



**REFERENCE
& MASTER DATA**

**Compliance. Connectivity.
Confidence.**

LEGAL ENTITY DATA

Bloomberg
FOR ENTERPRISE



**COMPLIANCE. CONNECTIVITY.
CONFIDENCE.**
Legal Entity Data

2 Four Key Challenges

6 People, Process and Technology

7 Bloomberg Legal Entity Database

After the 2008 crisis, regulators began issuing an unprecedented number of new requirements organized around four broad mandates: systemic risk reduction, capital adequacy and solvency, transparency, and compliance. Systemic risk reduction is designed to ensure that the failure of a single entity does not bring down the whole system. Capital adequacy and solvency require individual entities to reserve cash or liquid securities as a cushion against stressed market conditions. Transparency disclosure requirements increase the clarity of trading activities and decisions to help predict failures and avoid abuse. And compliance is required of all firms to make sure the entire industry follows the same set of rules.

Many firms have struggled in this complex new environment. High-quality data plays a critical role in meeting all four mandates, but seamless management of enterprise data is a constant challenge for even the most sophisticated organizations. Accurate and reliable legal entity data is particularly important because it allows firms to clarify complex entity relationships and connect entities with a variety of securities. Making these connections completely, accurately and efficiently is essential to fulfill four key challenges firms face as they attempt to meet these mandates: risk management, due diligence, regulatory reporting and pre-trade compliance.

To address the needs of the industry, Bloomberg has made significant investments to deliver high-quality legal entity data. Today, our reliable, comprehensive and fully integrated entity data leads the industry. Our people, process and technology form a rigorous legal entity data methodology—one firms can leverage to address the challenges of risk management, due diligence, regulatory reporting and pre-trade compliance.

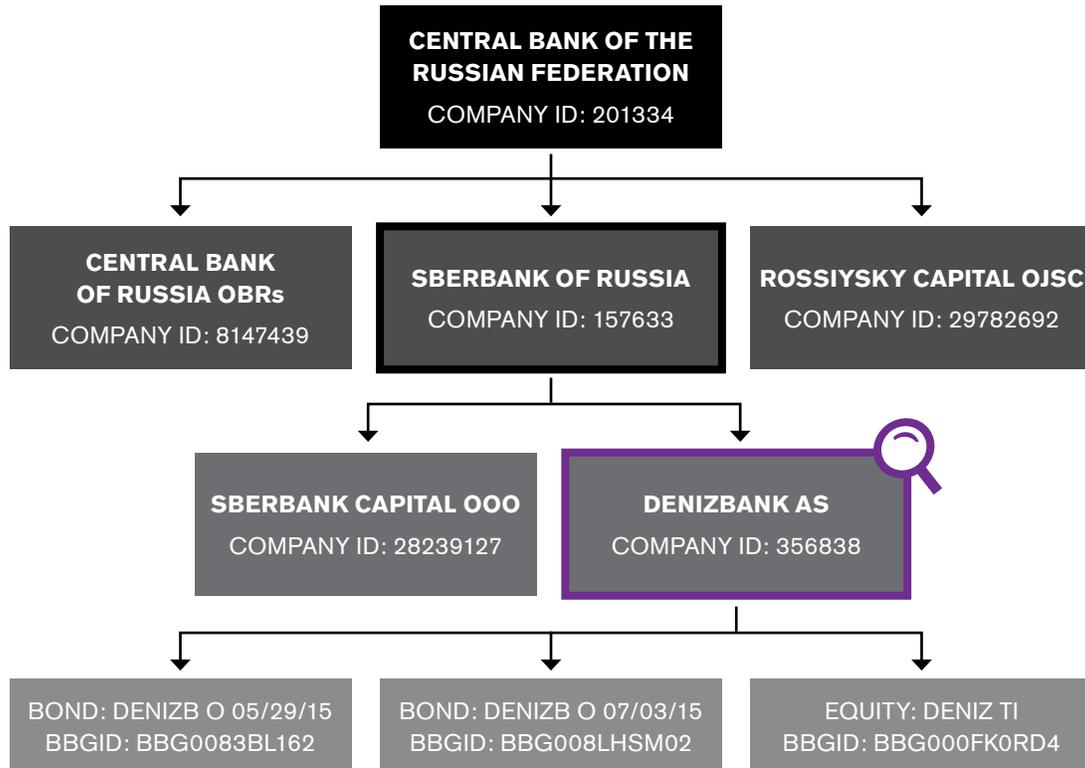
This document provides insight into how we apply our methodology to these challenges and helps explain why buy-side and sell-side firms around the world trust Bloomberg legal entity data to fuel essential business processes for risk and compliance.

