLEIF Business Reports, the LOUs in approximately two-thirds of the cases are not validating parent registration information.

The ROC offered already existing LEI registrants and potential new registrants the ability to record legitimate exceptions for opting out of reporting parent relationship data. The GLEIF reports on those registrants that have recorded relationship (Level 2) reporting exceptions (column 1 in chart below) and how many of each unique LEI registrant reported either a parent and/or immediate parent or provided an exception reason for opting out from not providing either or both (see column 3 in chart below).

Level 2 Reporting Exceptions	Number of Immediate & Ultimate LEI Parent Exception Records (1)	Month-to-Month Change (2)	Number of LEIs with Complete* Parent Information (3)	% Month-to-Month Change (4)
Year-end 2017	1,067,968	-	572,818	-
Year-end 2018	2,156,909	38,952	1,146,554	1.7%
Month-end Jan 2019	2,187,337	30,428	1,163,111	1.4%
Month-end Feb 2019	2,215,647	28,310	1,179,625	1.4%
Month-end Mar 2019	2,250,448	34,801	1,201,202	1.8%
Month-end Apr 2019	2,282,691	32,243	1,218,932	1.5%
Month-end May 2019	2,312,875	**30,184**	**1,235,212**	**1.3%**

*Note: Complete in this context means the registered LEI entity either registered a LEI or gave one of the following reasons that they either did provide or did not provide an immediate and/or ultimate parent LEI for one of the following reasons: 1. that the LEI registrant is controlled by natural person(s) without any intermediate legal entity; 2. that it is controlled by legal entities not subject to preparing consolidated financial statements; 3. that either the immediate or ultimate parent has diversified stakeholders controlling the entity; 4. where legal obstacles prevent providing or publishing this information; and 5. where providing this information would be detrimental to the legal entity or the relevant parent.

Relationship data is critical if the LEI is to be used for hierarchical constructions of legal entities for risk management. Importantly, 79% of those legal entities that are included in the "LEIs with complete parent relationships" category (1,235,212) include entities that do not report an immediate parent and/or ultimate parent. This is because the entity is not required to supply one if the legal entity is controlled by natural persons (not required to have a LEI), is controlled by legal entities not subject to preparing consolidated financial statements, or has no known person controlling the entity such as in diversified shareholdings. Also, of the 181,341 legal entities reporting either an intermediate or ultimate parent entity, 62% that report a LEI for an intermediate parent report it directly without Local Operating Unit (LOU) validation; 55% for ultimate parents.[3] This lack of validation is also an inhibitor to the success of the LEI initiative as the LEI is intended to be the highest quality 'go-to' data base of legal entity information.

It still remains to be understood how such permitted exceptions will affect the FSB's and the BIS's (Bank for International Settlements) long term objective of aggregating financial transaction data for risk management at the enterprise level (the BIS's concern) and systemic risk analysis (the FSB's concern).

The GLEIF has retained the names or other identifying information for some of these opted-out parent entities in a separate database, where they assign a PNI (Provisional Node Identifier) to each. They have kept that information confidential to this point. What use will be made of this data remains to be seen, to be sorted out by the ROC in collaboration with the GLEIF and, perhaps, industry members. No timeline on dealing with this has been published by either organization, nor by the FSB.

Finally, the Number of LEIs with Complete Parent Information (column 3) seems to be consistently falling short of the total number of issued LEIs (this month 1,235,212 vs. 1,428,403). We wonder how to account for this discrepancy. Most probably it may be the number of PNIs recorded which are used to designate the registrant of a LEI that has a parent who has no LEI (yet).

[3] Global LEI System Business Report | Q1 2019, May 13, 2019, https://www.gleif.org/content/4-lei-data/2-global-lei-index/2-download-global-lei-system-business-reports/20190513-download-global-lei-system-business-report-q1-2019/2019-05-13-quarterly_business_report.pdf

CLOSING COMMENTS

Parsing the FSB's Thematic Review of the Legal Entity Identifier (LEI) [4]

The review of the LEI by the FSB was released on May 28, 2019. To contribute to this effort we had previously published a Special Report on Industry Responses, including our own, in response to the FSB's review. [5] We have since learned from the FSB's review document that the nine (9) publically available responses we summarized and linked to, have been augmented by 11 other non-public responses "Over 20 written responses were received." (Annex 5 at page 59). Given the FSB has already announced they will not make the individual responses public we are left with the FSB's interpretation of the complete set of 20 responses. These are summarized, along with input from a roundtable conducted with fifty (50) stakeholders, in Annex 5 at pages 59-64. (Note page references throughout refer to the pages in the FSB's Thematic Review of the Legal Entity Identifier).

