

Updates on developments surrounding implementation of the Global Legal Entity Identifier System

# April 18 – GARP: Risk Aggregation and the Barcodes of Finance

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Reposted from GARP, April 14, 2016

The great promise of LEIs and related standards will go unfulfilled unless implementation and performance gaps can be overcome

# By Financial InterGroup

The concept of the unique transaction identifier, UTI; unique product identifier, UPI; and legal entity identifier, LEI; has met with universal acceptance. For financial institutions, these "barcodes of finance" (see research abstract by Allan D. Grody and Peter J. Hughes of Financial InterGroup) are expected to allow for straight-though processing as the barcodes of commerce have done for the commercial and retail trade supply chains. For regulators, they are expected to provide an automated means to aggregate data to observe the buildup of enterprise risk across silos of businesses within each financial institution and systemic risk across the global financial system.

The derivatives industry has been singled out as the testing ground for the launch of these codes. Eventually all reporting entities in all markets by any financial market participant will have to get a LEI and use UTIs and UPIs in their submissions to regulators. Banks today are being asked to submit LEIs on Federal Reserve reporting forms. Mutual funds, money market funds and other collective funds have to be report with LEIs to the Securities and Exchange Commission. Regulators want these codes so they can aggregate data for systemic risk analysis.

In 2012, a version of the LEI code was distributed in the U.S. under the Commodity Futures Trading Commission's new swaps regulation. LEIs were later changed to conform to a global version under Financial Stability Board standards. In 2014, the EU began distributing LEI codes under the new FSB format. Multiple versions of the UTI and UPI codes were created and, along with the LEI, included in swaps transaction data sent to trade depositories (in the U.S. referred to as swaps data repositories, or SDRs).

## **Regulations Pending**

Three recent public consultations, all sponsored by the Bank for International Settlements/Financial Stability Board, have laid bare the issues confronting these codes in their inaugural implementations. Two papers were issued by the International Organization of Securities Commission (IOSCO) and the Committee on Payments and Market Infrastructures (CPMI) on the UTI and the UPI, and the other by the FSB's appointed Regulatory Oversight Committee (ROC) on LEI parent entities.

The August 2015 IOSCO/CPMI consultation paper on the UTI proposes using the LEI as an element (a prefix or name space) for constructing the UTI. Members of the International Swaps and Derivatives Association (ISDA) are using a shortened version of the LEI for such purposes.

The December 2015 paper on the UPI asks for ways in which the swaps products can be defined – specifically, what data elements are needed to define each category of swaps transactions so they can be consistently reported in a standard way to SDRs The UPI document deferred the issue of the actual construction of the UPI code to a later consultation.

The LEI process had never before been exposed to a transparent public consultation where responses were expected to be made public. However, these responses were not in fact published, but rather were summarized without attribution. (The ROC's summary of recommendations will be discussed later in this article.) Even before these consultations, unresolved issues surrounding the LEI, UTI and UPI had surfaced.

The LEI issues had surfaced through industry comment letters in public consultations of various regulators. The Investment Company Institute, for instance, described the problems that collective funds (mutual funds) have in accessing the correct legal entity where intermediaries are involved, such as the local operating units (LOUs) issuing LEIs and third parties such as collateral agents. Immediate access is necessary when identifying legal entities to report counterparty or collateral providers for swaps transaction reporting.

### **Corporate Actions**

Another issue, addressed in the IOSCO/CPMI paper itself, regards the maintenance of the LEI. While corporate or life-cycle events (mergers, acquisitions, spin-offs, etc.) can change the controlling parent of a legal entity, an early assumption was that the LEI code itself would be unchangeable.

In practice, this is not possible when such corporate events take place. In the global LEI system (GLEIS), a change in control of a legal entity (as a counterparty in a trade, or a reference entity in a credit default swap, or as an issuer of underlying securities) may require that the assigned LEIs be flagged as "expired" and a new LEI assigned. Each LEI registry maintaining that code, as well as trade repositories maintaining transactions containing those LEIs, would have to be updated. In a later phase of the GLEIS, each instance of its appearance in the hierarchies of the old and new LEI would also have to be updated.

The same LEI issue described above pertains to the UTI and UPI, especially as the LEI is being proposed as the prefix for the UTI. It is not unreasonable to expect that the UPI will likewise be identified by associating each with its issuing or manufacturing legal entity. The mechanisms to resolve such issues are being addressed, although in an uncoordinated way.