FOUR KEY CHALLENGES

Legal entity data is essential to four critical processes

Bloomberg legal entity data provides the accuracy, quality and depth firms need to address four major risk and compliance challenges.

Establishing connections between entities and instruments is built into the design of the Bloomberg data model.



DENIZBANK AS – COMPANY ID: 356838



RISK MANAGEMENT

Sector:
Financial

Country of Risk:
Turkey (TR)

Ultimate Parent:
Russian Federation

Issuer Risk:
IG8 – 12-month default risk probability is between 0.096% and 0.1715%



CUSTOMER DUE DILIGENCE

FATCA:
GIIN – JPCJOH.00015.ME.792

Regulator:
Capital Markets Board of Turkey

Tax ID:
2920084496

Registered Address:
Buyukdere Caddesi
No:106
Esentepe
Istanbul, 34394
TR



REGULATORY REPORTING

LEI:
3RV7W250LTUQH12INJ88

Solvency II:

- **NACE Sector** – Financial & Insurance Activities
- **NACE Code** – 64.19

EMIR Counterparty Classification:
Financial Company (FC)



PRE-TRADE COMPLIANCE

OFAC Sectoral Sanctioned:
No

EU Sanctioned:
Yes

UN Sanctioned:
No

Canada Sanctioned:
Yes

Australia Sanctioned:
Yes

1. RISK MANAGEMENT

Enhancing risk management practices has been a central focus for financial participants as they seek to strengthen their ability to withstand a wide range of market stresses. Two critical metrics in this arena are concentration risk and counterparty risk.

Concentration Risk

Concentration risk can be calculated against a variety of measures, most notably the ultimate issuer, sector and region. To help firms understand risk associated with the ultimate issuer, Bloomberg systematically links entities to more than 35 million instruments, thus enabling complete aggregation for issuer exposures. Precise instrument-to-entity linkage helps risk managers, compliance officers, analysts and others identify the immediate parent, ultimate parent and ultimate obligor in simple and complex structures. Sector concentration risk can be monitored using our second-generation industry classification schema (BICS), which delineates sector classifications for entities up to seven levels and across multiple business units. Regional risk is identified with a proprietary algorithm that provides visibility into an entity's country of risk using factors such as revenue, business operations and filing locations. In each case,

Bloomberg maintains the accuracy of concentration risk through daily adjustments of records according to corporate actions, such as name changes, IPOs, M&A, domicile changes and more.

The Bloomberg data model demands that all securities be linked to issuers prior to entry in the database. In the same way, when an entity is added to the database, the required fields include the company identifier. This simple but effective methodology allows Bloomberg legal entity data clients to aggregate exposures to any entity or obligor.

Counterparty Risk

To help firms manage counterparty risk on an enterprise scale, Bloomberg applies domain expertise to clearly identify individual counterparties, link these entities to market-standard identifiers, such as the LEI, and create corporate structures to identify parents, obligors and ultimate parents. Once the counterparty has been identified, firms need an understanding of an entity's ability to meet its obligations. Based on our proprietary quant techniques, our default risk solution estimates the probability of default over a wide range of tenors, from three months to five years.

Proprietary Default Risk Analysis

To help gauge the likelihood of an issuer experiencing a credit event, Bloomberg relies on a powerful algorithmic model that produces independent, fully objective default risk measures and model-implied credit default swap (CDS) spreads. This highly complex model is the direct result of proprietary Bloomberg quantitative techniques.

Bloomberg experts build corporate hierarchies using multiple data sources, including SEC filings, company websites and others. LEI integration provides initial automatic mapping. We then verify linkages with matching technology. Finally, teams apply real-world experience to detect the nuances that differentiate subsidiaries, branch offices, related entities and affiliates from one another.

By identifying specific legal entities and their corporate and capital structures, then using our proprietary quant techniques to gauge the probability of default, Bloomberg helps firms assess the risk of doing business with a particular counterparty.