"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." (See Forward at page iv).

We comment on the review with a bias that we have been an early supporter and a continued supporter of the LEI initiative, and more specifically, the broader global data standards initiatives supported by the FSB – the UTI, UTI, CDE and the expanded ISIN initiative.

A long way to go

The LEI has far to go to meet the G20's objective. LEI adoption in absolute terms is relatively low which limits the ability to effectively support further regulatory uses. LEI coverage varies widely across FSB jurisdictions. (See pages 18-19). LEI codes have been issued for legal entities in more than 220 countries; however, more than 50% of the jurisdictions have less than 100 codes. The issuance of LEIs is mainly concentrated in Canada, the EU and the US. Estimates are that coverage in Canada, the EU, and the US ranges from 2% to 7% of all eligible legal entities in their respective territories. A second group of jurisdictions (Australia, Hong Kong, Japan, Korea, Saudi Arabia, Singapore and Switzerland) has an estimated coverage between 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).

The lack of regulatory mandates for parties in financial transactions to obtain and maintain an LEI is still cited by industry respondents as the obstacle which most prevents the ubiquitous adoption of the LEI. Multiple regulators across jurisdictions have not included the mandate for an LEI in reporting rules, and therefore not all entities are obligated, or do not view themselves as obligated, to obtain one. Universal adoption of the LEI is considered a necessity and a lynchpin for realizing cost reduction and risk analysis benefits promised by all the global standards initiatives overseen by the FSB.

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[4] Thematic Review on Implementation of the Legal Entity Identifier, Peer Review Report 28 May 2019
https://www.fsb.org/wp-content/uploads/P280519-2.pdf

[5] FIG's summary of, and comments on industry responses to the FSB's Thematic Review of the LEI,
http://www.financialintergroup.com/cmsAdmin/uploads/FIG-Summary-and-comments-of-responses-to-Thematic-Review-of-LEI-Mar-2019.pdf

Most benefits to regulators noted in the LEI review is anecdotal and/or aspirational with few concrete examples cited by regulators of actual use of the LEI for risk analysis. However, in the OTC derivatives markets, which was previously unregulated and now is regulated in many jurisdictions, the LEI is a primary identifier although mainly used locally. The international uses of the LEI for cross-border trade analysis is still deficient, owing to the uneven adoption of the LEI, especially in Asia.

Most cost reduction benefits to industry members is de minimis, with just a few examples of savings documented in the review - in a description of savings of time in manual look-up activities and a description of a Citibank activity that suggests longer-term cost benefits although none was described "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." (See page 36).

FSB's review falls short of providing assurances of ability to complete mission

The work of analyzing the global LEI initiative in the way the thematic review has been organized (FSB member regulators' survey augmented with industry commentary) while the ROC continues to review its own operational policies, and the GLEIF assesses its own systems and operations and that of its LOU partners, does not assure a thorough understanding of the reasons preventing full adaption of the LEI. That is because in requesting comments solely on the LEI, the FSB has isolated the LEI from the other standards initiatives that must be completed and implemented in order to fulfill the objectives set for the LEI by the G20 "global adoption of the LEI to support authorities and market participants in identifying and managing financial risks". (See page 1).

The LEI by itself falls short of being able to realize the stated objective. To realize this objective each financial transaction needs to contain the LEI codes for identifying the financial transactors and any financial reference entities, and the LEI of the transactions' supply chain participants; the ISIN codes for products and contracts; the UTI and UPI for OTC derivatives; and a set of harmonized critical data elements (CDEs), both for variable data and reference data, that describes the digital representation of the financial transaction. This review, without an integrated approach to all the data standards initiatives will not solve what is now a global collective action problem of regulators and a technology integration issue for both regulators and industry members. We urge the FSB to look to an integrated review of all its global standards initiatives and suggest one such approach in the **Financial Thought** section at the conclusion of **Closing Comments**.

Industry responses rely on regulatory compulsion but suggest business model changes

Most respondents are relying on regulatory compulsion, both in issuing LEIs and renewing them, to propel the LEI initiative toward greater adoption and a successful outcome. However, regulators accepted that regulatory mandates were needed to compel LEI registration but did not feel solving the lapsed (non-renewal) issue was an obstacle to greater LEI adoption. This is evidenced in the FSB Supervisors opinions expressed in their response to two (2) survey questions "Is the lack of LEI coverage an obstacle to use?" (55% said it was) and "Is the lapsed rate an obstacle to LEI adaption" (only 14% said it was). (See Table 8 at page 35).