XBRL International, the organization overseeing the data tagging language for financial reporting, has been attempting to get issuer entities to be involved in reporting corporate reorganization events at the source of the creation of such notices. This is the same at-source point as when a legal entity is required to register or change its LEI identity. This maintenance function of LEIs has yet to be coordinated in the interim GLEIS, where 30 LEI Registries exist, nor in the 25 instances of globally dispersed trade repositories which can be expected to encounter similar issues.

Another effort is being undertaken by ISDA and ISIN to integrate the data elements related to their separate methods of defining swaps products, under the guiding hand of officials from the Global LEI Foundation and the Association of National Numbering Agencies (ANNA).

ISDA oversees the Financial Product Markup Language (FpML) for identifying swaps. ANNA oversees the ISIN numbering convention. ISINs mainly identify securities but it is proposed to extend this identification system to swaps and other derivatives.

### CFTC and ESMA

The CFTC, recognizing its inability to aggregate swaps data being reported to multiple trade repositories (in the U.S. alone there are four), requested a formal review of some of these issues in a 2014 consultative paper. The swaps data reporting regime is dependent on the global identification system of the LEI, UPI, and UTI to provide for data aggregation. Many of the questions posed in the review were related to improvements to these identifiers as well as the data tagging language used to describe other data elements for inclusion in swaps transaction reporting.

In summer 2015, the CFTC responded to the many comment letters received – and primarily to cross-border issues of reporting obligations of cleared swaps. The

commission did not respond to the remaining issues of data standards, but it was noted that they remain to be resolved.

The European Securities and Markets Authority in September 2015 released its final rule on MiFId II and MiFIR. In it, the ROC acquiesces to allow sole proprietors to be issued LEIs.

ESMA also has accepted that transactions need not be checked to see if LEIs have lapsed. On this latter point ESMA seems to have relied on a misguided understanding that LEIs lapse because the maintenance fee is not paid – a symptom, not the cause, of the LEI lapsing.

#### Joint Comment

ISDA, the Securities Industry and Financial Markets Association (SIFMA) and other trade associations, in what is referred to as the joint association letter on global trade reporting and data harmonization, commented on the poor quality of data being reported to trade repositories. They suggested a need to expand on the existing identification system and harmonize data reporting requirements across regulatory regimes.

The consultation paper issued by the ROC, also released in late summer 2015, proposes to collect data on direct and ultimate parents of legal entities in the GLEIS. This is expected to permit the consolidation of financial transactions containing LEIs.

The definition of ultimate parent is based upon public company audited financial-statement-consolidation principles. It is hoped that, following these accounting principles, it will allow for transactions that are first aggregated across multiple globally dispersed trade repositories to be aggregated up the counterparty chain to its ultimate parent for risk purposes.

In March 2016, the ROC, having received 28 comments, published its response to the public consultation on parents of legal entities. The ROC summarized its proposals and responses by requesting entities that have or acquire an LEI to report their "ultimate accounting consolidating parent," defined as the highest-level legal entity preparing consolidated financial statements, as well as their "direct accounting consolidating parent" to the LOU maintaining the LEI. In both cases, the identification of the parent would be based on the accounting definition of consolidation.

The ROC is referring to this process as a six-month pilot, after which it will evaluate outcomes. It is also recognized that this falls short of complete hierarchies as requested by the FSB, which they expect to be addressed in further consultations.

#### **Current State**

It was obvious from the launch of the LEI code in the U.S. in July 2012 that LEIs were being issued before global standards were set. The result is that non-conforming and duplicate LEI codes and legal entities exist, as well as non-certified and lapsed LEIs.

It was also known, even after the FSB standardized the code construction, that there would be no means to aggregate transactions up to the parent entity using these

randomly created, 20-character codes. That would be addressed in a second phase, now done partially by the ROC's response to its consultation paper.

The UTI was launched, both in the U.S. and elsewhere, also without a standard coding convention. The UPI, like the UTI, is also in use without consistent ways of constructing it.

To add further confusion to the UPI issue, ESMA in its recent, final rules on MiFID II and MiFIR unilaterally embraced the ISIN code for product identifiers, noting that ISIN still has to assign codes to cover derivatives. It is obvious that all three "barcodes of finance| (LEI, UTI and UPI) need to adhere to a global standard in order to be fit for all intended uses.

