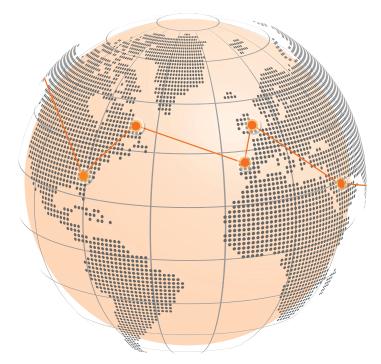
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Business Entity Data Special Report (\$)

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Editor's Letter



Entity Data Comes of Age

Business entity data isn't just the LEI (legal entity identifier) anymore. As AIM Software's Olivier Schlatter puts it in the Virtual Roundtable in this report on the topic, "entity data has become a major topic of conversation and is now recognized as an important subject matter." With business entity data's newly discovered importance, there is also the realization that centralizing this data, as has been done or

attempted with LEIs and numerous other pieces of key reference data, is a good idea.

Schlatter says firms see a need for a central hub, or enterprise data management platforms that can range across data domains and leverage related data elements. JP Morgan's Ludwig D'Angelo sees the advances for entity data operations happening through structure and controls of an overall operating model, with implementations of new operating models driving improvements for handling entity data.

Consultant Ed Ventura adds in the Virtual Roundtable that centralization of business entity data is the direction the industry is headed, so the data can be easily shared by sales, marketing and operations units of firms. And Deloitte & Touche's Sam Auxier poses that a central enterprise utility "that really knows the data at a detailed level," is the leading solution for business entity data.

To feed any possible central solution for business entity data, standardization of operations, in some cases driven by the LEI, along with validating data and making that data flow more effectively to the research and reporting where it is needed, are important functions to complete, as our Roundtable participants explain. D'Angelo, in the separate Q&A closing this report, points out that establishing entity hierarchies will produce a "matrixed" view of risk from business entity data that undoubtedly will be valuable to firms.

Yours sincerely,

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Contents

FEATURES

8 Virtual Roundtable

Inside Reference Data gathers together leading data management professionals to discuss the latest moves in the business entity data arena

18 O&A

Ludwig D'Angelo, executive director at JP Morgan, tells *Inside Reference Data* about how hierarchies are gaining influence as a means to manage entity data

NEWS

- 6 Clarient Appeals to Interest in Managing Entity Data
- 6 Joss Technology, OpenCorporates Link Entity Data
- 7 Mizuho Picks GoldenSource for Client Management
- 7 News Download



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News Review

Clarient Appeals to Interest in Managing Entity Data

More firms are considering utilities to manage client entity data, says Matthew Stauffer, chief executive officer of Clarient Global.

Stauffer spoke to *Inside Reference Data* in March as the company's new entity hub—a centralized reference data and document utility—went live with five major market participants. He said that research by Aite Group shows 88% of firms are considering such a solution to manage their entity data.

Clarient Entity Hub is now operational with five major banks and asset managers—Barclays, Credit Suisse, Goldman Sachs, JP Morgan Chase and State Street—representing \$8 trillion in assets. Clarient, a unit of the Depository Trust and Clearing Corporation (DTCC), was launched in cooperation with these firms and is therefore industry governed.

Stauffer says the Aite research shows 82% of firms cited regulation as the driving force behind investment in and improvement of legal entity data management. "This data validates what we hear from the industry," he adds.

Joanna Wright

Joss Technology, OpenCorporates Link Entity Data

Data management vendor Joss Technology (later acquired by AIM Software) and OpenCorporates, a website that offers legal entity data under an open data license, formed a partnership to enhance the capabilities of each, the two companies announced.

Joss Technology's entity data platform aggregates and validates information to provide firms with a consolidated, 360-degree view of counterparties, customers and brokers. OpenCorporates provides information on 80 million companies in 95 jurisdictions.

Joss Technology officials said that

OpenCorporates' capabilities answer needs expressed by clients: reducing manual reviews, lowering the need for data remediation and increasing confidence in quality and completeness of information used for compliance and risk reporting, says Marco Sablone, New York-based director of global sales and marketing at Joss Technology.

