Financial InterGroup

The Global LEI Initiative:
2020 Year-end Report and Commentary on the Decade-long Effort

January 2021

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Introduction

The Global Legal Entity Identification Foundation (GLEIF) has been reporting statistics on the Legal Entity Identifier (LEI) since January, 2016 and on the LEI's Relationship data since May, 2017. We are pleased to bring you this Research Note on annual, month-end and year-to-date LEI issuance based on **GLEIF's January 8, 2021 Global LEI Data Quality Report** and FIG's historical LEI database, now going back five (5) years.

Registered LEIs have reached 1.777 million vs last month's 1.757 million. The monthly averages of newly issued LEIs per month this year is now 19,364 and the average monthly lapsed LEI rate is 18,778. A **climbing lapsed rate** (now at 32.9% vs. last month's 32.1%) has caused the number of lapsed LEIs to exceed newly issued LEIs for the third month in a row. This year's monthly statistics and the last five years of comparative LEI data is presented immediately after the commentary section below:

Regulatory compulsion was once thought to be the answer to full global adoption of the LEI. It's regulatory sponsor, the G20 and, in turn, its off spring, the Financial Stability Board (FSB) signed off on a unique, unambiguous and universal code, **A Global Legal Entity Identifier for Financial Markets*****.*** The expectation was that an LEI would be registered and then used by every financial market participant (now estimated at 20 million legal entities) to communicate financial transaction data to regulators to analyze systemic risk.

An ancillary benefit (the true motivator for industry cooperation other than regulatory fines for not complying) was the reduction of huge infrastructure costs due to the elimination of multiple: proprietary identifiers; legacy mapping software; processing workflows; and manual labor and personnel required to reconcile ummatched or faulty legal identifiers. When the LEI initiative is viewed in the context of implementation of other FSB inspired standards initiatives (the Unique Product Identifier - UPI, the Unique Transaction Identifier - UTI, the set of Common Data Elements – CDEs, and the expansion of the International Securities Identification Number – ISIN to include derivatives) **total industry savings is estimated at $250 billion**. Just for the LEI and in just one application, client on-boarding in banks, the **estimate is a savings of $4 billion**. Both estimates do not include Financial Market Infrastructure entities where savings from the significant mapping activities they engage in will largely be eliminated.

A New View on Means Toward Global Adoption

Now, however, the regulatory initiative of compelling LEI global adoption via regulatory mandate has stalled. Individual governments are slow to adopt regulation to implement the LEI. Legislation, government bureaucracy, consensus building exercises, costs and privacy issues intervene. Alternatively, governments are declaring that their situation qualifies those they regulate to accept the granted right to opt out of the LEI mandate when asserting certain conditions of Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRS) account consolidation rules that do not apply.

In recognition of the prospect that global adoption is far into the future, the FSB's own offspring, the Regulatory Oversight Committee (ROC) and, in turn, its implementation arm, the Global LEI Foundation (GLEIF), are redefining objectives and strategies, some far afield of its original mission. GLEIF has made it a priority to reach a 20 million target of issued LEIs by 2027 by augmenting regulatory initiatives with industry voluntary efforts. To this end, we hope the voluntary collective action issue that dominated past industry failures to standardize financial transaction identifiers and financial transaction data elements is now a past inhibition.

A Retrospective on the LEI Initiative

Initially, the US took the lead in passing legislation to adopt a standard legal entity identifier through the Dodd-Frank Act. That act established the Office of Financial Research (OFR) which authored a consultation on the need, benefits and attributes of a standard code and its reference data for identifying parties to a financial transaction. All entities that had status to enter into a financial transaction was eligible to receive a code.

The ISO began designing a legal entity identifier code. The LEI code was a simple 20-character code (18 characters and two check-digits calculated from the previous 18). It was to be a randomly created set of characters. The Commodity Futures Trading Commission (CFTC) was the earliest regulator to adopt the code and selected DTCC to assign and maintain the code and its reference data in a centralized data base. DTCC selected SWIFT to produce the codes. The code and the database were specific to the companies transacting business in US markets regulated by the CFTC at that time. The codes were assigned randomly by SWIFT and the reference data for each legal entity was populated by DTCC from multiple commercial databases containing derivative market participants. Both DTCC and SWIFT expected to be designated as the global operator of the LEI system as the G20 initiated the global version of the system.