## Paradigm Shift in Transparency

The three codes were to be the pillars supporting a paradigm shift in global financial transaction transparency and risk data aggregation. Its first implementations are taking place in the swaps markets, where billions of transactions are being reported with these codes. It has not gone well.

In addition to non-standard identifiers, the problems are compounded in that there are no useful global standards identifying counterparties' controlling entities and no common definitions of data elements comprising a swaps transaction. This leaves regulators with no computerized means of accessing or aggregating transactions for risk analysis, this being the first objective for their use.

The LEI is assigned, and its business card data (name & address) recorded, by LOUs (local operating units). They are facilities operators given the franchise first by regulators, soon to be reevaluated and accredited by the GLEIF to operate an LEI registry in a sovereign jurisdiction.

LOUs currently include data vendors, financial market utilities, government patent offices, national business registries, stock exchanges, central banks, software companies and national economic institutes. They are all attempting to validate data from its originating source, the registrants' own input, but using multiple secondary sources of electronic and manually produced public and private data, thus adding layers of errors of human interpretation and omission.

Critically, while the LEI is now exclusively being assigned by regulation to swaps market participants, this is only one tenth of the potential issuance expected in support of all financial participants in all markets, the end objective for LEI issuance. In addition, the LEI lacks real-time updating and maintenance in an era where financial transactions are increasingly processed in real time.

## **Determining Fitness for Purpose**

The LEI appears to be in need of evaluation of fitness for purpose, as it is now being proposed to be used universally as the linchpin for construction of the UTI and possibly the UPI, even while falling short on its earliest objectives for a uniform standard, high levels of data quality, timeliness and use in data aggregation for risk assessment.

The ROC consultation paper references consolidated financial statements as a key source to validate parent relationships based on accounting definitions within the scope of public audits. These statements are usually certified by external auditors.

It would seem a natural extension of the auditor's work to organize this data in computer-readable form, jointly certify the validity of the data with its client, place it in a standardized template using XBRL tagging conventions (commonly used by auditors in financial statement reporting) and register it directly in the GLEIS.

This would eliminate the necessity of validation through secondary sources, a costly and burdensome effort now performed by LOUs for individual LEIs. This is especially the case when corporate reorganizations such as mergers, acquisitions and spin-offs need to be timed precisely to be effective across all LEIs of a single parent entity, wherever the component LEIs are registered or recorded. Many companies are required by regulation to register their component legal entities in their country of domicile.

#### **Timeliness**

The maintenance of LEIs due to ownership changes still needs to be developed in the GLEIS and in trade repositories. This problem was identified in the ROC's consultation papers when referring to changes of ownership and control of LEIs. They suggest using accounting consolidation standards within auditor prescribed timetables, but they note that consolidated financial statements are not updated in real time, only at quarterly or annual intervals. While this conveys their interest in more frequent, if not real-time, updating, and a role for auditors, it is not explicitly stated.

It should be reasonable to conclude that timely availability and processing would be desirable if suitable, practicable solutions were presented. For example, auditors' third-party assurances services can be used to certify LEIs and update changes to LEIs and their hierarchies as those changes are known. (See Grody and Hughes, The Global Risk Regime – New Roles for Auditors)

Auditors are privately informed well in advance of the public when such changes are to take place. Auditors' assurance costs for these services might well be lower than the costs of LOUs obtaining and then validating such information. We note that LEI pricing has not gone through any revisions, nor have onboarding and validation of ownership and control hierarchies yet been priced.

#### **At-Source Issuance**

When it agreed to direct the creation of the GLEIS, the FSB accepted the proposal to use the Internet's underlying technology to aggregate data across the multiple LEI Registers. That recommended architecture was accepted by the FSB but has not yet been included in the GLEIS's design. This technology should also be included as a requirement to aggregate data across trade repositories.

Further, the earlier proposal by IOSCO and others for automating data aggregation by using the controlling consolidating parent LEI as a prefix for all legal entities should be revisited. An at-source method for generating global UTIs using the LEI as a prefix is just now being considered through the IOSCO/CPMI consultation paper. Its further use

for designing the UPI would ease the burden of associating legal entities as manufacturers, obligors or guarantors of contracts or issuers of investments. The LEI's 20-character length has also proven troublesome in fitting in with data fields in legacy systems. It could be halved and still be universally assignable and long lived.

