MSCI
ESG Research

Intangible Value Assessment (IVA) Methodology

September 2011

Contents

Overview

Intangible Value Assessment (IVA) measures and analyzes companies' risk and opportunities arising from environmental, social, and governance issues.

IVA research seeks to answer three key questions:

1. What are the key ESG risks and opportunities in each industry?
2. Do companies have risk management strategies commensurate with the risks they face?
3. Do companies have strategies to capture potential opportunities in the ESG space?

IVA research focuses on the key ESG issues affecting each industry. Please see Appendix 1 for the IVA list of industries. Where an ESG issue does not apply to an industry, it is not analyzed for those industries. For example, water scarcity could constrain future production in a number of industries (e.g. Steel, Utilities) but is not relevant for many other industries (e.g. Professional Services, Banks). Industry-specific key issues are selected from pool of key issues below:

Environment	Social	Governance
Carbon Emissions	Labor - Operational	Corruption & Instability
Upstream Carbon Emissions	Human Capital Development	Financial System Instability
Energy Efficiency	Health and Safety	Other Ethics Issues
Insuring Climate Change Risk	Labor - Supply Chain	
Water Stress	Raw Material Sourcing - Social	
Biodiversity and Land Use	Product and Service Quality	
Raw Material Sourcing - Environmental	Product Safety - Chemicals	
Financing Environmental Impact	Product Safety - Financial	
Toxic Releases	Privacy and Data Security	
Packaging Material and Waste	Responsible Investing	
E-Waste	Insuring Health and Demographic Risk	
Opportunities in Environmental Technologies	Opportunities in Health and Nutrition	
Opportunities in Green Building	Access to Communications	
Opportunities in Renewable Energy	Access to Finance	
	Access to Healthcare	

Please see Appendix 2 for selected metrics used to analyze each of the above key issues.

The IVA product comprises company profiles, ratings, scores, and industry reports.

IVA ratings and profiles are designed to complement conventional analysis of companies' financial performance, by providing an additional perspective based on sustainability factors. They attempt to gauge a company's positive or negative impact on the world, as well as the company's risk of internalizing that impact.

When used in conjunction with conventional financial analysis and valuation methods, IVA allows clients to find hidden value in several ways:

- Screen portfolios and trades for emerging and overlooked risks;
- Due diligence for transactions;
- Ensure compliance with socially responsible investment mandates;
- Determine opportunities for positive engagement with management, further supported by our Proxy Research, Voting and Governance Exchange services;
- Generate investment ideas based on top and bottom ratings and subscores

Coverage

The IVA coverage universe currently comprises the following:

- Top 1,500 companies of the MSCI World Index (expanding to the full MSCI World Index over the course of 2011)
- Top 25 companies of the MSCI Emerging Markets Index (expanding to the top 200 companies by market cap of the MSCI Emerging Markets Index by July, 2012)
- Top 275 companies by market cap of the FTSE 100 and the FTSE 250 excluding investment trusts
- ASX 200

Beginning Sept 23, 2011, companies deleted from the MSCI World Index will be removed from ESG Manager within one day of being dropped from the MSCI World Index.

Company ratings are updated on an annual cycle. However, company ratings can be re-evaluated mid-cycle if extra-ordinary events occur (see 'Ongoing Monitoring' on pg. 10).

Companies whose industry classification changes will be updated when its new industry peer group is due for an annual ratings review.

Analytical Process

The IVA company rating methodology can be summarized as follows:

1) In-Depth Industry Analysis – Determining the Key Issues

Our research process begins with an in-depth assessment of the competitive dynamics of the industry, with particular emphasis on the special risks and opportunities created by environmental and social factors. This is the point at which we identify the key issues for the industry, which are chosen from an ongoing list maintained by the research team. For a list of key issues, please refer to Appendix 2.

A key ESG issue is defined as an environmental and/or social externality that has the potential to become internalized by the industry or the company through one or more of the following triggers:

1. Pending or proposed regulation
2. A potential supply constraint
3. A notable shift in demand
4. A major strategic response by an established competitor
5. Growing public awareness or concern

Through industry research and expertise, analysts select up to five key issues with the greatest potential of having a material impact on the core business of companies in the industry. Typically, analysts focus on the extent to which an industry's core business activities rely on or exert an impact on specific environmental and social resources. They then assess the extent to which "triggers" as identified above could in the medium to long term alter the cost structure or revenue stream of companies in the industry. Generally, key issues are selected only if most companies in an industry face at least moderate risk exposure, as measured by the risk exposure metrics in our key issues models (please refer to Appendix 2 for more details on the risk exposure that each key issue aims to address).

