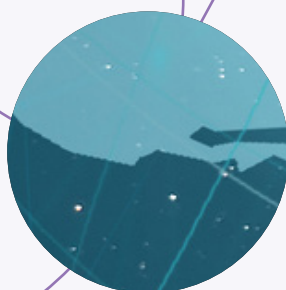


Vendor Analysis: Dun & Bradstreet

ESG Data Aggregators and Scorers, 2022





Chartis Research is the leading provider of research and analysis on the global market for risk technology. It is part of Infopro Digital, which owns market-leading brands such as Risk and WatersTechnology. Chartis' goal is to support enterprises as they drive business performance through improved risk management, corporate governance and compliance, and to help clients make informed technology and business decisions by providing in-depth analysis and actionable advice on virtually all aspects of risk technology. Areas of expertise include:

- Credit risk.
- Operational risk and governance, risk management and compliance (GRC).
- Market risk.
- Asset and liability management (ALM) and liquidity risk.
- Energy and commodity trading risk.
- Financial crime, including trader surveillance, anti-fraud and anti-money laundering.
- Cyber risk management.
- Insurance risk.
- Regulatory requirements.
- Wealth advisory.
- Asset management.

Chartis focuses on risk and compliance technology, giving it a significant advantage over generic market analysts.

The firm has brought together a leading team of analysts and advisors from the risk management and financial services industries. This team has hands-on experience of developing and implementing risk management systems and programs for Fortune 500 companies and leading consulting firms.

Visit www.chartis-research.com for more information.

Join our global online community at www.risktech-forum.com.

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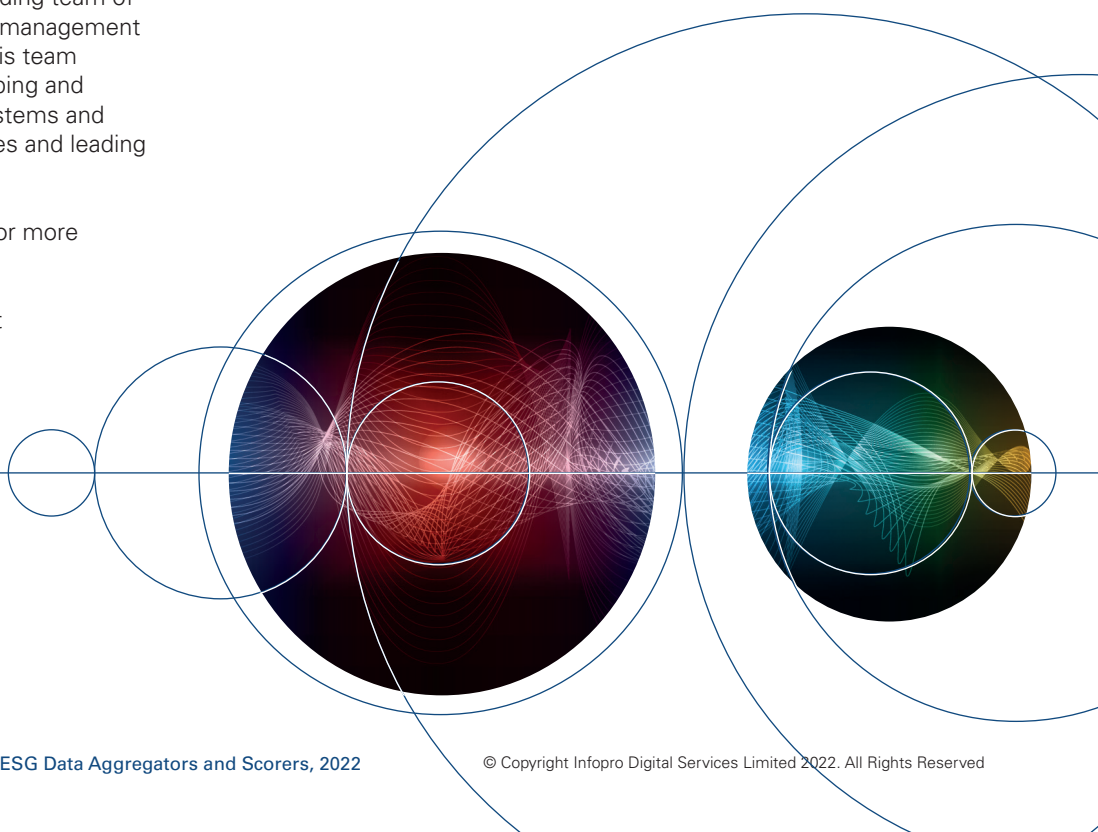


Table of contents

1. Report context	5
2. Quadrant context	8
3. Vendor context	11
4. Methodology	14
5. How to use research and services from Chartis	17
6. Further reading	18

List of figures and tables

Figure 1: Workflows for analyst vs. 'human-in-the-loop' data collection and analysis	7
Figure 2: RiskTech Quadrant for ESG data aggregators and scorers, 2022	9
Table 1: Completeness of offering – Dun & Bradstreet (ESG data aggregators and scorers, 2022)	10
Table 2: Market potential – Dun & Bradstreet (ESG data aggregators and scorers, 2022)	10
Table 3: Dun & Bradstreet – company information	11
Table 4: Evaluation criteria for Chartis' ESG data aggregators and scorers, 2022 report	15

1. Report context

This Vendor Analysis is based on the Chartis quadrant report *ESG Data Aggregators and Scorers, 2022: Market and Vendor Landscape* (published in May 2022). This section summarizes the key theses in that report; subsequent sections take a detailed look at Dun & Bradstreet's quadrant positioning and scoring, and Chartis' underlying opinion and analysis.