"We have been seeking additional data sources, and that's why we were interested in OpenCorporates' approach, which is different from other vendors," he says.

Joanna Wright

News Download

Mizuho Picks GoldenSource for Client Management

Mizuho International, a subsidiary of Mizuho Financial Group, one of Japan's largest financial institutions, has gone live with GoldenSource's Enterprise Data Management (EDM) platform.

GoldenSource says Mizuho International is using its solution for client and counterparty management to support the trading, risk and compliance functions of its investment banking business in London. The tool provides a single view of entity data. This is the first project GoldenSource has embarked on with Mizuho International in London.

GoldenSource has been working on several entity master-based projects, of which the partnership with Mizuho International is one. Mizuho's use of GoldenSource's EDM platform better automates client onboarding and account review, according to Steve Engdahl, who was senior vice president of product strategy at GoldenSource, at the time, but has since left the company.

Kevin Gage, chief information officer of Mizuho International, says in a statement: "GoldenSource has enabled us to significantly reduce onboarding times by providing a quick process. Moving to this automated, workflow-based approach has reduced the level of operational risk and improved data quality."

Joanna Wright

Avox to Provide Clients with Real-Time Entity Data

Entity data provider Avox has released web-based application programming interfaces (APIs) for clients to access legal entity data feeds in real time for use in know-your-customer processes.

The launch provides search, subscribe and update functionality for data across the Avox database of more than 1.7 million entities.

GMEI's LEIs Reach Half of Global Total

The Global Markets Entity Identifier (GMEI) utility, a joint venture by the Depository Trust & Clearing Corporation and Swift, has issued more than 165,000 legal entity identifiers (LEIs) to entities in more than 140 jurisdictions, according to officials. The number of identifiers represented about half of the 338,000 LEIs that had been issued as of February worldwide.

"The industry, DTCC and Swift, other Local Operating Units and the GLEIF are working together to implement the LEI, since it is so critical to improving global systemic risk analysis," says Bill Hodash, managing director of business development at DTCC.

A Growing Drumbeat

Inside Reference Data gathers together leading data management professionals to discuss the latest moves in the business entity data arena

What advances have been made in business entity data operations?

Olivier Schlatter, global lead product manager entity and client data solutions, AIM Software North America: Over the past few years, entity data has become a major topic of conversation and is now recognized as an important subject matter in itself. The industry has seen many new initiatives, ideas, products and vendor offerings in this area.

Today, entities data are all about compliance and risk management. Financial institutions are trying to break down data silos as a result of the LEI initiative and many other data-related regulations (Basel, Solvency, Fatca, Form PF).

Most firms recognize there is a need for a workflow-driven central hub that can increase automation and is flexible enough to quickly respond to everchanging requirements, such as new data sources and enrichment rules A key area of interest for AIM Software's clients is how related data can be leveraged. For example, corporate actions data (often readily available within the firm) can be combined with entity data to further increase automation. Modern EDM platforms with expertise across data domains turn out to be a tremendous asset.

Tim Lind, global head, financial regulation solutions, Thomson Reuters: In its mission to support the implementation of a global LEI (legal entity identifier) system, the GLEIF (Global LEI Foundation) has aimed to create a truly global system making available a complete and comprehensive data source. The tangible measure of this is the Foundation's capacity to provide depth of coverage and timely advice to practitioners globally who are confronted with an increasing demand to implement LEIs in compliance with capital markets regulation.

The advances that can therefore be seen in consequence of the GLEIF's initiative chiefly relate to the organization and presentation of entity data information. Specifically, data feeds in observance today now adhere to a consistent and universally recognized format. Consistent use of this constant format mitigates confusion around the management of entity data. For local operating units (LOUs), this critical enhancement accommodates their timely onboarding. The other advancement following these changes in entity data management relates to overall enhancement of data quality. especially relating to LOUs.

The proliferation of LOUs can be and has been viewed by many as a sign that the system delivered by the GLEIF is moving forward. Another indicator of this general advancement is EMIR's regulation that requires counterparties to use the LEI as their primary identifier in mandated regulatory reporting practices. This again is a major win for the global LEI system and its adoption by firms both large and small.