Once up to five key issues have been selected, analysts work with sector team leaders to make any necessary adjustments to the weightings in the model. Each key issue typically comprises 10-30% of the total IVA rating. The weightings take into account both the contribution of the industry, relative to all other industries, to the negative or positive impact on environment or society; and the timeline within which we expect that financial risk or opportunity for companies in the industry would be expected to materialize, as illustrated conceptually below.

		Expected Time frame for Risk/Opportunity to Materialize	
		Short-Term (<2 years)	**Long-Term** (5+ years)
Level of Contribution to Environmental or Social Impact	Industry is **major** contributor to impact	Highest Weight	
	Industry is **minor** contributor to impact		Lowest Weight

The final set of key issues and accompanying weights must be approved by the sector team leader and the Ratings Review Committee, comprised of the leadership of MSCI ESG Research, before the research process progresses.

'Company-Specific' Key Issue

In some cases, a company may face an environmental, social, or governance issue with potential material impact that is not shared by other companies in its industry. This is sometimes the case, for example, when a company operates a number of different business segments, or the company faces unique risks in a particular market. In these cases, the company is analyzed on that key issue. Analysis of the 'company-specific' key issue contributes to the company's overall rating but does not contribute to the ratings of industry peers that are not materially impacted by that particular key issue.

The 'company-specific' key issue is an addition to the industry key issues. For example, the ratings of industry peers will be based on the three key issues that have the most material impact on companies in the industry. For the company with the additional 'company-specific' key issue, its ratings will be based on the three industry key issues, plus the 'company-specific' key issue, or four key issues total. In cases where the industry already has five key issues – the maximum in the IVA ratings model, addition of the 'company-specific' key issue will require that the industry key issue with the least material impact on the company be dropped in the rating for the company. Hence, in this case, all industry peers' ratings will be determined by five key issues; but for the company in question, its five key issues include only four that are common to the industry peers, plus one that is specific to the company.

All additions of 'company-specific' key issues are escalated to the ESG Ratings Review Committee (see 'Reality Check', pg. 5), which decides whether addition of a 'company-specific' key issue is merited.

2) Collection of Company Data on Key Issues

On each key issue, the analyst collects a wide range of data to address the question: "To what extent is risk management commensurate with risk exposure?"

We measure the level of risk exposure each company faces by combining company-specific data on company's operations with macro-level data relevant to each key issue. In assessing risk management capabilities, we obtain information from the following sources:

- **Corporate documents**: annual reports, environmental and social reports, securities filings, websites, and Carbon Disclosure Project responses.
- **Government data**: central bank data, U.S. Toxic Release Inventory, Comprehensive Environmental Response and Liability Information System (CERCLIS), RCRA Hazardous Waste Data Management System, etc. We continue to assess the value of other, similar information sources, particularly for European companies.
- **Popular, trade, and academic journals**: accessed through websites, subscriptions, and searches of online databases such as Factiva or Nexis.
- **Relevant organizations and professionals**: reports from and interviews with trade groups, industry experts, and nongovernmental organizations familiar with the companies' operations and any related controversies.

Data sources specific to each key issue can be found in Appendix 2.

3) Company Interview

For the most part, analysts use publicly disclosed data as inputs to IVA analysis. On an as-needed basis, our analysts contact company management following the preliminary company research and analysis to request specific data that is missing for our analysis. When non-publicly-disclosed data is used in our analysis, analysts will explicitly identify the use of this data in the company profiles. While much of the publicly disclosed data that companies provide are not audited or legally binding, we feel that companies aim to meet a 'higher bar' for verification for when it chooses to publicly disclosed data than when it chooses to disclose selective data informally to research analysts.

In contacting companies, analysts routinely disclose to management the industry key issues on which the company is being assessed. Upon request, companies are permitted to view a text-only draft of their profile for fact-checking purposes.

Typically, analysts engage in discussions with companies only during the annual ratings review cycle. While some companies proactively reach out to analysts, we believe that limiting contact with companies to data requests during the annual review period preserve analysts' objectivity in benchmarking companies' performance relative to peers.

4) Analysis and Rating

Once the data gathering process is completed, the analyst scores each company on each key issue. The scores evaluate the companies' relative risk exposure and management performance as compared to best practice for the industry. For each score, 0 is defined as worst-in-class and 10 as best-in-class for industries on which the key issue is analyzed. The average for companies in a given industry may not be at or near five if there are clusters of companies near best or worst in class, however five represents a typical 'neutral' score.