Key thesis

Environmental, social and governance (ESG) issues now constitute a major class of risk. Activism among investors and the need for regulatory compliance mean that ESG risks are now being addressed in investment portfolios, loan books and financial holdings.

Sustainable investing by adhering to ESG principles is a high priority among asset owners, from retail wealth managers to the largest institutional investors. Younger investors, 'activist' investors and institutional investors (such as pension funds, college endowments and sovereign wealth funds) are adopting investment mandate charters that require stronger adherence to ESG principles. Institutional asset owners are using proxy voting to influence corporate behavior directly and, in turn, direct portfolio weightings and holdings.

Against this background, investment managers must be able to progress from simply divesting exclusionary holdings to quantifying the ESG data used in investment decisions. But the validity of the data used for ESG investing has come under scrutiny, and regulators and investors in ESG funds want assurance that data and quantitative assessments are valid. Global regulatory bodies concerned with 'greenwashing' are using regulatory frameworks such as the EU Taxonomy and Sustainable Finance Disclosures Regulation (SFDR) to sideline or shut down such funds to protect investors.

A developing vendor landscape

The vendor landscape for ESG data is entering its third phase. In the first phase, several boutique vendors entered the market; in the second, the major financial information vendors snapped up many of these players and launched their own offerings.

Chartis believes that in the third phase of development, new challengers will enter the market as demand for real-time, alternative, vertical-focused and non-financially material ESG risk data increases. Chartis also expects a fresh

wave of partnerships and re-bundling to occur as investors accelerate the integration of ESG risks and advanced analytics into their investment decision-making. ESG data aggregators/scorers and providers of analytics tools are now sourcing significantly more data from Non-Financial Reporting Directive (NFRD) filings and multiple external sources that include non-governmental organizations (NGOs), news outlets, social media channels, screen-scraping and other 'alternative data' sources.

Although the standardization of frameworks and regulations is still in its early stages, there is some progress in global unification. In 2020/2021, five leading framework and standards-setting organizations – CDP, CDSB, GRI, IIRC and SASB¹ – published a joint/shared set of reporting elements for ESG. In January 2022, the CDSB then consolidated into the International Financial Reporting Standards (IFRS) Foundation as the International Sustainability Standards Board (ISSB). While quantifiable ESG data is still at an early stage in its development, pressure from investors and regulators continues to accelerate momentum in standardization and the consolidation of frameworks.

Demand-side takeaways

Why ESG matters for investment managers

The measurement of risk and performance (risk performance) is the mainstay of all investing: it is essential that investors mitigate market, credit, liquidity and operational risk. In this context, ESG risk is relevant in two ways: it affects both the potential physical risk of the asset and the financial risk of the asset's cash flow.

When firms evaluate investment assets and portfolios, they must now view ESG risks as no different from other risks, and mitigating them has become one of the main goals of portfolio risk analytics. The actual incorporation of ESG scores and measures, however, remains at a very early stage.

¹ Climate Disclosure Project, Climate Disclosure Standards Board, Global Reporting Initiative, International Integrated Reporting Council, Sustainability Accounting Standards Board.

The current state of ESG data

Mapping the ESG data landscape

At a basic level, ESG data is being aggregated and analyzed by companies to support investment decision-making. As such, ESG data must serve a wide variety of end users, use cases (such as regulatory or voluntary requirements) and investment strategies. Unsurprisingly, the datasets needed to cover the full range of ESG risks are broad, and no single firm has a complete offering at present.

The ESG data landscape can be segmented as follows:

- **By asset class.** Historically, vendors in the market have specialized in providing services around a given asset class (usually either equities or fixed income) and have sourced data from partners for asset classes outside their specialty. While the primary ESG asset classes are equities and fixed income, ESG data on such physical assets as commodities and real-estate investments is still relatively sparse, and ESG ratings on digital assets are non-existent. ESG derivatives are in the early stages of being traded, and are being used primarily for hedging overlays and ESG exposure.
- **Public or private.** Data on publicly owned companies comes from several sources, primarily NFRD and corporate reports. Private company data is harder to obtain, although private companies are responding to requests for disclosure (RFDs) to satisfy the investment mandate criteria of asset owners and managers. Additional sources include NGOs, news outlets and sensor information.
- **ESG risk dimension.** While many data sources cover a full spectrum of ESG risk factors, ratings providers take different approaches to the factors they include and measure within the ESG remit. Furthermore, certain boutique data providers are offering specialized products around particular ESG risks that could be used to augment scoring.

The core market data vendors have aggressively acquired the leading providers of ESG equities data, leaving other niche vendors to compete for market share. Credit analysis firms and providers of fundamental financial data have also entered the ESG data aggregation and scoring market: they

already evaluate and produce credit scores and can extend their in-depth research and analysis to ESG. Credit data firms can also address the twin risks of ESG by combining ESG risk data and findings with credit analysis.