These at-source approaches and use of a shortened LEI and company-related LEI prefix had been proposed before by regulators and the industry but dismissed, principally by market infrastructure intermediaries and data vendors who have kept code assignment for themselves. Financial market participants may find it easier to embrace self-assignment of codes, using their own codes, as is done today in global commerce and on the Internet.

## Technology to the Rescue

Many market infrastructure intermediaries dominate the industry with data warehouses of an earlier era supporting high fixed costs and risky reconciliation and mapping processes. Fortunately, we are in unprecedented times. Capabilities exist today to aggregate and distribute billions of transactions in real time across globally disbursed data bases. The Internet and the World Wide Web are examples of such fundamental capabilities.



With unique, universal and unambiguous identifiers and common data elements housed in databases across the Internet and accessible through Internet protocols, much of the industry's legacy architecture can be redesigned for real-time processing at lower cost and less risk.

There are vast, Internet-based virtual private networks threaded throughout the financial services industry. Search and aggregation techniques designed for the Internet can be deployed in finance, giving instantaneous access to disbursed data – the technology and techniques that give us instant access to the World Wide Web's data via a simple search query.

Allan D. Grody

Certainly the high-speed, Internet-based technologies deployed in so many industries outside of finance, and pursued aggressively for revenue generation at the front end of the financial industry, should be pursued as well in the middle and back offices of financial firms.

## **Blockchain and Its Needs**

This technical model has similarities to the much touted, immutable distributed database ledger technology of the blockchain. Many commentators and collaborators in financial circles are supporting experiments in blockchain technology. While a diverse set of objectives for first implementations are being considered, they all have one thing in common: a recognition of the needed prerequisite of a universal set of financial-product and financial-supply-chain participant identification standards and associated reference data.



These Blockchain visionaries and collaborators are not placing the needed priority on global identifiers and are in denial of the existing, mature technologies as described above that can support these visions. These visions, in the end, are the displacement of infrastructure intermediaries such as the financial market utilities (FMUs) that are involved in post-trade clearing, settlement and payment mechanisms in order to accomplish real-time finality of financial transactions from order placement to posting to digital ledgers (the straight-through-processing vision).

Peter J. Hughes

To realize this vision, a first initiative, or at least a parallel initiative, of industry collaboration is needed around the current efforts of the Financial Stability Board to bring unique, universal and unambiguous identification standards into existence. This effort is currently bogged down in the one market it is being tested in, the global swaps market.

The true test, thereafter, is the global financial industry's willingness to cooperate further around the promise of distributed database technology. This distributed capability exists and was in use long before the blockchain incorporated such techniques, albeit not in finance.

## Missing Utility Link

Technology, in whatever form, can be utilized to establish the one missing global utility to make all the blockchain global visions practicable. That utility is the universal product and participant catalogue, what has been described as a golden copy of global identifiers and associated reference data.

Along with standard data tags and common data sets that describe financial transactions, a distributed ledger utility can be created to underpin all subsequent legacy systems and infrastructure reengineering promised by blockchain visionaries. Without it, no consequential global industry transformation can take place.

Deploying these new technologies in operational areas (the focus of the "barcodes of finance") had always been disadvantaged by the under-funding of cost centers, favoring instead the funding of revenue-producing areas. This forced legacy systems to be extended beyond their reasonable life and created a legacy mindset that accepted minimum funding for new technologies — even though the industry-wide benefits of embarking on this identification journey were to be found in pursuing straight-through processing.

## Conclusion

It is not too late to revisit the baseline assumptions that brought us this false start, which now encumbers the industry and regulators with non-standard and non-aggregatable codes placed in billions of transactions sitting in swaps data repositories.

Regulators' public consultations need to be infused with a more forward-looking vision, not in ways that perpetuate more incremental legacy "make-dos" that impose more technology, operations and regulatory burdens.

If not, the industry is destined to continue with the Rube Goldberg-like infrastructure it is burdened with, like those ridiculously complicated machine depictions, designed to accomplish a simple objective but with great difficulties. And risk managers will be forever burdened with poor data quality with which to perform their critical analyses