Ludwig D'Angelo, executive director, JP Morgan: The main advances in entity data operations have occurred in the structure and controls of the overall operating model. Every organi-





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zation understands where their issues lie. In most cases, an implementation of a new, well-documented operating model lies at the core of improvements in this space. These improvements mainly lie in the linkages between client entity data and instrument issuer data and the need to keep all the information up to date with regard to corporate actions.

Ed Ventura, president, Ventura Management Associates: There seems to be a focus on developing a full picture of the relationships a bank has with its customers and in understanding the relationships within the customer, be they hierarchical or arms length. There is particular emphasis on





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the cross-jurisdictional relationships within customer entities to ensure that a global understanding is achieved.

Are a lot of business entity data operations projects or improvements currently underway?

Schlatter: About three years ago, a wave of new projects was started, driven by the LEI requirement mandated by Dodd-Frank for over-the-counter derivatives trading in the US. More recently, EMIR in Europe and Fatca are impacting business entity data operations significantly. It is likely that risk data aggregation as laid out by BCBS239 will also apply to domestic systemically important banks. So there is still a lot of work to be done.

Firms are addressing these challenges in different ways. Most take a tactical approach, mapping the LEI into multiple and separate data stores, but some are

taking a strategic approach and using these regulatory requirements as an opportunity to review how they acquire, manage and distribute entity data.

These firms often establish a single view of each client and its roles and relationships across the business silos, which can be used to facilitate regulatory compliance, client on-boarding, cross-selling and a better understanding of risk exposure. Improvements include easier data access and better data governance, greater efficiency, reduced costs and enhanced data quality.

Lind: The regulatory landscape in the wake of the global financial crisis has resulted in a large number of projects designed to bring improvements to business entity data operations. With an increased demand for transparency, the LEI system championed by the GLEIF has been instrumental.

This data improvement mindset has been adopted to varying degrees by firms across the industry. We have raw data which tells us that by September 2013, there were nearly 350,000 LEIs assigned and estimates of over double that today, indicating a strong response from the industry in terms of registering for LEIs. If we examine this pattern more closely, there are variations between the larger and smaller firms in tackling the improvements expected around their

entity data management. Many larger firms, for example, have taken a proactive approach, supported by their bigger budgets. In contrast, some midsize and smaller firms appear to be doing very little to comply with the LEI system.

No matter the size of the firm, the concept of the LEI should stimulate discussion and planning about entity reference data management and improvements to it. For example, a key question exists around how to best integrate the LEI into a firm's reference data processes. In the light of this, the LEI also provides a tremendous opportunity to review existing entity databases. Such projects are intimately tied to the goal of making real improvements to business entity data operations.

Sam Auxier, principal, Deloitte & Touche: Almost every client I work with—and my colleagues at Deloitte concur—has some type of project underway around business entity data, ranging from basis-quality improvements to the consolidation of legacy entity databases. Large financial institutions may have many of these through large migrations to an outside utility. But our clients are looking for help beyond just reporting. For example, we are combining our capabilities around regulatory intelligence with advanced technology from IBM.

D'Angelo: Many of the projects underway at financial services firms are related to eliminating duplicate records that might exist as well as closing gaps in the data—essentially those linkages between client data, instrument data, settlement instructions, etc., as well as linkages to ratings data on issuers. Organizations with established strategic repositories are executing many of these initiatives as part of the implementation. But any work to clean up this data must coincide with work to improve or reengineer the overall operating model or you will find yourself doing endless cleaning-up.

Ventura: This space has always garnered a great deal of support to develop the best methods of understanding and capturing client information. It's always been a challenge to obtain and maintain relationship information because of the dynamics of customers who seem to be ever changing. Often, customers do not understand their own companies to the extent it is necessary for the bank to know them, so banks tend to invest the resources needed to obtain a complete picture. Continuous improvement is a common mantra to ensure banks have the best possible information about their clients. Centralization of data seems to be the direction, with data being shared by sales, marketing and operations (barring jurisdictional privacy issues).