Supply-side takeaways

The three main paradigms of ESG data provision

ESG data providers can be segmented by the operating models they use to construct their datasets:

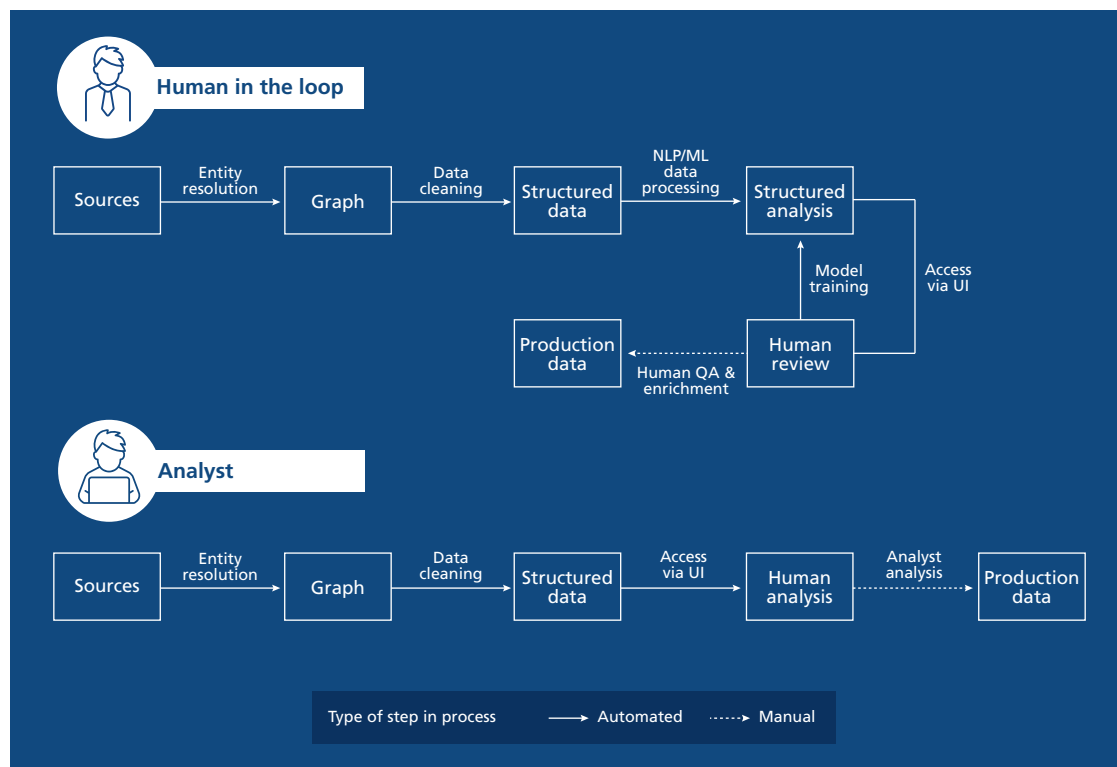
- **Analyst-first with scores.** These firms employ highly trained professionals with the skills to perform both fundamental and quantitative ESG analysis on assets and entities. Firms may use technical mechanisms to source and clean data, but the ESG analysis is based on fundamental information.
- **Analytically and quantitatively driven.** These firms leverage primarily quantitative frameworks (including finely tuned yet generalized models) to produce more objective ESG analyses that can be reproduced more often.
- **'Human-in-the-loop'**. These firms integrate the best of human and AI models by training machine learning models with human supervision, employing analysts to augment the lower-level work done by AI.

Analyst-driven ESG ratings emerged from traditional approaches to equity research and credit ratings. ESG data firms initially hired and trained analysts to look at non-financial risk and opportunities in much the same way that non-ESG financial data vendors approached the analysis of stocks and bonds.

In recent years, however, new entrants have shifted to a more automation-driven approach. These vendors have fallen into two camps: those that employ 'pure' AI² data models, and those that have some kind of human involvement in the process (see Figure 1). At present, Chartis regards the human-in-the-loop approach to be more viable, compared with that adopted by pure-play AI data vendors. Relatively few data vendors are attempting a fully automated approach at present, and their product development is still at a relatively early stage.

² Which Chartis defines as the processing of structured and unstructured data using intelligent automation.

Figure 1: Workflows for analyst vs. 'human-in-the-loop' data collection and analysis



Source: Chartis Research

Broader competition so far is between the analyst-driven firms – which are seen as providing deeper insight – and the human-in-the-loop vendors, which can enable more reproducible and consistent ESG analysis. In this evolving market, however, the analyst and automation-first approaches are converging, as analyst firms build out their internal tools and automation-driven vendors bulk up their analyst operations as they increase their revenue and tackle new datasets. There has already been some consolidation in the market between traditional and automation-driven data vendors, but it is too early to determine how this will affect ongoing market dynamics.

ESG data: the competitive landscape

The current vendor landscape for ESG data contains many established vendors that have expanded from their core position in distributing market or credit data to extend these datasets to cover ESG requirements. These established providers were well-positioned to enter the ESG business because of their highly trusted and diversified solution sets, well-established data collection and distribution processes, and large departments of analysts.

In addition, since many of these suppliers already distribute primary market data, they are also extending that facility to cover ESG data. This benefits clients who want to incorporate data for their own ESG scoring and modeling requirements.

2. Quadrant context

Introducing the Chartis RiskTech Quadrant®

This section of the report contains:

- The Chartis RiskTech Quadrant for ESG data aggregators and scorers, 2022.
- An examination of Dun & Bradstreet's positioning and its scores as part of Chartis' analysis.
- A consideration of how the quadrant reflects the broader vendor landscape.