Scoring Key Issue 'Metrics'

While the metrics used to score companies on each key issue are standardized across industries that face the same key issue, which facilitate comparisons across industries on each key issue, analysts often delve into industry-specific or regional-specific information in scoring the metrics in order to best capture the risks and opportunities facing companies in each industry. For example, under the Biodiversity & Land Use key issue, analysts on the Oil & Gas team and the Metals & Mining teams score their companies on the metric: "To what extent do companies minimize disturbances from operations?" In our Oil & Gas research, analysts collect data on the total barrel of oils spills and the intensity of the spills (barrels spilled per sales); they rank the results on oil spills which are then translated into 0-10 scores for this metric in the key issue model. In comparison, in our Metals & Mining research, analysts collect data on the hectares of land that companies reclaim per year versus the hectares of land that are disturbed for mining operations; the ratios are converted into 0-10 scores for this metric in the key issue model.

Additionally, a key component of the analytical process is to standardize the data that analysts collect in order to accurately score companies in the key issue models and benchmark companies' performance against peers. Our analysts collect historical data on health & safety rates, for example, which are often not comparable in terms of the units reported; further, there are often gaps in the historical data, and analysts may use their expertise to produce estimates in order to gauge a company's performance trend. Analyzing the "targets" that companies commit to on a key issue, such as targets on reducing water consumption in response to operational risks arising from Water Stress, is another example of where analysts often spend considerable time and effort in order to compare the aggressiveness of companies' commitments.

After analysts score companies on each key issue, they benchmark companies' performance on each key issue against their peers in the same industry, focusing on the key performance metrics for each key issue.

Final Rating

To arrive at a final letter rating, the weighted average of the key issue scores are aggregated and companies are ranked from best (AAA) to worst (CCC). These judgments on company performance are not absolute but are explicitly intended to be relative to the standards and performance of a company's industry peers. Please refer to Appendix 3 for how final ratings are calculated.

A file including the key issue scores and weights is available on ESG Manager. For clients receiving the legacy-Innovest 'subscores file,' the 29 static IVA subscores are organized under four pillars. See Appendix 4 for the full list of 29 subscores.

Company Profiles

Results of company analysis are discussed in more detailed in the company profiles. Each company profile covers the following:

- **Final Rating**: company's final rating, how it has changed from the previous year, and the key reasons for any rating change
- **Overall Performance on Key Issues**: How the company performs on each key issue overall, relative to its industry peers
- **Level of Risk Exposure on Each Key Issue**: An assessment of the company's level of risk exposure relative to peers, and the reasons for its higher or lower risk relative to peers, often based on its types of products/services, geographic locations of operation, other business characteristics (e.g. type of physical assets, size of workforce) relevant to risks associated with each key issue
- **Strength of Risk Management on Each Key Issue**: An assessment of the company's ability to manage its risks relative to peers, providing details on performance metrics where ever possible, but taking in account policies and commitments where performance metrics are not available
- **Other Risks or Opportunities**: Provides a brief summary and assessment of additional risks or opportunities not covered under the key issues

5) Reality Check

Upon completion, ratings and subscores are reviewed by the sector team lead and the company profiles are peer-edited. In the final step of the process, the analyst defends the final ratings to the ESG Rating Review Committee, which is comprised of the leadership of MSCI ESG Research. The Ratings Review Committee reviews the selection of key issues, assignment of weights, treatment of company-specific issues, rating changes and rating distribution before giving final approval.

Ratings Over-Rides

The Ratings Review Committee grants overrides of the final rating in the following cases:

- Red Flag in ESG Impact Monitor:

  Companies that receive a 'red flag' in MSCI Impact Monitor cannot receive a 'AAA' rating in IVA. In the rare case that the IVA model and analysis generate a 'AAA' rating for a company that, based on Impact Monitor research, has severely contravened international norms and standards of behavior, the rating will be over-ridden to a 'AA.'

- Red Flag in ISS Governance Risk Indicators (GRId):

  For companies published since August, 2011, companies that receive a 'red flag' in ISS Governance Risk Indicators (GRId) cannot receive a 'AAA' rating in IVA. In the rare case that the IVA model and analysis generate a 'AAA' rating for a company with poor governance practices along any of the four major categories assessed under ISS GRId – Board, Audit, Compensation/Remuneration, Shareholder Rights, the rating will be over-ridden to a 'AA.'

- 'AAA' and 'CCC':

Top and bottom ratings in an industry require additional scrutiny and justification to the Ratings Review Committee.