Sam Auxier, Deloitte & Touche

What's the leading approach to handling business entity data? Is it federating the data? Is the way the data will be viewed the greater concern?
Schlatter: As a specialized solutions provider, we have

many discussions around data cleansing, ongoing data maintenance and preparation for various regulations.

Most firms recognize that, if it has not been done already, reconciling entity data across internal sources and creating linkages should be the first priority. All recent regulations and more stringent risk management practices require financial firms to uniquely identify an entity across the enterprise.

In those projects, firms are not always able to completely break down the silos, but they can quickly create commonality around a small core dataset.

Time-to-market has become key: longer and more disruptive MDM projects are getting less attention, to the benefit of packaged solutions, which maintain connectors to all data vendors and can aggregate internal sources in a matter of days, and not months.

Corporate hierarchy is usually the next item on the priority list.

Lind: Federating data enables flexibility and local expertise and removes the burden of centralized bureaucracy. At the same time, federating data creates challenges in ensuring consistency and quality of data that centralized masters offer. By federating the LOUs while establishing a central operating unit, the GLEIF will provide that critical guidance with key central services and the Golden Copy from which everyone can benefit.

Auxier: We have seen approaches shift quite a bit, but the leading one is towards a central enterprise utility that really knows the data at a detailed level. This is focused on ensuring quality and monitoring the sources for accuracy—with federation of the review and sign-off process to the business unit most relevant to a specific asset class or type of data. There seems to be a much better understanding of how challenging maintaining this data is and how important it is as well to meet risk and regulatory reporting requirements.

D'Angelo: There are options for handling entity data when designing the operating model. Each has its benefits and shortcomings. As an example, logic would locate client on-boarding close to the group that knows the most about the client—the relationship management function—but federating that function might lead to data

inconsistency or quality issues. In any data operation, one needs to define clearly the elements of the data model and the lineage or origin of each element of that model. The data model should also include the controls and validation required for each data element, as well as the downstream entitlement of that data, or essentially what applications are allowed to view and use the data. The quality and completeness of the model will eliminate perceived data quality issues more related to misuse of data.

Ventura: There seems to be a move toward centralization rather than federation. The objective of collecting business entity data is to develop a complete picture of the customer for numerous reasons, including risk assessments, sales opportunities and regulatory reporting. The evolution of the data collected seemed to begin on a federated basis as each area of the bank collected what it specifically needed to perform its specific tasks. During the financial crisis, when most banks couldn't determine their full exposure to certain organizations, the need to pull together data became obvious and has since been the direction. Varied jurisdictions with specific privacy rules and regulations often require banks to maintain data on a federated basis and challenge the centralized model. However, they seem to be addressed on a virtual basis as needed for reporting.

Are you seeing changes in how business entity data is extracted, assembled or delivered?

Schlatter: Changes have been significant, mainly driven by technology. In the past, most operations were batch-oriented, with



Ludwig D'Angelo, JPMorgan

large spreadsheets or databases, and low traceability about the origins of the data. Today, near real-time and processled operations have taken over, driven by newer technologies such as web services, data virtualization or cloud-based architectures etc.

A plethora of systems must work together throughout the complete lifecycle of an entity—we work, for instance, together with leading vendors in the KYC utility space. While other solutions gather knowledge on entities, we enrich the data, set up internal controls and rules, maintain the quality of the data over time, and disseminate 'golden copies' to the downstream systems.

Providing transparency and auditability about the way data is extracted, assembled or delivered is no longer a niceto-have. Data lineage and traceability are growing concerns. Dashboards provide critical insights about the on-going operations and data quality across systems.



Ed Ventura, Ventura Management Associates

Lind: There have been changes in the way business entity data is extracted, assembled and delivered. Readily apparent is the standardization of reference data secured by the LEI. What this means is the way business entity data is assembled and, in turn,

extracted follows one standard formula instead of many. By accepting common and universal data feeds and employing the LEI, we reduce confusion about the reference data itself. With the 2015 focus on hierarchies, the LEI will be one building block to support the evolution of risk management, and in the meantime, it offers a standardized mechanism to link value-added content including securities issuer data, full global hierarchies, countries of risk, credit analytics, news, regulatory status, fundamental, and related financial data.