Summary information

What does the Chartis quadrant show?

The RiskTech Quadrant uses a comprehensive methodology that involves in-depth independent research and a clear scoring system to explain which technology solutions meet an organization's needs. The RiskTech Quadrant does not simply describe one technology option as the best ESG data aggregation solution; rather it has a sophisticated ranking methodology to explain which solutions are best for specific buyers, depending on their implementation strategies.

The RiskTech Quadrant is a proprietary methodology, developed specifically for the risk technology marketplace, to assess vendors' product, technology and organizational capabilities. Section 4 of this report sets out the generic methodology and criteria used for the RiskTech Quadrant.

How are quadrants used by technology buyers?

Chartis' RiskTech and FinTech quadrants provide a view of the vendor landscape in a specific area of risk, financial and/or regulatory technology. We monitor the market to identify the strengths and weaknesses of different solutions and track the post-sales performance of companies selling and implementing these systems. Users and buyers can consult the quadrants as part of their wider research when considering the most appropriate solution for their needs.

Note, however, that Chartis Research does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Chartis

Research's publications consist of the opinions of its research analysts and should not be construed as statements of fact.

How are quadrants used by technology vendors?

Technology vendors can use Chartis' quadrants to achieve several goals:

- Gain an independent analysis and view of the provider landscape in a specific area of risk, financial and/or regulatory technology.
- Assess their capabilities and market positioning against their competitors and other players.
- Enhance their positioning with actual and potential clients and develop their go-to-market strategies.

In addition, Chartis' Vendor Analysis reports, like this one, offer insight into specific vendors and their capabilities, with further analysis of their quadrant positioning and scoring.

Chartis Research RiskTech Quadrant for ESG data aggregators and scorers, 2022

Figure 2 illustrates Chartis' view of the ESG data aggregator and scorer landscape, highlighting Dun & Bradstreet's position.

Quadrant dynamics

General quadrant takeaways

It may be highly competitive, but the vendor landscape for ESG data aggregators and scorers remains concentrated in the hands of a number of financial information conglomerates. Significant acquisition activity recently has led these conglomerates to snap up all the leading independent ESG data providers and ratings agencies. The mid-sized ESG vendors that remain tend to offer best-of-breed or enterprise solution offerings (they either offer a few capabilities to address a generalized pain point or serve a narrower set of customers with a more holistic solution).

Leading vendors offer relatively similar capabilities, and compete primarily on the rigorousness of their core offerings, and by augmenting these with assorted vertical ESG risk or tech-heavy products to

Figure 2: RiskTech Quadrant for ESG data aggregators and scorers, 2022



Source: Chartis Research

support differentiated ESG investment strategies. Given the urgency of climate risk, category leaders tend to have best-in-class capabilities around environmental risk, including coverage of Scope 1, 2 and 3 emissions, as well as quantification of physical and transition risks in a manner that can be used by investment managers. Attention is also given to the breadth of the investment universe particular vendors cover, and their capacity to support firms' requirements for addressing impact and regulatory alignment – capabilities increasingly required by the compliance function in investment managers.

Vendor positioning in context – completeness of offering

Dun & Bradstreet is a leading provider of public and private company data across financial, risk and other use cases, and covers hundreds of

millions of organizations globally. It is the first firm to attempt to develop a private-company ESG rating at scale and currently covers more corporate entities than any other ESG data provider.

In Chartis' report analyzing ESG data aggregators and scorers, vendors were evaluated according to how they supply data across a broad range of asset classes across public and private markets. In this context, Dun & Bradstreet's offering was classed as 'best of breed' in Chartis' analysis. The company does offer some public-company ESG data and can benefit public-equity ESG investors by empowering them to dissect the supply chains of their public-market ESG investments more effectively. Because a great deal of ESG risk sits in the supply chain – in areas such as climate, waste, biodiversity, human rights and corruption – Chartis believes that Dun & Bradstreet's data collection and management

Table 1: Completeness of offering – Dun & Bradstreet (ESG data aggregators and scorers, 2022)

Completeness of offering criterion	Coverage
ESG data services: breadth, scale, coverage, completeness	Medium/High
Roadmap of ESG data services	Medium/High
ESG scoring model: methodology and coverage	High
Roadmap of ESG scoring model	Medium/High
ESG analytical, construction and rebalancing portfolio tools	Medium/High
Roadmap of ESG analytical, construction and rebalancing portfolio tools	Medium/High
Technical architecture and infrastructure	Medium/High

Source: Chartis Research

capabilities will enable it to become a powerhouse in the ESG sector as deeper integration of supply-chain-related and private-market ESG analysis begins to become established.

Dun & Bradstreet uses an automated yet rigorous and transparent methodology to generate public and private-company ESG ratings, based on its extensive collection of company information. With unique insights into private companies' operations and procurement activities, Dun & Bradstreet has historically been well-positioned to credit-score private companies. Given the convergence of ESG risk with counterparty risk processes, Dun & Bradstreet is also a versatile provider for firms looking to adopt an all-in-one solution for public and private market ESG investing, and for counterparty ESG risk management.

Table 1 shows Chartis' rankings for Dun & Bradstreet's coverage against each of the completeness of offering criteria.

Vendor positioning in context – market potential

As a leading source of company intelligence across a wide variety of use cases, Dun & Bradstreet is well-positioned to capture significant market share for its ESG data.