2. CUSTOMER DUE DILIGENCE

The due diligence mandate is designed to make sure firms understand exactly who they conduct business with and what types of transactions are permitted, even as corporate structures and permissions change. The mandate is expressed in a number of requirements, including Know Your Customer (KYC), Anti-Money Laundering (AML), the Foreign Account Tax Compliance Act (FATCA), European Market Infrastructure Regulation (EMIR) and many others.

Bloomberg brings a distinct information advantage to this challenge with registrant data, which is sourced from numerous global registries to help firms identify customers more accurately, as well as regulation-specific entity taxonomies, which govern the types of interactions a firm can pursue with a client, such as the types of products it

can offer. For any given entity, this data allows us to provide firms with a clean view of all vital attributes.

From initial onboarding to periodic remediation, due diligence involves a complex set of requirements informed by multiple regulations in different regions. Data requirements include details such as the legal name, domicile, country of incorporation and registrant data. They also include industry and regulatory classifications, such as NACE, NAICS, UK SIC and EMIR, and identifiers such as the LEI, registry IDs and the GIIN. Collecting these sensitive details is a complex and time-consuming process that must be completed prior to engaging with a counterparty and repeated regularly over time.

Bloomberg legal entity data gives

firms a head start on customer due diligence. When entities are entered into our database, our data experts must complete the process of acquiring many of the same details that these regulations require. Using Bloomberg legal entity data as an initial due diligence resource helps streamline the process. It also helps clearly differentiate financial and nonfinancial counterparties for regulators, delineate all the lines of business a counterparty is associated with and develop a fuller, more complete picture of the counterparty's makeup.

3. REGULATORY REPORTING

Regulatory reporting plays a key role in increasing market transparency as part of the broader effort to minimize the risk of future crises. This is why regulators have instituted new trade reporting requirements for certain asset classes, such as OTC derivatives, and periodic reporting requirements for alternative investment fund managers (AIFMs) and insurance companies.

These requirements are what drove the adoption of the legal entity identifier (LEI), an important component for improving the efficiency and accuracy of market monitoring.

Integrating the LEI in downstream applications is a complex process. Bloomberg has driven LEI integration for clients by mapping the LEI to

ID_BB_Company, an identifier our clients already use. This allows easier integration of LEIs at the entity and security level in risk and compliance applications that use Bloomberg data for regulatory reporting.

Without this built-in connectivity, firms would face the prospect of mapping internal IDs for individual counterparties and ultimate issuers to their corresponding LEIs before applying the results to regulatory reporting efforts. Instead, firms can leverage ID_BB_Company knowing that Bloomberg is continuously monitoring, cleansing and normalizing the data as well as performing exception handling as changes occur.

Although the LEI does not yet provide

enough coverage to be a key identifier, clients often need to incorporate the LEI into workflows to achieve regulatory compliance. Solvency II, for example, requires the LEI in reporting. When this requirement emerged, Bloomberg clients were able to identify counterparties with the LEI very quickly, aggregate risk more efficiently and ease the regulatory burden.

4. PRE-TRADE COMPLIANCE

In addition to creating safer financial markets, regulators and governments around the world are using financial policy as a tool to enforce foreign policy. By controlling access to capital and markets, governments can compromise the capacity and reach of certain adversaries. Unfortunately, this dynamic demands that financial firms remain ever-watchful in their adherence to policies that can change as quickly as the headlines.

Sanctions are a prime example. Globally and within individual jurisdictions, numerous sanctions programs govern which entities firms can conduct business with. Complying with sanctions requires not only a deep understanding of why the sanctions exist, but also the ability to collect highly granular data about the entities affected by each sanction program.

Reliable legal entity data helps firms make certain they do not conduct business with sanctioned entities or engage in specific activities with sectoral-sanctioned firms. Managing this data, however, requires an up-to-date entity database complete with sanction data. In other words, firms need to be able to accurately link sanction lists to entities within the database, map out complex corporate trees to identify sanctioned subsidiaries and update all of these details immediately as they change.

To address this challenge, Bloomberg diligently monitors ten sources of sanctions data: OFAC, the European Union, the United Nations, Canada, Singapore, Japan, Hong Kong, Australia, the UK and Switzerland. All sanctioned entities are flagged and clients are notified so they can set and enforce internal trading restrictions accordingly. Also flagged are specific

new debt and equity securities firms that are prohibited from trading.

Tracking sanctions data requires constant vigilance to make sure all affected entities are identified and mapped to the Bloomberg legal entity database. Taking a published list at face value is not sufficient. For example, the recent Russian sanctions included only 15 primary entities but ultimately involved more than 1,400 organizations.