Auxier: The emergence of legal entity portals is changing the way this data is extracted and used within the industry. Many of our clients leverage the industry utility then integrate this with other information to develop their regulatory reports or for their own research purposes.

D'Angelo: More work is being done around documented data models and downstream data entitlement than ever before. Firms are taking a bottom-up view of what is required and marrying that with a top-down view of the best strategic sources for that data. The operating model is laid over it all to ensure there is confidence in the quality and timeliness of the data.

Ventura: There are some new products offered to help banks better understand business entity data. They are being deployed by a number of organizations and help to supplement and validate data collected by the organization.

To what extent has the growth of the LEI contributed to increased volumes of business entity data?

Schlatter: The driver behind LEI adoption has been regulation, with the identifier being a requirement for regulations such as Dodd-Frank, EMIR, Solvency II and MiFID II. It is expected that any further regulation impacting entity data will contain an identifier mandate so the LEI is here to stay.

Firms are taking different approaches to implementing the LEI. Thus, using these regulatory requirements as an opportunity to review how they acquire, manage and distribute entity data definitely takes an advantage here.

Finally, from a risk point of view, the industry is waiting for LEI phase 2, which is slated to provide corporate hierarchies. Such an undertaking is not without challenges, but we hope the newly established GLEIF will speed up the kick-off of that particular stream.

Lind: The relationship between the growth of the LEI and increased volumes of business entity data is not entirely clear, though an inherent and logical assumption exists that the LEI has led to greater volumes of entity data. This time last year, we observed a dramatic growth in the number of LEIs issued to leading firms that adopted the system in response to ISO standards and regulatory compulsion. It is, nevertheless, difficult when trying to gauge the true scope of the LEIs' usage and the consequent business entity reference data they generate.

The LEI has the potential to be a very useful tool for a variety of data management and integration practices, however the prospect of it becoming the default identifier of choice across the industry is still in question. From the perspective of the practitioner, many firms are trying to determine their scope of operations and systems that will benefit from the LEI. These critical decisions continue to play an essential role in determining the volume of business entity data that is produced by use of the LEI.

Auxier: The LEI is coming along at the same time as various reporting requirements such as Fatca, AIFMD, Form PF, Solvency II, and other rules. All these regulations are requiring a data strategy that the LEI could really enable —if it was widely, globally, adopted—but it is not there yet, so it is not really contributing significantly, at this time, to the increase in volume. It is really the regulations that are driving the increase in volume around business entity data.

D'Angelo: I'm not sure it has led to a growth *per se* in volumes. It holds the promise of linking client and issuer data unambiguously. The onboarding documents will include the client's LEI, which will be linked to the issuer LEIs provided by the data vendors and likewise the rating agencies as well. It took the financial crisis of 2007–8 for everyone to understand and agree the role the identifier plays in risk aggregation across different firms.

Ventura: The LEI has pushed banks to embrace a more holistic view of their customers and has provided the framework that is deployed within numerous organizations. It has brought attention to a long-standing issue up the line and has truly helped shift the thinking and culture of banks to prioritize relationships and entity data.

Sponsored Statement

Follow the Entity Data Road to Legal Entity Information Wizardry

When you consider all of the new regulations our industry faces, a clearer picture of common requirements begins to emerge. Most reforms targeting risk management will place a premium on the ability to manage exposure to legal entities and market counterparties.

Whether it's managing client data to ensure anti-money laundering (AML) and know-your-customer (KYC) compliance obligations are met, the ability to aggregate an investment book or portfolio to calculate exposure to an issuer, or understanding the credit risk associated with over-the-counter market counterparties, the data needed to accurately define complex legal entities has become the primary focus.

The need for comprehensive entity data is hardly a new revelation, but we are seeing a noticeable acceleration of activity in terms of investment in the operational and technology infrastructure to capture and manage it. For 20 years, our industry has been centralizing the management and governance of instrument reference data through various enterprise data management (EDM) initiatives. Now we are talking about EDM 2.0 and it's legal entity's turn.