The company is known for providing operations and credit-oriented data products, rather than explicitly targeting private-market investors (although the product can be leveraged in that way). In the public markets, providers of ESG data are also major providers of financial information, and Dun & Bradstreet also has an extensive set of financials on public and private companies.

Private-market investors are referring to specialized data and research products to support their investment research and target selection. However, few of these firms have integrated ESG ratings into their solutions. Dun & Bradstreet is well-positioned to capitalize on emerging pathways for ESG data integration in public and private markets, both as a direct vendor for investors and as an embedded partner within the various private-market data and research portals.

As ESG data starts to converge with third-party risk management use cases, Chartis anticipates that Dun & Bradstreet may see significant adoption of its solution because of the vast quantities of corporate ESG data it can provide, alongside intelligence signals and decisioning tools that can power onboarding and risk management across the third-party lifecycle.

Table 2 shows Chartis' rankings for Dun & Bradstreet's coverage against each of the market potential criteria.

Table 2: Market potential – Dun & Bradstreet (ESG data aggregators and scorers, 2022)

Market potential criterion	Coverage
Client growth	High
Market strategy	Medium
Growth strategy	High
Business model	High
Financials	High

Source: Chartis Research

3. Vendor context

Overview of relevant solutions/capabilities

Dun & Bradstreet (publicly traded on the New York Stock Exchange [NYSE: DNB]) is a global provider of business to business (B2B) data, insights and AI-driven platforms, and has been serving companies of all sizes since 1841. The Dun & Bradstreet Data Cloud provides solutions and insights to help customers grow their revenue, increase their margins, manage risk and stay compliant.

Table 3 provides a summary of the vendor and its solutions.

Corporate supply chains are bigger and more widespread than ever. With open markets enabling materials and production to be sourced across the globe, companies now rely on thousands of third parties to help them generate their bottom line. Doing business with a large portfolio of third parties comes with new levels of emerging risks, many of which are increasingly difficult to understand and visualize.

ESG risks are among those that have become difficult to pinpoint — and are more prevalent now than ever. Inconsistencies in data and a lack of standardization have created a challenge for firms attempting to proactively harness ESG insights to mitigate risk and generate competitive benefits.

Procurement and compliance professionals are under pressure to incorporate ESG criteria into their third-party assessment policies and due diligence processes to meet regulatory requirements and minimize risk.

D&B ESG Intelligence is a trusted source of ESG rankings, enabling firms to:

- **Incorporate ESG into due diligence.** Firms can use intelligent ESG data to efficiently assess suppliers for ESG risk throughout their procurement and supply chain processes, from onboarding to ongoing risk monitoring.
- **Measure and report on ESG.** The solution helps firms to comply with ESG disclosure and reporting requirements. It also enables them to understand the indirect impacts on the supply chain, such as emerging and previously unknown supply-chain risks.
- **Identify and map ESG risks in the supply chain.** Firms can maintain ESG performance visibility throughout the supply chain and mitigate ESG-related reputational, regulatory and physical risks associated with suppliers.
- **Actively monitor ESG risks and engage suppliers.** Firms can effectively monitor the ESG risks in their supplier portfolio and conduct routine audits easily. Dun & Bradstreet's ESG data is refreshed often to provide up-to-date

Table 3: Dun & Bradstreet – company information

Company	Dun & Bradstreet
Headquarters	Jacksonville, FL
Other offices	55 locations, including Center Valley, Pennsylvania; Austin, Texas; Paddington, England and Dublin, Ireland
Description	Dun & Bradstreet is a global provider of B2B data, insights and AI-driven platforms, helping its clients to take intelligent actions to help them compete and grow.
Solution	Dun & Bradstreet's ESG Intelligence capability delivers data and analytics built on the Dun & Bradstreet Data Cloud and established sustainability standards. Its aim to help companies quantify and assess the impact of their business partners' sustainability rankings on their performance. This trusted source of ESG data enables compliance and procurement teams to generate insights that help strengthen their ESG goals and policies and streamline their ESG assessment processes.

Source: Dun & Bradstreet

insights, so teams can mitigate risk proactively. Firms can also regularly identify increases in specific ESG risk areas that they should engage with suppliers about.

Building resilient business relationships

D&B ESG Intelligence is a tool to enable firms to identify ESG risks and understand key data to help them mitigate risks effectively. D&B ESG Intelligence can help firms acquire the data to:

- Evaluate ESG risks when onboarding new third parties and suppliers.
- Track and evaluate specific ESG issues for select suppliers.
- Anticipate possible supply-chain disruptions using company-level ESG Rankings insight.
- Develop materiality assessments to uncover the highest impact issues for the business and its stakeholders.

The supply chain ESG data challenge contains several elements:

- Lack of transparency, visibility and traceability.
- Lack of ESG data quality and credibility.
- Lack of robust ESG data collection, analysis and reporting infrastructure.

D&B ESG Intelligence helps teams to address the challenges involved in implementing ESG assessment throughout the procurement process. With robust coverage of private and public entities around the globe and rigorous processing and quality assurance, D&B ESG Rankings provide the transparency, data quality and reporting infrastructure procurement teams need to incubate future-ready supply chains.