The Ratings Review Committee requires the following criteria to be met in order for companies to attain a 'CCC' rating; failing these criteria, a company's rating will be over-ridden to 'B':

- There is sufficient information on which to evaluate the companies' risks and opportunities with confidence. In the event that lack of company disclosure drives its low rating, the Ratings Review Committee will review the level of risk exposure facing the company and determine whether the lack of disclosure constitutes poor strategy and a major gap in company risk management.
- Company strategy and performance on the key issues constitutes worst in class. The company faces some serious ESG risks that it has failed to mitigate. In the rare event that the company's low rating is driven purely by comparison to a specific industry peer set, the RRC will review whether the worst-in-class rating is warranted based on the company's absolute performance on each key issue relative to companies in all other industries evaluated on the same key issue.

The Ratings Review Committee requires the following criteria to be met in order for companies to attain a 'AAA' rating; failing these criteria, a company's rating will be over-ridden to 'AA':

- There is sufficient information on which to evaluate the companies' risks and opportunities with confidence. In the event that the lack of controversies affecting a company drives its high rating relative to industry peers, the Ratings Review Committee will review whether the lack of controversy constitutes particularly strong strategy and management of the key issues facing the company.
- Company strategy and performance on the key issues constitutes best in class. The company shows some ability to manage ESG risks that is worth highlighting. In the rare event that the company's high rating is driven purely by comparison to a specific industry peer set, the RRC will review whether the best-in-class rating is warranted based on the company's absolute performance on each key issue relative to companies in all other industries evaluated on the same key issue.

6) Ongoing monitoring

Company ratings are updated on an annual cycle when all companies in its industry are reviewed. Between annual updates, a company's rating may be reviewed on an exceptional basis for the following reasons:

- The company is downgraded to a 'Red Flag' in ESG Impact Monitor.
- The company faces financial risks from involvement in an extraordinary 'ESG Event' with substantial negative social or environmental impact, including but not limited to contribution to large number of injuries, deaths, or imminent health/safety threats; and environmental damage requiring government intervention.

  A mid-cycle review is instigated and approved by the Ratings Review Committee, and could result in no ratings change; a change in the ratings due to adjustments on the company's performance score on one of the key issues evaluated for the company's rating; a change in the ratings based on the inclusion of a 'company-specific' key issue, if the 'ESG Event' is not covered as part of industry key issues in the company's rating; or a ratings over-ride, if the 'ESG Event' is of an extraordinary scope that cannot be adequately captured in a ratings model. Our mid-cycle review of Tokyo Electric Power Company in May, 2011 – whereby the company's rating was downgraded from a 'BB' to 'CCC' -- in response to the nuclear accident at Fukushima following a tsunami is an example of this last type of ratings over-ride.

The company changed industry classification, and its new industry peer set is due for annual review. In the event of an industry classification change before the company is up for annual review, we will re-rate that company when its new industry peer group is due for review, so that its performance can be benchmarked against its new industry peer group. At this time, we do not re-rate a company that has changed classification, including classification changes due to mergers and acquisitions, unless its new industry peer set is up for its annual review.

Appendix 1 – IVA Industries

The IVA rating is indicative of a company's ***relative*** performance compared to peers in a given industry. Therefore our methodology for determining industries has significant bearing on the final result.

IVA industries are defined by the GICS sub-industries, which we group to form reasonable peer sets wherein companies face relatively similar key ESG issues. As a result, each IVA industry is either a GICS sub-industry (8-digit level), a GICS industry (6-digit level), or a grouping of several GICS sub-industries. Companies are assigned to IVA industries based entirely on the company's GICS classification.

As of January 2011 the IVA industries were as follows: *(This list is subject to change, but clients will be notified in advance if there are any changes to the list of industries.)*