The G20 designated the Financial Stability Board (FSB) to organize the code, its systems and processes, its governance structure and its global administrator, the Global Legal Entity Identification Foundation (GLEIF). A multi-government oversight structure, the Regulatory Oversight Committee (ROC), now consisting of regulatory representatives of 71 sovereign jurisdictions, was put in place. The role of the ROC, originally set up to oversee the LEI initiative, has recently been expanded to oversee all of the other global data standards initiatives instituted by the FSB.

The FSB early on dismissed the structure of a centralized LEI code generation system overseen by SWIFT and with the code assigned and managed by DTCC, in favor of a distributed assignment system performed at multiple operating nodes in multiple sovereign jurisdictions. Regulators were to mandate the use of the LEI for collecting transaction data across multiple regulated financial markets and multiple financial market participants. Each legal entity was to be assigned a globally unique code, the LEI, to be used in reporting each financial transaction. The LEI was to be used to aggregate financial transactions from each financial market participants' hierarchical risk and control structures to permit regulators to assess systemic risk.

Registrants themselves where to be responsible for providing relationships of ownership and name and address information for each of its legal entities. Business registration data bases were to be used to validate registrants' data. Later, it was realized that not all financial market participants were required to have a presence in a business register (sole proprietors, trusts, pension arrangements, collective investment funds, and government entities amongst others). Ultimately, other validation sources were allowed (financial regulator data bases, audited financial statements, etc.). Where there were no external sources to validate the data, original documentation was to be provided.

In a recent consultation, the long outstanding issue of registration of an **LEI for eligible Government entities** was defined. Resident government entities and international organizations are to be classified using the accepted government classification protocol, System of National Accounts (SNA). In lieu of GAAP or IFRS consolidation rules these government entities would be consolidated using the International Public Sector Accounting Standards Board's consolidation rules.

Technical Solutions

The assignment and collection of the LEI data was to be organized as a distributed federated system supporting a virtual data base following the technical design of the Internet. The distributed virtual data base was subsequently modified to be multiple physical data bases, each overseen and maintained by local operating units (LOUs). There are now 37 LOUs consisting of business registrars, patent offices, data vendors, clearing firms, securities depositories, commercial bar code agencies, software firms, security exchanges and national numbering agencies.

Access to the virtual data base was to be 'as with the Internet' where a request for data activated multiple distributed data nodes responding electronically and in real-time to provide the information to the requestor. This design, however, was replaced with multiple 'logical' data bases connected through an end-of-day download, now three (3) downloads a day, to a centralized data store managed and maintained by GLEIF.

Solving Some Knotty Issues

Ownership structures (the hierarchies of LEI relationships between an ultimate parent and intermediate parents within a single organization) was postponed to a second phase as it seemed quite challenging then and still is now. Later consultations settled on ownership and control structures based on accountants' financial reporting account consolidation rules governed by GAAP and IFRS. This approach had the benefit of already established protocols for aggregation of data but suffered from the fact that financial institutions aggregate data differently for risk management purposes. Also, the validation of the ownership structures has proven difficult, with LOUs only able to validate about half of the registrants reported LEI parent/ultimate parent data. Ownership structures that identify risk and control dependencies still remain the major outstanding issue. Its resolution will determine the usefulness of the LEI for its original mission, that of as an aggregation mechanism for systemic risk analysis.

Corporate actions, now redefined as legal actions, which are the notifications that a legal entity is undergoing a change to its organization and/or ownership structure, was also postponed. A later consultation and its recommendations still await implementation so critical to maintaining the accuracy of the LEI data. Data vendors, previously shunned because of their proprietary and commercial approaches are now being embraced into the solution.