While the value of EDM is self-evident to most institutions, executing on the vision is never easy. As institutions seek the right operational model to manage the legal entity version of EDM, they are seeking ways to converge different types of entities into a common platform. This means combining the common data elements of the three primary types of entities that all firms need to deal with—clients, counterparties and issuers.

Asset management example

A good example of this trend comes from the asset management sector, which is looking to converge issuer and counterparty data to support market and credit risk. When determining market exposure to its broker/dealers, it needs to consider not only its trading activity with them as a counterparty to OTC and delivery vs. payment (DvP) transactions, but also the equity and debt it holds from these same entities as issuers.

Having a common view of the hierarchy, country of risk and other core descriptive data on these entities will not only create more efficiency and scale in data operations, but also provide a much fuller picture on the totality of exposure



to large entities. Broker/dealers are also looking into scaling their entity data even further, considering the same entity may be a client, counterparty and issuer of securities they hold in their book.

BCBS 239 catalyst

A set of data management principles under the auspices of BCBS 239 has certainly been a catalyst for the focus on legal entity content and will likewise place a premium on managing data across the different roles an entity can play.

Managing legal entity data across lines of business, asset classes and geographies will be a prerequisite to meeting the BCBS 239 data governance challenge. This includes not only unique identification and an accurate description of the entity and its corporate hierarchy, but all relevant information that can provide predictive insight into the risks of doing business with the entity, whether it is as a customer, counterparty or issuer.

Take inventory of the key regulations and you will see this theme repeat itself. Fatca requires banks to know the national origin of a client (are they a US person from a tax perspective?). Solvency II will require the ability to assign risk to securities held in a portfolio and aggregate exposure to issuers, industry sectors, asset classes and markets.

The Dodd-Frank Act and European Market Infrastructure Regulation require

accurate data on counterparties to ensure appropriate reporting and clearing of OTC swap trades. Recent executive orders such as sanctions from the Office of Foreign Assets Control and the EU against Russia for its involvement in the Ukraine are examples where financial institutions need to connect the complex hierarchical relationships of Russian companies to ensure no trading of sanctioned instruments occurs.

This trend will consolidate the acquisition and verification of basic information such as an entity's name, address, country of domicile/risk, cross-referencing of identifiers and industrial classifications. The legal entity identifier system will serve as a building block to support the evolution of risk management, but it will also provide a standardized mechanism to link value-added content, including securities issue data, full global hierarchies, country of risk, credit analytics, news, regulatory status, fundamental, and related financial data.

Entity data is the map that connects the total exposure of securities and holdings to issuers and the concentration of assets by industry sector or countries of risk. So, if you are searching for a common denominator in regulatory compliance, all roads lead to the legal entities with whom we service, invest and trade.

Tim Lind, Head of Regulatory Data Solutions, Thomson Reuters

Designing Hierarchy

Ludwig D'Angelo, executive director at JP Morgan, tells *Inside Reference Data* about how hierarchies are gaining influence as a means to manage entity data



Ludwig D'Angelo, JPMorgan

What's had the greater impact on business entity data operations, the legal entity identifier or risk data aggregation and stress test rules, and why?

Neither one had a greater impact than the other on entity data operations.

The LEI is the main enabler of risk data aggregation and stress testing. The key is to keep up the momentum of LEI adoption by continuing to evangelize the benefits—meaning benefits to external regulatory risk reporting, as well as internal initiatives to manage risk.

What further advances are most needed for managing business entity data?

Entity hierarchies are probably the most needed advance in business entity data. It's obviously important to understand the ultimate parent in an entity hierarchy, but it's equally important to understand the entity hierarchy within a family of issuers under that one ultimate parent. Marrying the legal entity hierarchies with obligor hierarchies will also provide a valuable matrixed view of instrument/issuer default risk

What is the importance of corporate hierarchies as a next step for business entity data?

Corporate entity hierarchies are the next logical step in adding value to the base level LEI. Mapping ratings agency data on issuers becomes more relevant when one understands the relative position of a legal entity in its organizational family tree. The relevance increases dramatically when you incorporate this hierarchy data according to majority/minority ownership information. It will serve to further improve the risk modeling you can perform.

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