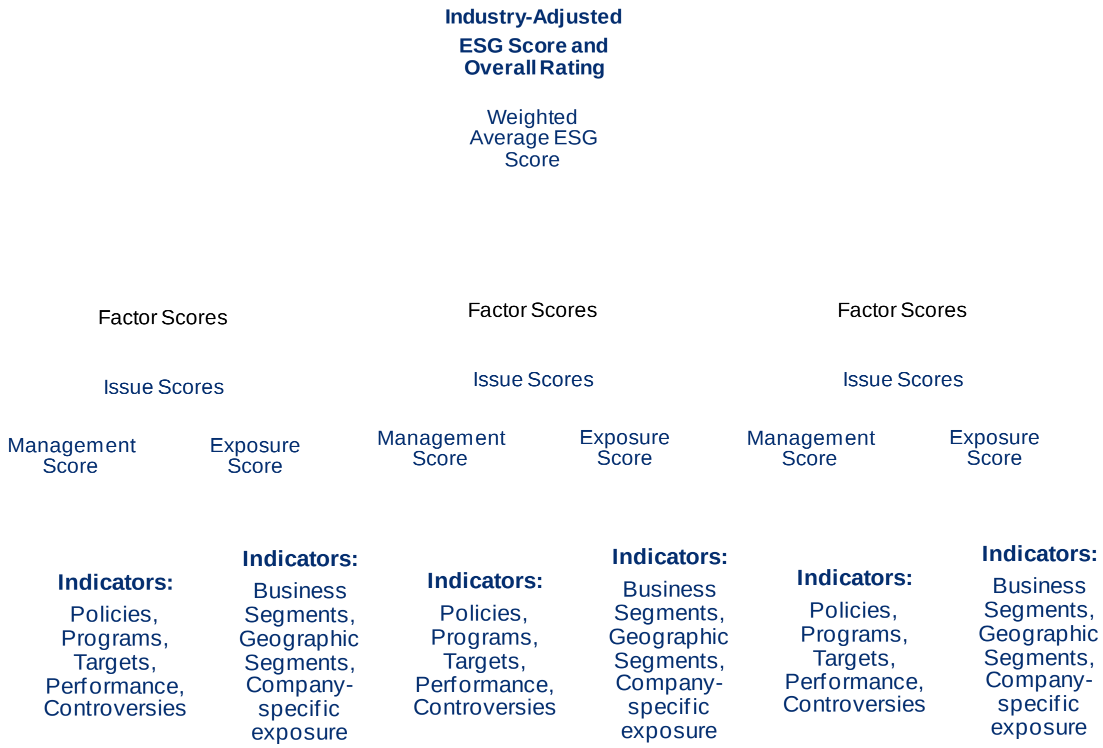
IVA Industry	GICS code(s)	GICS equivalent(s)
Consumer / Retail		
Advertising	25401010	Advertising
Apparel Retail	25504010	Apparel Retail
Auto Components	251010	Auto Components
Automobiles	251020	Automobiles
Broadcasting & Cable TV	25401020	Broadcasting
	25401025	Cable & Satellite
Casinos & Gaming	25301010	Casinos & Gaming
Diversified Consumer Services	253020	Diversified Consumer Services
Homebuilding	25201030	Homebuilding
Hotels & Travel	25301020	Hotels, Resorts & Cruise Lines
	25301030	Leisure Facilities
Household Durables	252010	Household Durables *(excluding Homebuilding - 25201030)*
Leisure Equipment & Products	252020	Leisure Equipment & Products
Movies & Entertainment	25401030	Movies & Entertainment
Publishing	25401040	Publishing
Restaurants	25301040	Restaurants
Retail - Asia Pacific Retail - Europe Retail - North America	255010 255020 255030 301010	Distributors Internet & Catalog Retail Multiline Retail Food & Staples Retailing
Specialty Retail	255040	Specialty Retail *(excluding Apparel Retail – 25504010)*
Textiles, Apparel & Luxury Goods	252030	Textiles, Apparel & Luxury Goods
Beverages	302010	Beverages
Food Products	302020	Food Products
Household & Personal Products	3030	Household & Personal Products
Tobacco	302030	Tobacco
Energy / Extractives / Materials		
Energy Equipment & Services	101010	Energy Equipment & Services
Integrated Oil & Gas	10102010	Integrated Oil & Gas
Oil & Gas Exploration & Production	10102020	Oil & Gas Exploration & Production
Oil & Gas Refining & Marketing	10102030	Oil & Gas Refining & Marketing
Commodity Chemicals	15101010	Commodity Chemicals
Construction Materials	151020	Construction Materials
Containers & Packaging	151030	Containers & Packaging
Diversified Chemicals	15101020	Diversified Chemicals
Metals and Mining - Non-precious metals	10102050	Coal & Consumable Fuels
	15104010	Aluminum
	15104020	Diversified Metals & Mining
Metals and Mining - Precious metals	15104030	Gold
	15104040	Precious Metals & Minerals
Paper & Forest Products	151050	Paper & Forest Products