Our legal entity data experts start with the identified entities and work outward to include all affected subsidiaries. Process proficiency ensures that this happens quickly when sanction information changes. The team monitors alerts to integrate changes by the end of day. All of this helps reduce the risk of clients unintentionally violating sanctions.

PEOPLE, PROCESS AND TECHNOLOGY

Three factors enable Bloomberg to provide high-quality data

The accuracy of Bloomberg legal entity data stems from a powerful methodology that includes domain expertise, processes that have been fine-tuned in hundreds of client engagements and continuous investment in advanced technology.

SUBJECT MATTER EXPERTS

People are the most vital element of any reference data offering. The complexities of legal entity data demand experts who can interpret regulatory requirements, understand the nuances and implications of changes in legislation, identify potential conflicts and set priorities.

Our legal entity data experts include: corporate structure analysts who create entity hierarchies, including the impact of corporate changes, such as mergers and acquisitions; regulatory analysts who focus on legal entity reference data, such as sanctions programs and registrant data; and quantitative analysts who focus on default risk and capital structure. Together, these professionals:

- **Advocate** for clients with a clear understanding of their needs and perspectives
- **Apply** targeted expertise to highly complex data problems
- **Manage** relationships with regulators and other industry influencers
- **Provide** informed insight during LEI challenges
- **Detect** and address potential issues with legal entity data quality and structure
- **Improve** processes and evaluate new technology choices

PROVEN PROCESSES

Bloomberg employs rigorous processes to create legal entity data and maintain its accuracy over time despite frequent changes. These include three steps, each with its own challenges and nuances.

- **Acquisition** involves retrieving legal entity data from a large number of sources, often in different languages, and in many formats. All of this disparate data must be aggregated, normalized and cleansed prior to further processing.
- **Identification** requires our team to link new details to existing records. This process is complicated by the inconsistent nature of entity data, which must be verified prior to linking. After new details are confirmed, Bloomberg adds them to our legal entity database, which is automatically linked to both our corporate actions database and instrument database.
- **Maintenance** includes all of the daily work done to monitor changes in entity relationships, securities, sanctions and other requirements, and to then update the database quickly. Through proactive investigation and response to alerts triggered by changes in other databases, our team ensures that our data accurately reflects the current state of global legal entities.

All of these processes are built into the way Bloomberg manages legal entity data. For example, before any new security can be added to an asset class database, it must be connected to an entity using the ID_BB_COMPANY identifier.

This robust, continuous and constantly evolving process results in accurate legal entity data that firms can use to meet four important and persistent challenges: risk management, customer due diligence, regulatory reporting and pre-trade compliance.

ADVANCED TECHNOLOGY

Technology provides underlying support for the team of professionals guiding the legal entity data process. Bloomberg specializes in deploying sophisticated technology to automate more straightforward tasks and to thus reserve intellectual capital for more complex issues.

A matching tool checks new entities against the existing database. Mapping and connectivity tools help reduce the risk of error when building out corporate and capital structures. And a workflow tool automatically prompts our teams to update entity details in multiple databases when mergers, divestitures and other corporate actions occur. All of these technologies are run through quality-assurance procedures and tested for accuracy by Bloomberg experts.

BLOOMBERG LEGAL ENTITY DATABASE

Depth and breadth plus unprecedented quality and accuracy

Simply put, Bloomberg provides the industry's most comprehensive aggregation of in-depth legal entity data. This database covers 3.5 million public and private entities. It includes approximately 350,000 LEIs—our team of experts continuously monitors and maps the data to new LEIs as they are released. Our entity database draws updates from hundreds of sources, including global registries, 21 LOUs, company filings, websites and more. Bloomberg clients can expect highly accurate and timely legal entity data specifically designed to fuel risk and compliance workflows and improve enterprise decision making.