The key benefits of D&B ESG Intelligence include:

- **Deep coverage.** Extensive coverage that includes business data coupled with public ESG-related information for millions of US private companies and all US public companies.
- **Standardized rankings.** ESG Rankings are based on leading sustainability frameworks, such as Global Reporting Initiative (GRI), UN Sustainable Development Goals (SDGs), Task Force on Climate-Related Financial Disclosures

(TCFD) and UN Principles for Responsible Investment (PRI).

- **Strategic metrics.** Insights on companies, including consistent outperformance for companies with good ESG Rankings.
- **Frequent updates.** Updated weekly and distributed monthly to provide the most up-to-date snapshots of companies.

Vendor leading practices

D&B ESG Intelligence: features and capabilities

Rankings built from top standards

Dun & Bradstreet's ESG rankings are structured around leading sustainability frameworks, such as:

- Carbon Disclosure Project (CDP).
- GRI.
- Sustainability Accounting Standards Board (SASB).
- TCFD.
- UN PRI.
- UN SDGs.

This standardized framework provides trusted and measurable insights to help firms benchmark against industry averages, develop goals to stimulate supply-chain performance, set ESG policies in onboarding evaluations, and compare their supplier's ESG Rankings against performance.

Deep data coverage

D&B ESG Intelligence provides extensive coverage that includes business data coupled with public ESG-related information for 38+ million global private and public companies.

Dun & Bradstreet's data is gathered from millions of verified and globally trusted sources to deliver granular ESG rankings that cover 31 specific topics spanning 13 ESG themes:

- Natural resources.
- Greenhouse gas (GHG) emissions and climate.

- Environmental risk.
- Environmental opportunities.
- Human capital.
- Product and service.
- Customer engagement.
- Community engagement.
- Supplier engagement.
- Certifications.
- Corporate governance.
- Corporate behaviors.
- Business sustainability.

This granular coverage, which is updated monthly allows firms to track and report on specific ESG factors that help increase their supply-chain resilience. Coverage includes:

ESG ratings built from top standards:

- CDP.
- GRI.
- SASB.
- TCFD.
- UN PRI.
- UN SDGs.

Granular ESG rankings:

- 31 ESG topic rankings.
- 13 ESG themes.

Data gathered from millions of sources:

- Financial filings.
- Sanctions and blacklists.
- Dun & Bradstreet data.
- News media.
- Regulatory agencies.

- Lists of excluded parties.
- Financial enforcement agencies.
- Non-governmental organization (NGO) databases.
- Certifications.

Deep data coverage:

- 38+ million public and private businesses across the globe.

D&B ESG Intelligence: when and where it is needed

Batch file delivery

D&B ESG Intelligence via batch file in CSV. Format updated on timescales of up to a month. These files can be uploaded into any existing system for analysis.

D&B Risk Analytics – Supplier Intelligence

D&B ESG Intelligence is the company's flagship supplier risk management solution, and enables firms to leverage intelligent automation tools, restricted party screening and modern visualizations for quick analysis. D&B Risk Analytics – Supplier Intelligence helps firms to incorporate ESG throughout the procurement process, from supplier selection and appraisals to ongoing monitoring of current suppliers. It does this by coupling ESG Rankings with industry-leading supplier risk, firmographic, beneficial ownership, financial, diversity and linkage data – all on one platform.

Direct+ API integration

D&B ESG Intelligence via application programming interface (API) integration is compatible with nearly all systems, and enables firms to easily refresh data on a monthly basis.

D&B Risk Essentials

D&B ESG Intelligence is a standalone platform with the modern visualizations and automated reporting found in the company's D&B Risk Analytics – Supplier Intelligence solution. D&B Risk Essentials couples ESG Rankings with firmographic and company data, giving firms an alternative way to leverage ESG Intelligence. Firms also have access to Dun & Bradstreet's future-ready capabilities for monitoring ESG risk, if they don't need a comprehensive supplier risk management solution.

4. Methodology

Overview

Chartis is a research and advisory firm that provides technology and business advice to the global financial services industry. Chartis provides independent market intelligence regarding market dynamics, regulatory trends, technology trends, best practices, competitive landscapes, market sizes, expenditure priorities, and mergers and acquisitions. Chartis' RiskTech® and FinTech™ quadrant reports are written by experienced analysts with hands-on experience of selecting, developing and implementing financial technology solutions for a variety of international companies in a range of industries, including banking, insurance and capital markets. The findings and analyses in our quadrant reports reflect our analysts' considered opinions, along with research into market trends, participants, expenditure patterns and best practices.

Chartis seeks to include RiskTech and FinTech vendors that have a significant presence in certain target markets. The significance may be due to market penetration (e.g., a large client base) or innovative solutions. Chartis uses a detailed 'vendor evaluation form' and briefing sessions to collect information about each vendor. If a vendor chooses not to respond to a Chartis request for information, Chartis may still include the vendor in the report. Should this happen, Chartis will base its opinion on direct data collated from technology buyers and users, and from publicly available sources.

Chartis' research clients include leading financial services firms and Fortune 500 companies, leading consulting firms and financial technology vendors. The vendors evaluated in our quadrant reports can be Chartis clients or firms with whom Chartis has no relationship.

Chartis evaluates all vendors using consistent and objective criteria, regardless of whether they are Chartis clients. Chartis does not give preference to its own clients and does not request compensation for inclusion in a quadrant report, nor can vendors influence Chartis' opinion.