Another issue, the renewal of the LEI reference data surfaced early on. Renewals were intended to have registrants update LEI reference data at least annually. However, consistently one-third of the data base is not timely renewed. Again, this impacts the quality of the LEI data. A subsequent consultation called for identifying inactive but still operationally valid LEIs as a limited solution. The acceptance of non-renewed LEIs as legitimate (active) in reporting financial transactions to regulators and in maintaining open financial transactions creates concerns as to the accuracy of the LEI data over time. GLEIF this month (Dec. 2020) stopped reporting the accumulated number of non-renewed (lapsed) LEIs in their Data Quality reports. For this report this month's total Lapsed LEIs was provided by **pTools**

LEI Infrastructure Expands

Also, along the way a **Registration Agent** (RA) concept was created (there are now 72 RAs, half comprised of a network of commercial Barcode agents aligned with the GS1 Barcode Network) to interface between registrants in need of registering LEIs and the 37 LOUs who register, assign and store LEIs and their reference data. The other half of the 72 RAs are mainly software and data vendors. Also, most recently a **Validation Agent** (VA) role was introduced to the GLEIF's Globally Important Financial Institutions (GIFI) Relationship Group. These large financial institutions are being solicited for their willingness to validate credentials of its clients and introduce them to a LOU for obtaining an LEI.

Many of these GIFI Relationship Group members, as is the first pilot institution JPMorgan Chase, are also Global Systemically Important Financial Institutions (G-SIFIs). These institutions have had a unique status among regulators since the financial crisis. These are the ones that can more easily spread the contagion of systemic risk. Observing systemic risk was and still is the main objective for the LEI initiative among regulators. We believe it would be reasonable to add a requirement to first have a Validation Agent's complete set of LEIs recorded with renewed reference data and complete relationship data. This requirement would be of great importance to regulators who would then benefit from the ability to aggregate financial transactions of these large financial institutions, especially G-SIFIs.

The LEI Regulatory Adoption Issue

Both the Validation Agent and the Registration Agent roles were introduced to accelerate faltering regulatory compulsion that was expected to drive LEI registrations. The pace of registration of the four largest markets for LEI issuance - the EU, the US, India and China are proceeding at different paces. The EU is by far the leading region embracing the LEI. It had early on recognized a need for a single identifier for legal entities, long before the FSB's global LEI initiative. It embraced the LEI fully as it needed a mechanism to consolidate economic and financial data from multiple business and sovereign entities making up the EU, each with its differing identifiers.

The US was the earliest user of the LEI, nearly a decade ago, when it embraced the still unapproved ISO LEI standard and began assigning codes to legal entities for derivatives through a DTCC/SWIFT undertaking under a conditional approval by the CFTC . Subsequently, when the FSB stepped in to define the global LEI system (GLEIS) changes to the code structure caused the early US version of the code (the CICI – Commodities Industry Counterparty Identifier) to be modified. 3000 codes were removed and the remaining grandfathered with a different structure.

Most recently, the CFTC has become the first regulator to mandate renewals of LEIs but just for a limited set of 153 of the largest participants in the derivatives markets. A pending Bill in the US Congress, the **Financial Transparency Act**, has yet to be acted upon. It calls for all US financial regulators to mandate to their reporting entities that they provide a standard legal entity identifier in their reporting to each agency. However, it does not make LEIs mandatory.

In India a landmark global LEI initiative was recently introduced, marking the first mandatory use of the **LEI for large value transactions** in centralized payment systems. With mandates in place in other business segments, India is poised to substantially increase its LEI registrations from the 32 thousand it now has issued. China has most recently published its **roadmap for full LEI adoption**. It is an ambitious undertaking to register LEIs for entities conducting commercial and financial transactions by 2022 when it intends to nearly triple LEI registration, now at 37 thousand.

Other LEI Initiatives

GLEIF seeks to extend the LEI for use as a critical component of the global digital economy. A digitally verifiable LEI (vLEI) is a new credential which can be held by any business with valid registered LEIs. A digital LEI carries a cryptographic link between the LEI and its holder and thus delivers trust within any digital business transaction. In an extended use case, it can create trusted signatures for approved individuals within an organization.

GLEIF's priority in this moment is the **GLEIS 2.0 "zero fee project"** a fee reduction initiative that requires increasing revenue to lower fees by increasing the number of registered LEIs from the current 1.8 million to 20 million by 2027. It will require regulators to continue to mandate use of the LEI in each of their sovereign jurisdictions and GLEIF to extend the voluntary Validation Agent concept beyond the larger financial institutions to Business Registrars, Certification Authorities and other potential bulk issuers of LEIs.