Specialty Chemicals	15101030	Fertilizers & Agricultural Chemicals
	15101050	Specialty Chemicals
Steel	15104050	Steel
Electric Utilities - International	5510	Utilities
Electric Utilities - North America		
Gas Utilities	551020	Gas Utilities
	10102040	Oil & Gas Storage & Transportation (Gas only)
Multi-Utilities & Unregulated Power	551030	Multi-Utilities
	551050	Independent Power Producers & Energy Traders
Public Services	551040	Water Utilities
Financials		
Asset Management	40203010	Asset Management & Custody Banks
Banks - Asia Pacific	4010	Banks
Banks - Emerging Markets		
Banks - Europe		
Banks - North America		
Global Banks		
Consumer Finance	402020	Consumer Finance
Diversified Financials	402010	Diversified Financial Services
Investment Banking & Brokerage	40203020	Investment Banking & Brokerage
	40203030	Diversified Capital Markets
Life & Health Insurance	40301020	Life & Health Insurance
Multi-Line Insurance & Brokerage	40301010	Insurance Brokers
	40301030	Multi-line Insurance
	40301050	Reinsurance
Property & Casualty Insurance	40301040	Property & Casualty Insurance
Real Estate Management & Development	404030	Real Estate Management & Development
REITS - Asia Pacific	404020xx	Real Estate Investment Trusts
REITS - Europe		
REITS - North America		
Health Care		
Biotechnology	352010	Biotechnology
Health Care Equipment & Supplies	351010	Health Care Equipment & Supplies
	351030	Health Care Technology
	352030	Life Sciences Tools & Services
Health Care Providers & Services	351020	Health Care Providers & Services
Pharmaceuticals	352020	Pharmaceuticals
Industrials		
Aerospace & Defense	201010	Aerospace & Defense
Air Freight & Logistics	203010	Air Freight & Logistics
Airlines	203020	Airlines
Building Products	201020	Building Products
Commercial Services & Supplies	202010	Commercial Services & Supplies
Professional Services	20202010	Human Resource & Employment Services
	20202020	Research & Consulting Services
Construction & Engineering	201030	Construction & Engineering
Construction & Farm Machinery & Heavy Trucks	20106010	Construction & Farm Machinery & Heavy Trucks
Electrical Equipment	201040	Electrical Equipment
Industrial Conglomerates	201050	Industrial Conglomerates
Industrial Machinery	20106020	Industrial Machinery
Marine Transport	20303010	Marine
Road & Rail	203040	Road & Rail
Trading Companies & Distributors	201070	Trading Companies & Distributors
Transportation Infrastructure	203050	Transportation Infrastructure
Technology and Telecom		
Communications Equipment	45201020	Communications Equipment
Computers & Peripherals	452020	Computers & Peripherals
Electronic Equipment & Instruments	452030	Electronic Equipment, Instruments & Components
	45204010	Office Electronics
Semiconductor Equipment & Products	453010	Semiconductors & Semiconductor Equipment
Software and IT	4510	Software & Services

Integrated Telecommunication Services	501010	Diversified Telecommunication Services
Wireless Telecommunication Services	501020	Wireless Telecommunication Services

Appendix 2 – Key Issues

Our key issue rating model is built around approximately 30 key environmental, social, and governance issues from which we select up to five key issues for each industry that we have identified as having potential material impact on companies' financial performance. For each key issue, we have developed a model that includes standardized elements allowing companies across multiple industries to be evaluated on the same scales for issues they commonly face; at the same time, the models are flexible with regards to tailoring performance metrics to capture the industry-specific nature of companies' ESG risks and opportunities. These models yield scores on a zero to 10 scale, where 10 indicates best performance in managing risk or opportunity.



Evaluating Key Issues – Risks

Each key issue model comprises two components: risk exposure and risk management. This distinction allows the model to adjust the level of management required to achieve a given key issue score: companies facing higher risk exposure must have stronger management practices in place to mitigate their risks. Conversely, the model does not penalize companies with minimal management strategies if they face low or minimal exposure to the specific risk.

Our exposure metrics measure the extent to which companies' core business is at risk of incurring potential losses, based on one or more of the following characteristics: the types of products the company manufactures or sells, or types of services the company provides; the locations in which the company operates; characteristics of the physical assets the company operates; and other differentiating characteristics of the companies' business or structure relevant to each key issue, such as the extent to which companies' manufacturing is outsourced or the size of its workforce. Higher scores on exposure indicate greater risk on the key issue.

Our management indicators seek to evaluate the capacity of companies to address the risks they face. These indicators fall into several categories:

- Strategies & Policies [statements, policies]
- Targets & Implementation [systems, programs, quantitative targets]
- Demonstrated Performance [quantitative metrics; controversies, including litigation and fines, campaigns, accidents]