Briefing process

We conduct face-to-face and/or web-based briefings with each vendor.³ During these sessions, Chartis experts ask in-depth, challenging questions to

establish the real strengths and weaknesses of each vendor. Vendors provide Chartis with:

- A business update – an overview of solution sales and client satisfaction.
- A product update – an overview of relevant solutions and R&D roadmaps.
- A product demonstration – key differentiators of their solutions relative to those of their competitors.

In addition to briefings, Chartis uses other third-party sources of data, such as conferences, academic and regulatory studies, and publicly available information.

Evaluation criteria

We develop specific evaluation criteria for each piece of quadrant research from a broad range of overarching criteria, outlined below. By using domain-specific criteria relevant to each individual risk, we can ensure transparency in our methodology and allow readers to fully appreciate the rationale for our analysis. The specific criteria used for ESG data aggregators and scorers, 2022 are shown in Table 4.

Completeness of offering

- **Depth of functionality.** The level of sophistication and number of detailed features in the software product (e.g., advanced risk models, detailed and flexible workflow, domain-specific content). Aspects assessed include innovative functionality, practical relevance of features, user-friendliness, flexibility and embedded intellectual property. High scores are given to firms that achieve an appropriate balance between sophistication and user-friendliness. In addition, functionality linking risk to performance is given a positive score.
- **Breadth of functionality.** The spectrum of requirements covered as part of an enterprise risk management system. This varies for each subject area, but special attention is given to functionality covering regulatory requirements, multiple risk classes, multiple asset classes, multiple business lines and multiple user types (e.g., risk analyst, business manager, CRO, CFO,

³ Note that vendors do not always respond to requests for briefings; they may also choose not to participate in the briefings for a particular report.

Table 4: Evaluation criteria for Chartis' ESG data aggregators and scorers, 2022 report

Completeness of offering	Market potential
<ul style="list-style-type: none"> • ESG data services: breadth, scale, coverage, completeness • Roadmap of ESG data services • ESG scoring model: methodology and coverage • Roadmap of ESG scoring model • ESG analytical, construction and rebalancing portfolio tools • Roadmap of ESG analytical, construction and rebalancing portfolio tools • Technical architecture and infrastructure 	<ul style="list-style-type: none"> • Client growth • Market strategy • Growth strategy • Business model • Financials

Source: Chartis Research

compliance officer). Functionality within risk management systems and integration between front-office (customer-facing) and middle/back office (compliance, supervisory and governance) risk management systems are also considered.

- **Data management and technology infrastructure.** The ability of risk management systems to interact with other systems and handle large volumes of data is considered very important. Data quality is often cited as a critical success factor and ease of data access, data integration, data storage and data movement capabilities are all important factors. Particular attention is given to the use of modern data management technologies, architectures and delivery methods relevant to risk management (e.g., in-memory databases, complex event processing, component-based architectures, cloud technology and Software as a Service). Performance, scalability, security and data governance are also important factors.
- **Risk analytics.** The computational power of the core system, the ability to analyze large amounts of complex data in a timely manner (where relevant in real time) and the ability to improve analytical performance are all important factors. Particular attention is given to the difference between 'risk' analytics and standard 'business' analytics. Risk analysis requires such capabilities as non-linear calculations, predictive modeling, simulations, scenario analysis, etc.
- **Reporting and presentation layer.** The ability to present information in a timely manner, the quality and flexibility of reporting tools, and ease

of use, are important for all risk management systems. Particular attention is given to the ability to do ad hoc, 'on-the-fly' queries (e.g., 'what-if' analysis), as well as to the range of 'out of the box' risk reports and dashboards.

Market potential

- **Business model.** Includes implementation and support and innovation (product, business model and organizational). Important factors include size and quality of implementation team, approach to software implementation, and post-sales support and training. Particular attention is given to 'rapid' implementation methodologies and 'packaged' services offerings. Also evaluated are new ideas, functionality and technologies to solve specific risk management problems. Speed to market, positioning and translation into incremental revenues are also important success factors in launching new products.
- **Market penetration.** Volume (i.e., number of customers) and value (i.e., average deal size) are considered important. Rates of growth relative to sector growth rates are also evaluated. Also covers brand awareness, reputation and the ability to leverage current market position to expand horizontally (with new offerings) or vertically (into new sectors).
- **Financials.** Revenue growth, profitability, sustainability and financial backing (e.g., the ratio of license to consulting revenues) are considered key to scalability of the business model for risk technology vendors.

- **Customer satisfaction.** Feedback from customers is evaluated, regarding after-sales support and service (e.g., training and ease of implementation), value for money (e.g., price to functionality ratio) and product updates (e.g., speed and process for keeping up to date with regulatory changes).
- **Growth strategy.** Recent performance is evaluated, including financial performance, new product releases, quantity and quality of contract wins, and market expansion moves. Also considered are the size and quality of the sales force, sales distribution channels, global presence, focus on risk management, messaging and positioning. Finally, business insight and understanding, new thinking, formulation and execution of best practices, and intellectual rigor are considered important.

Quadrant construction process

Chartis constructs its quadrants after assigning scores to vendors for each component of the Completeness of Offering and Market Potential criteria. By aggregating these values, we produce total scores for each vendor on both axes, which are used to place the vendor on the quadrant.