GLEIF has many past accomplishments that are significant. The first time a global government/private sector initiative was established to put in place an operating organization and system for global data standards and its operations and management. The establishment of the ROC, GLEIF and GLEIS organizations, and their governance structure, operational procedures and technical ecosystem; a global Business Registry data base; the establishment of an Entity Legal Type (ELT) data base; organizing BIC (Swift's Bank Identity Code) and ISIN mapping to the

LEI; creating a Mapping Certification program for data vendors; creating API (Application Programming Interface) functionality and continuous technical improvements for user access; first adoption of the use of the LEI in digital signing of XBRL (eXtensible Business Reporting Language) financial reports; demonstration of a proof-of-concept of DLT (Distributed Ledger Technology) for the GLEIS; and consultation case studies to validate cost savings for the use of LEIs in on-boarding, KYC (Know Your Customer) compliance and trade finance.

The Challenge Ahead

GLEIF has much to do in implementing the remaining technical and process components of the LEI initiative. Much left to do was unforeseen at the G20's 2009 indoctrination into the LEI concept. Yet much was seen but postponed for a later time. Resolving these difficult issues first was thought to slow down the adoption of the LEI code and recording its reference data. This was done even though postponing critical known issues such as establishing risk hierarchies, timely updating of data, populating the LEI for all financial participants, and not even knowing how many LEIs would be needed, would not permit all necessary implementation tasks and timelines to be scheduled.

Besides postponing the realization of cost savings and risk benefits promised for the project, the full extent of resources required would not be known for decades. Now GLEIF must convince industry members and regulators to continue on the path toward full global adoption of the LEI even though the objective of significant cost reduction and the ability to conduct systemic risk analysis is far into the future. But there is an alternative available to realize benefits sooner.

With a significant push by GLEIF and the ROC, and needing to be newly refreshed by continuing advocacy by its overseers, the G20 and the FSB, regulators should be encouraged to incent industry members to participate in the LEI initiative more fully through capital reduction incentives. The negative incentives of intimidating fines (the 'stick' approach) should be supplemented by a 'carrots' approach as with offering operational risk capital reduction incentives.

Auditors, long encouraged by the FSB to assist more fully in financial stability issues, should be incented to become Registration Agents and/or Validation Agents. They have the most knowledge and expertise to validate LEI reference data. They also make judgements about risk and control relationships amongst legal entities within an enterprise as part of their audit functions, which is such a critical activity in validating LEI relationship data.

Finally, G-SIFI's should be incented to register all their legal entities and their complete hierarchies of LEIs through progressive capital haircuts as implementation goals are met. These institutions have had a unique status among regulators since the financial crisis. These are the ones that can most easily spread the contagion of systemic risk. These banks are also the early test cases for implementing the global Principles for Effective Risk Data Aggregation and Risk Reporting framework laid out by the Basel Committee on Banking Supervision in 2013, commonly referred to as **BCBS 239**. BCBS 239 has generated new and significant demands for data standards and technology, However, it is still a work-in-progress according to the latest updated **progress report of the implementation of the BCBS 239 principles** reported on as of April 2020. None of the G-SIFI banks are fully compliant with the BCBS 239 principles for attaining the necessary data architecture and IT infrastructure. Data aggregation remains a key to effective risk analysis and the LEI and its hierarchical parent relationship structures is an essential pillar of such aggregation. This approach of first engaging with G-SIFIs to aggregate financial transactions would give the LEI initiative a short-term win in meeting the original mission objectives of observing systemic risk for this critical market segment.