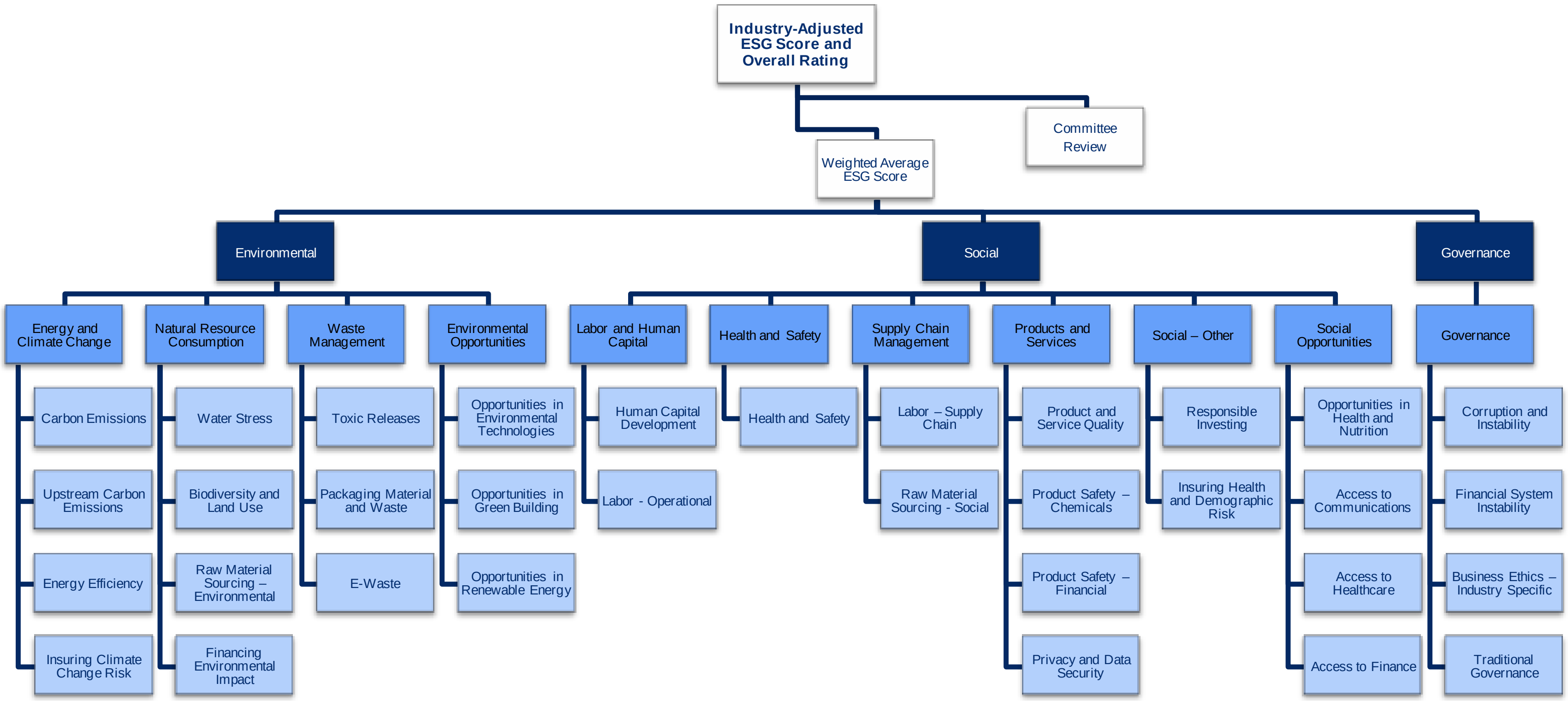
We do not explicitly score disclosure as a management indicator, but we also do not assume that policies and practices are in place unless the company makes a positive indication that that is the case. In instances where the lack of explicit policies signals lack of awareness or attention to a particular risk, companies receive the lowest scores on an indicator. For example, in the case of having a code of conduct for suppliers in our analysis of Labor – Supply Chain, we deem the lack of disclosure of an explicit policy to mean that the company does not have such a policy in place, raising the risks of poor labor standards in its supply chain that can lead to operational disruptions and reputational damage. In instances whereby a company does not disclose performance data, such that we are unable to benchmark its performance against industry peers, for benchmarking purposes, we assume the company is below industry average yet not worst-in-class. For example, in the case of SOx and NOx emissions in the Toxic Releases key issue model, we score companies that do not disclose their rates as below average. Our company profiles explicitly point out when company's lack of disclosure on specific key issues lead to uncertainty in assessing its performance relative to peers.

Evaluating Key Issues – Opportunities

In addition to **risks**, we also evaluate **opportunities** for companies in some industries to profit from mitigation of or adaptation to environmental and social challenges. Similar to risks, our evaluation of opportunities contains two components: opportunity exposure and opportunity management.

Opportunity exposure is determined primarily based on the extent to which opportunities exist for the product/service categories in which the company is involved. In some key issues, this 'business segment' or industry opportunity can be augmented by the geographic locations in which the company operates, for example if subsidies or other government incentives exist in some jurisdictions.