This FSB member survey result highlights the focus on all out LEI adoption advocated by regulators versus assuring usefulness of the LEI in practice as expressed by industry respondents. "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." (See page 45). While industry members are adamant that regulatory compulsion is critical for success they are not sanguine that regulators can deliver. "The main obstacles cited in written contributions were the lack of regulatory mandates impacting coverage and renewals…". (See page 62).

The ROC has also expressed concerns about renewals, now at 26% of all issued LEIs. "The LEI ROC progress report of April 2018 summarizes 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." (See page 14).

ISDA/GFMA, XBRL US, BVI and State Street seek full replacement of entity identifiers with the LEI over time. While accepting mapping throughout a transition period, however long, these responses recognize the risk and operational inefficiencies of mapping and seek to achieve the long term benefits of a singular non-proprietary legal entity identifier code.

Global adoption and the commensurate elimination of proprietary codes is the only way industry can achieve the significant cost savings that was the buy-in reason for industry members to participate in the LEI initiative, aside from fear of significant fines for not accommodating regulatory mandates.

Their responses also recognize the current deficiencies in the existing implementation of the LEI and its reference data, mainly in data quality, in timely and accurate updating, and in the lack of mandatory renewals of LEIs. One possible model to consider for improved maintenance of the lapsed reference data is that the responsibility could be shared between registrants, financial firms, other market participants, LOUs and the GLEIF, rather than solely by the registrant. Most critically, they see many sovereign regulators' reluctance to mandate the use of the LEI and the still unproven use of LEI hierarchies for risk data aggregation as major obstacles to realizing the objectives for the LEI.

The **Swedish Securities Dealers Association (SSDA) and SWIFT** would use the LEI as it is mandated, map them to other identifiers, but do not see the LEI as a replacement for theirs or other local identifiers. Their responses reflect the reality of embedded identity codes in their own systems, in their members' ecosystems and, in the SSDA's case, in their national tax system as long term deterrents to using a sole legal entity identifier. They see mapping to the LEI as the primary way forward into the foreseeable future.

The **World Council of Credit Unions** finds the LEI costly and burdensome and does not want to see it mandated for its member organizations. They cite considerable costs to retool their systems.

The **Federation of European Securities Exchanges** points out an uneven application of LEI mandates to the investor community including leaving out non-EU issuers which have no obligation to obtain LEIs. This exemption exists even though EU trading venues are required to report LEIs for all tradable instruments. They also cite inconsistencies in approach to the application of LEIs to investment funds.

Financial InterGroup advocates for accountants and G-SIBs to help move the LEI initiative forward. "…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." (See page 2).

To us it would seem easier to initially have the largest banks (there are 30 G-SIBs) compelled by their financial regulators and working with the four global audit firms that audit them, to collectively tackle further LEI adoption and renewals and to register relationship data. Collectively the G-SIBs could compel their clients and vendors to communicate exclusively to them through use of the LEI data standard. Like the giants of global commercial trade, which compel use of the Barcodes in their supply chain, the G-SIBs interact with almost all of the global supply chain participants in the financial industry. "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 returns are the most powerful reason for adoption without regulatory compulsion and also compare with the adoption of GS1 bar codes". (See page 45)

The group of G-SIB entities have already been separated by regulation from other financial institutions, categorized as global systemically important banks. They already follow different supervisory directives then all other financial industry participants. An approach that concentrates on enabling the largest financial institutions to compel their clients that don't see the benefits from using the LEI could expand the registered LEI universe. Such firms have limited regulatory reporting responsibilities and don't see the benefits from using the LEI for their internal operations, especially if they have little interaction internationally or with third party vendors. However, all of them interact in some capacity with one or more G-SIBs.

G-SIB auditors would be able to assist by viewing original source documents for qualifying registration of new LEIs or changes to reference data, and qualify the accuracy of relationship data being placed into the GLEIS, a needed validation check not now available in the GLEIS. It had been thought that this validation would be performed by LOUs but this is not occurring. The use of an XBRL taxonomy, a digital reporting language used by auditors in preparation of required financial reports, can be used for reporting LEIs and their hierarchies of subsidiary relationships. "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." (See page 61).

Placing accurate relationship data into the GLEIS following account consolidation rules that accountants adhere to in producing audited financial statements is critical to aggregating data for risk analysis. Account consolidation hierarchies is the initial ownership and control structures being placed into the GLEIS. Thereafter, resolving this hierarchy into ones that support risk and credit data aggregation becomes easier. "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." (See page 61).