LEI Statistics – Five (5) Year Comparisons

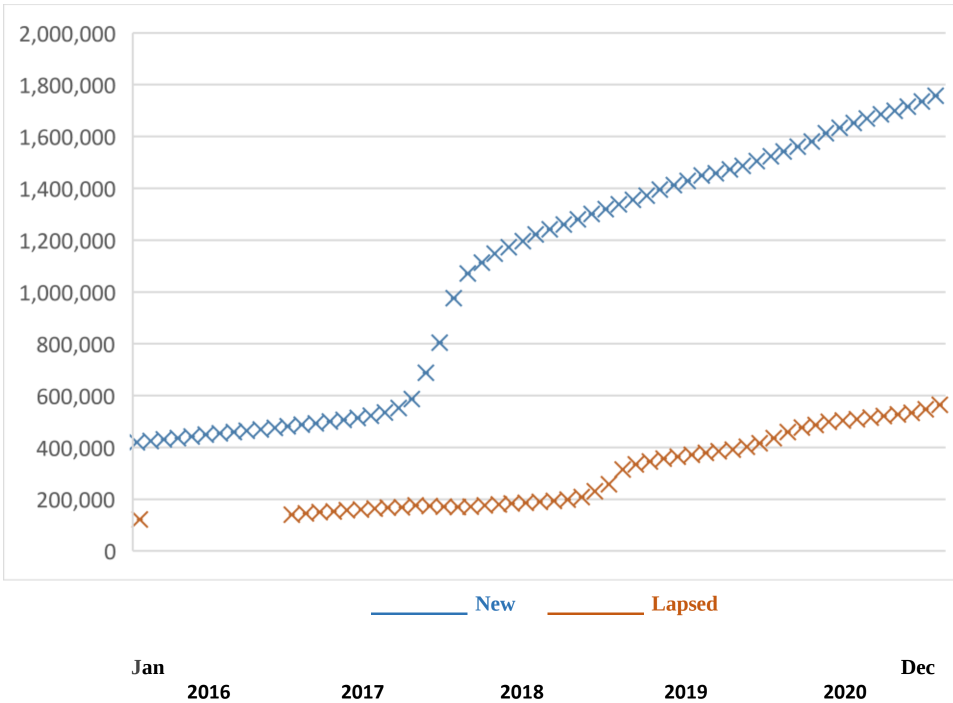
LEI Issuance & Lapsed LEIs – Year-to-Year Comparison	2016 Year-end	2017 Year-End	2018 Year-end	2019 Year-end	2020 Year-end
Total LEIs issued at Year-end	481,522	975,741	1,337,925	1,542,037	1,777,458
Total Lapsed LEIs issued at Year-end	139,461	169,778	313,915	459,436	585,029
Lapsed rate	29.0%	17.4%	23.5%	29.8%	32.9%
Year-to-Year Monthly Average Comparisons					
Newly Issued	4,976	40,237	29,987	16,652	19,364
Lapsed	6,300	7,134	16,422	19,802	18,778
Net LEI Increase/Decrease	-1,324	33,103	13,565	-3,150	586
Year-to-Year Relationship Data					
Number of Immediate & Ultimate LEI Parent Records	n/a	88,198	152,318	208,139	230,755
Number of Unique LEI s Reporting both Parent Relationships	n/a	51,944	89,826	119,637	132,096
Number of Immediate & Ultimate LEI Parent Exception Records	n/a	1,067,968	2,156,909	2,519,418	2,965,315
Number of LEIs with Complete Parent Information	n/a	572,818	1,146,554	1,341,015	1,563,458