INVESTING IN INNOVATION

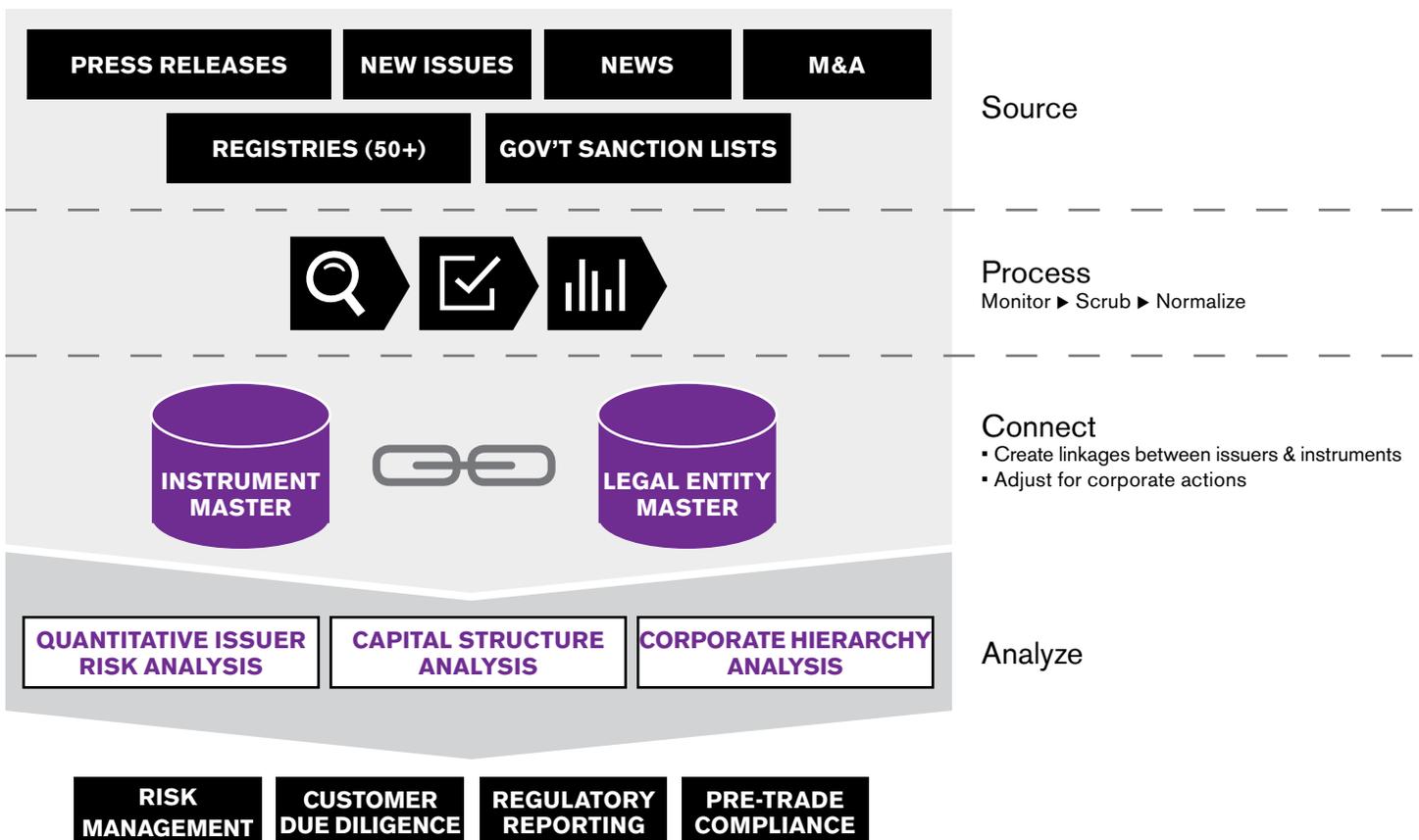
Providing high-quality legal entity data depends not only on people, process and technology, but on continuous investments to improve all three of these factors. Bloomberg is engaged in a constant process of identifying these opportunities.

Our data professionals are always learning and monitoring the changing

market landscape to identify new data needs, sources, outputs and applications. This diligence allows us to anticipate client needs and meet them proactively. On the process side, we complete regular methodological reviews to ensure peak performance and alignment with client expectations. And, with respect

to technology, we are automating processes, such as pulling legal entity data from registries and formatting it correctly, to gain even more efficiency.

Bloomberg combines people, process and technology to create a rigorous legal entity data methodology designed to address four key client challenges.



TAKE THE NEXT STEP

Bloomberg for Enterprise is ready to help your firm acquire highly accurate legal entity data suitable for use in a wide variety of risk and compliance workflows. Contact one of our data professionals at eprise@bloomberg.net or visit bloomberg.com/enterprise now.

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