To accelerate the data standards agenda a capital reduction incentive can be offered to G-SIBs of as much as 20% for operational risk mitigation. Such an incentive is already available through insurance or other risk transfer mechanisms, as originally proposed by the BIS in its Basel II framework. It would seem reasonable to provide such an incentive to implementing a data standards mechanism as it is a means to eliminate operational risk, rather than just transfer it.

Further Improvements

The FSB should allow financial firms to rely on the due diligence of the LOUs or allow financial firms to do it themselves (perhaps validated by their auditors). This would eliminate duplication of effort while saving considerable industry costs and time delays. If firms and regulators would then use the LEI to access legal entity data exclusively, the industry would significantly improve operational efficiencies.

Further efficiency gains can be achieved by adding information about fund relationship data and incorporating corporate change events, and an audit trail of such changes, to enhance LEI accuracy and utility. Time and cost savings could be realized if all business registries by their own initiatives would require the LEI for their entity records regardless of whether a regulatory mandate exists for an entity to have an LEI.

The bridging of the LEI from an accounting consolidation hierarchy to a risk hierarchy still needs to be accommodated. The current relationship (Level 2) data is not useful yet. The industry would like to see near-term improvements to the usability of the database and the completion of Level 2 work. It is still unclear how a set of ultimate and immediate parent LEI data, their LEIs perhaps registered in multiple LOUs, can be accessed and aggregated up through a chain of hierarchies for risk analysis purposes.

Finally, the FSB should assure that the ROC completes its policy on including data on international branches, individuals acting as sole proprietorships, and define a policy on incorporating government entities, employer retirement plans, foundations and those other entities that act as financial market participants into the LEI regime.

Is mapping sustainable long-term?

What is wrong with sustaining the mapping process that is the anchor of interoperability and which continues to support the myriad of proprietary codes? It is costly and risk prone and, in the end prevents a seamless straight-through-processing (STP) environment that would be enabled by newer digital technologies.

Mapping requires matching different computer readable identity codes of products and entities and different definitions of data elements. These mapping (matching) processes use dictionaries, much like the process of translating speaking and written languages. These dictionaries (computerized tables) map each code and its associated definition that is used by systems at financial firms, or business silo within a firm, to each different code or definition used by a Financial Market Utility (FMU), a software or data vendor, or a regulator. There are literally hundreds of standardized and proprietary codes. If these tables were static, as language dictionaries are, it would not be much of a problem, except that the entries in the tables are always changing, and changing at different times within each firm, at each software and data vendor, at each regulator and, at times, incorrectly changing.

The mapping concept used in reporting to regulators is also prevalent in data acquisition across the many silo business units of financial enterprises, between these business units and with their external software and data vendors, as well as amongst regulators. This mapping at the front-end of data acquisition has still to be considered by the FSB. BCBS recognized this in their risk data aggregation and reporting directive

(BCBS 239). They advocated for the use of the LEI for documenting the life cycle of data transformations for aggregated data that is presented both internally and to regulators for risk analysis.

There are many more identifiers then those identified in the review that financial institutions must interface with and map to. These are primarily for data acquisition needs (research data, market and reference data, government and institutional economic data, index data, capital and hedging market exchange data, etc.). To understand the breadth of the issue the GLEIF and the Data Coalition recently studied the number of different legal identities used in government agencies in just one sovereign jurisdiction, the U.S., and found fifty (50) distinct manifestations of legal entity codes.

This mapping and interoperability model is still being embedded into regulators and the industry's digital long term future even though new technologies such as distributed ledgers, smart contracts, artificial intelligence and machine learning needs singular data standards to be effective. The replacement of the costly interoperability and mapping architecture of financial infrastructure, within financial enterprises and across financial enterprises, is in sight through the FSB's many global data standards initiatives. However, the framework for its replacement over time and the business case for it is nowhere in sight.

With distributed technologies and global data standards as an enabler, the interoperability model needs to be reviewed for replacement over time with the long sought after straight-through-processing (STP) model. LEIs could then be used in a distributed ledger and be embedded into electronic certificates and signatures to enable smart contracts. "Some respondents note that the cost-benefit 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 realizing these benefits may depend on more complete adoption and thereby provide relevant incentives in the longer term." (See page 33).

Final thought

The LEI is the first significant step toward the realization of the digital age of finance. Needed is a longer term planning effort leveraging all the global data standards initiatives initiated by the FSB. It is critical that the FSB and the G-SIBs be engaged to determine how to lower industry costs and enable financial stability. The BIS, as the standards setter for operational risk capital requirements, has a role to play as well and should be at the table.

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