LEI Statistics – 2020 Monthly Comparisons

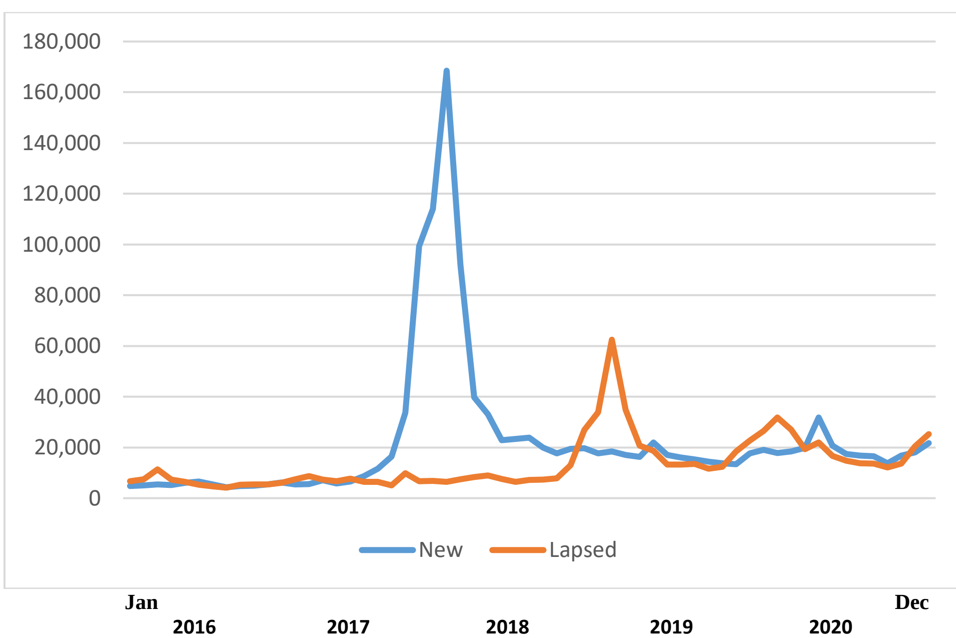
2020 Month-end LEI Issuance and Renewal (Lapsed) Data	Jan 2020 Month-end	Feb 2020 Month-end	Mar 2020 Month-end	Apr 2020 Month-end	May 2020 Month-end	June 2020 Month-end	July 2020 Month-end	Aug 2020 Month-end	Sep 2020 Month-end	Oct 2020 Month-end	Nov 2020 Month-end	Dec 2020 Month-end
Total LEIs issued at month-end	1,560,689	1,580,862	1,613,119	1,634,150	1,652,111	1,668,996	1,685,721	1,699,629	1,715,820	1,735,040	1,756,978	**1,777,458**
Total Lapsed LEIs at month-end	476,637	486,546	498,917	503,522	507,993	514,724	520,459	527,626	532,761	546,546	564,253	**585,029**
Lapsed rate	30.5%	30.8%	30.9%	30.8%	30.7%	30.8%	30.9%	31.0%	31.0%	31.5%	32.1%	**32.9%**
Monthly Average Comparisons												
Newly Issued	18,447	19,864	31,839	20,655	17,383	16,798	16,511	13,800	16,832	18,109	21,676	**20,448**
Lapsed	27,045	19,365	21,996	16,636	14,746	13,752	13,584	12,099	13,598	20,499	25,228	**26,782**
Net LEI Increase/decrease	-8,598	499	9,843	4,019	2,637	3.046	2,927	1,701	3,234	-2,390	-3,552	- 6,334
2020 Month-end Relationship Data	**Jan 2020 Month-end**	**Feb 2020 Month-end**	**Mar 2020 Month-end**	**Apr 2020 Month-end**	**May 2020 Month-end**	**June 2020 Month-end**	**July 2020 Month-end**	**Aug 2020 Month-end**	**Sep 2020 Month-end**	**Oct 2020 Month-end**	Nov 2020 Month-end	**Dec 2020 Month-end**
Number of Immediate & Ultimate LEI Parent Records	210,886	212,877	215,655	216,185	217,548	219,369	221,011	222,577	224,222	225,173	227,462	**230,755**
Number of Unique LEI s Reporting both Parent Relationships	120,961	122,046	123,529	123,803	124,558	125,587	126,554	127,403	128,312	128,878	130,164	**132,096**
Number of Immediate & Ultimate LEI Parent Exception Records	2,553,656	2,592,289	2,653,260	2,693,406	2,739,020	2,761,054	2,792,972	2,819,191	2,850,989	2,886,841	2,927,493	**2,965,315**
Number of LEIs with Complete Parent Information	1,357,419	1.376,589	1,407,147	1,426,894	1,444,800	1,461,023	1,477,032	1,490,407	1,506,751	1,524,235	1,544,567	**1,563,458**