Definition of quadrant boxes

Chartis' quadrant reports do not simply describe one technology option as the best solution in a particular area. Our ranking methodology is designed to highlight which solutions are best for specific buyers, depending on the technology they need and the implementation strategy they plan to adopt. Vendors that appear in each quadrant have characteristics and strengths that make them especially suited to that particular category and, by extension, to particular users' needs.

Point solutions

- Point solutions providers focus on a small number of component technology capabilities, meeting a critical need in the risk technology market by solving specific risk management problems with domain-specific software applications and technologies.
- They are often strong engines for innovation, as their deep focus on a relatively narrow area generates thought leadership and intellectual capital.
- By growing their enterprise functionality and utilizing integrated data management, analytics and business

intelligence capabilities, vendors in the point solutions category can expand their completeness of offering, market potential and market share.

Best-of-breed

- Best-of-breed providers have best-in-class point solutions and the ability to capture significant market share in their chosen markets.
- They are often distinguished by a growing client base, superior sales and marketing execution, and a clear strategy for sustainable, profitable growth. High performers also have a demonstrable track record of R&D investment, together with specific product or 'go-to-market' capabilities needed to deliver a competitive advantage.
- Because of their focused functionality, best-of-breed solutions will often be packaged together as part of a comprehensive enterprise risk technology architecture, co-existing with other solutions.

Enterprise solutions

- Enterprise solution providers typically offer risk management technology platforms, combining functionally rich risk applications with comprehensive data management, analytics and business intelligence.
- A key differentiator in this category is the openness and flexibility of the technology architecture and a 'toolkit' approach to risk analytics and reporting, which attracts larger clients.
- Enterprise solutions are typically supported with comprehensive infrastructure and service capabilities and best-in-class technology delivery. They also combine risk management content, data and software to provide an integrated 'one stop shop' for buyers.

Category leaders

- Category leaders combine depth and breadth of functionality, technology and content with the required organizational characteristics to capture significant share in their market.
- They demonstrate a clear strategy for sustainable, profitable growth, matched with best-in-class solutions and the range and diversity of offerings, sector coverage and financial strength to absorb demand volatility in specific industry sectors or geographic regions.
- They typically benefit from strong brand awareness, a global reach and strong alliance strategies with leading consulting firms and systems integrators.

5. How to use research and services from Chartis

In addition to our industry reports, Chartis offers customized information and consulting services. Our in-depth knowledge of the risk technology market and best practices allows us to provide high-quality and cost-effective advice to our clients. If you found this report informative and useful, you may be interested in the following services from Chartis.

Advisory services

Advisory services and tailored research provide a powerful way for Chartis clients to leverage our independent thinking to create and enhance their market positioning in critical areas.

Our offering is grounded in our market-leading research, which focuses on the industry and regulatory issues and drivers, critical risk technologies and leading market practices impacting our sector. We use our deep insight and expertise to provide our clients with targeted market and industry analysis, tailoring content to assess the impact and potential of relevant regulatory and business issues, and highlighting potential solutions and approaches.

Chartis' advisory services include:

Market dynamics

The markets that our clients – vendors, institutions and consultants – address are changing at an ever-increasing pace. Understanding the market dynamics is a critical component of success, and Chartis uses its deep industry and technical knowledge to provide customized analysis of the specific issues and concerns our clients are facing.

Market positioning

In today's highly competitive market, it is no longer enough simply to have a leading product or solution. Buyers must be able to appreciate the differentiating capabilities of your brand and solutions, and understand your ability to help them solve their issues.

Working with our clients, we generate compelling, independent co-branded research, targeting critical business issues. This helps our clients to position their solutions effectively, 'own' key issues and stand out from the crowd.

Collaborating closely with our clients, we develop pragmatic, resonant thought-leadership papers with immediate industry relevance and impact.

Our offerings include:

- **Co-branded research** on key market topics to provide a unique and compelling point of view that addresses a key industry driver and highlights the relevant issues. Reports can be tailored to varying levels of depth and can be powered by quantitative survey fieldwork, qualitative industry interviews, our deep domain expertise or a blend of all three.
- **Chairing roundtables and/or facilitating events and workshops** to support clients in hosting compelling events that put them at the heart of the discussion.
- **Targeted marketing through our sister brands**, leveraging the power of our parent group – Infopro Digital – to reach across leading brands such as Risk.net, WatersTechnology, FX Week and Central Banking.

Competitor analysis

Our unique focus on risk technology gives us unrivalled knowledge of the institutions and vendors in the sector, as well as those looking to enter it. Through our industry experts, Chartis clients can tap our insights to gain a much deeper understanding of their competitors and the strategies they should pursue to better position themselves for success.

Regulatory impact analysis

The analysis and assessment of regulatory change and implementation is one of Chartis' core strengths. We can apply our insights to assess the impact of change on the market – either as it applies to vendors and the institutions they serve, or on a client's specific product and customer base. We can also provide insights to guide product strategy and associated go-to-market activities, which we can execute for internal use to drive our clients' strategy or as a co-branded positioning paper to raise market awareness and 'buzz' around a particular issue.

6. Further reading



ESG Data Aggregators and Scorers, 2022: Market and Vendor Landscape



ESG Investment Data and Analytics, 2022: Climate-Focused; Market and Vendor Landscape



Portfolio Management Platforms, 2021: Market and Vendor Landscape



Key Trends 2021: Buy-Side Q3/Q4 Review



Big Bets 2022



Buyside50 2022

For all these reports, see www.chartis-research.com