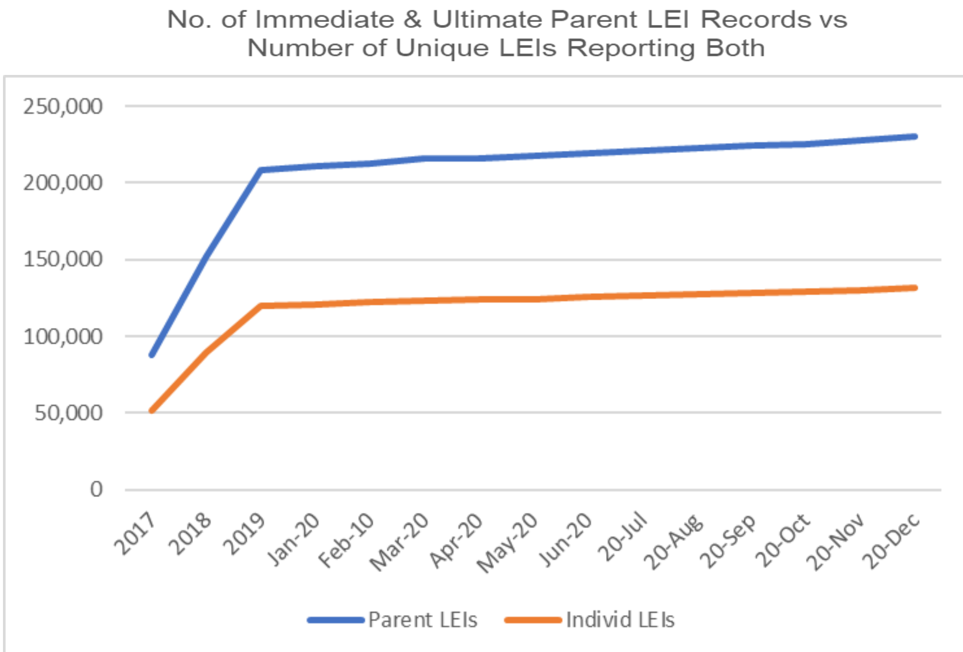
Graphs of LEI Progress Over Time

Total LEIs Issued vs. Lapsed LEIs

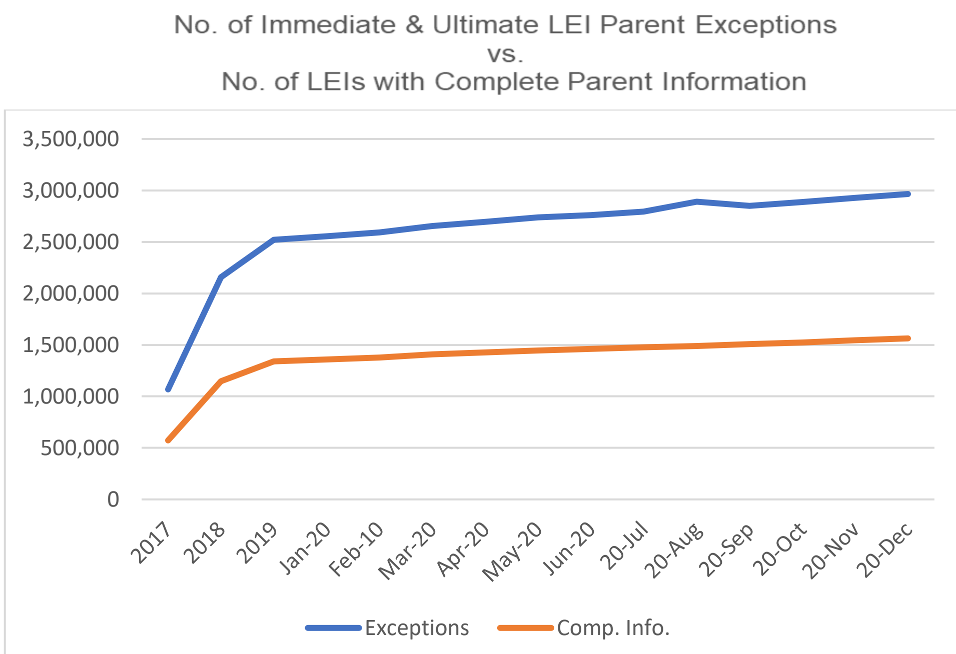


Monthly Newly Issued vs. Newly Lapsed LEIs





No. of Immediate & Ultimate Parent LEI Records vs
Number of Unique LEIs Reporting Both
250,000
200,000
150,000
100,000
50,000
0
2017
2018
2019
Jan-20
Feb-10
Mar-20
Apr-20
May-20
Jun-20
20-Jul
20-Aug
20-Sep
20-Oct
20-Nov
20-Dec
Parent LEIs
Individ LEIs



No. of Immediate & Ultimate LEI Parent Exceptions
vs.
No. of LEIs with Complete Parent Information
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
2017
2018
2019
Jan-20
Feb-10
Mar-20
Apr-20
May-20
Jun-20
20-Jul
20-Aug
20-Sep
20-Oct
20-Nov
20-Dec
Exceptions
Comp. Info.

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