Assessment of management is focused on determining the extent to which a company has taken advantage of the size of opportunity facing the company. Hence, in the opportunities models, companies with the highest exposure to opportunities can score the full range of 0-10 on the key issue: those that do the least to capitalize on their strong opportunities can score as low as 0, while those that are taking full advantage of the strong opportunities can score as high as 10. For companies facing low exposure to opportunities, their scores are constrained such that even companies taking full advantage can only score a maximum of 7.5, while those doing the least cannot score lower than 2.5. The rationale for constraining these companies' scores is to conform with the reality that even the most innovative companies cannot win big when they operate in a market with few environmental and social profit opportunities. And companies doing nothing in the face of strong opportunities are likely to fall behind competitors more so than companies doing nothing in a market with weak opportunities.


Industry-Adjusted ESG Score and Overall Rating
Committee Review
Weighted Average ESG Score
Environmental
Social
Governance
Energy and Climate Change
Natural Resource Consumption
Waste Management
Environmental Opportunities
Labor and Human Capital
Health and Safety
Supply Chain Management
Products and Services
Social – Other
Social Opportunities
Governance
Carbon Emissions
Upstream Carbon Emissions
Energy Efficiency
Insuring Climate Change Risk
Water Stress
Biodiversity and Land Use
Raw Material Sourcing – Environmental
Financing Environmental Impact
Toxic Releases
Packaging Material and Waste
E-Waste
Opportunities in Environmental Technologies
Opportunities in Green Building
Opportunities in Renewable Energy
Human Capital Development
Labor - Operational
Health and Safety
Labor – Supply Chain
Raw Material Sourcing - Social
Product and Service Quality
Product Safety – Chemicals
Product Safety – Financial
Privacy and Data Security
Responsible Investing
Insuring Health and Demographic Risk
Opportunities in Health and Nutrition
Access to Communications
Access to Healthcare
Access to Finance
Corruption and Instability
Financial System Instability
Business Ethics – Industry Specific
Traditional Governance

Environmental Key Issues

Key Issue: Carbon Emissions

This key issue evaluates the extent to which companies face increased costs linked to carbon pricing or regulatory caps. Companies that proactively invest in low-carbon technologies and increase the carbon efficiency of their facilities or products score higher on this key issue. Companies that allow legal compliance to determine product strategy, focus exclusively on activities to influence policy setting, or rely heavily on exploiting differences in regulatory frameworks score lower.

Social or Environmental Impact	• Contribution to climate change
Risk/Opportunity to Company	• Increased costs linked to carbon pricing or trading • Facility retrofits • Potential operational disruptions related to regulatory caps
Exposure Metrics	• Extent to which companies emit GHG in jurisdictions where regulations on carbon emissions are stringent or becoming more stringent • Extent to which companies' main business activities are carbon-intensive
Management Metrics	Efforts to reduce exposure through comprehensive carbon policies and implementation mechanisms, including carbon reduction objectives, production process improvements, installation of depollution or emissions capture equipment, and/or switch to cleaner energy sources. • GHG emissions, • Total GHG emissions in metric tonnes of CO2-e • GHG intensity in metric tonnes of CO2-e • Carbon reduction targets • Track record of achieving carbon reduction targets • Strategy to mitigate GHG emissions o Change source of energy (e.g. buy/build cleaner, including using biogas for energy; divest/decommission dirtier) o Capture emissions (e.g. carbon capture and storage, enhanced oil recovery) o Improve equipment or processes to boost efficiency (e.g. more output per unit pollution, reduce leaks from equipment, scrub emissions, flare biogas without producing energy) o Reduce demand for further increases

Industry Groups Using Key Issue	• Energy • Materials • Industrials • Consumer Discretionary • Consumer Staples • Real Estate • Utilities
Data Sources	• Company disclosure and news searches • Carbon Disclosure Project (CDP) • Environment regulatory agencies (EPA, EEA)

Key Issue: Upstream Carbon Emissions

This key issue evaluates the extent to which companies are exposed to higher input or production costs for their carbon-intense products due to increased energy costs in a carbon-constrained world. Companies that measure and reduce carbon emissions of their products throughout the value chain and implement programs with their suppliers to reduce carbon footprint score higher on this key issue. Companies that fail to identify or evaluate the carbon footprint of their products or that lack programs to reduce carbon emissions throughout the supply chain and distribution score lower on this key issue.

Social or Environmental Impact	• Contribution to climate change
Risk/Opportunity to Company	• Increased costs from higher and more volatile energy prices upstream in the value chain (affecting raw materials, input, and distribution costs)
Exposure Metrics	• Extent to which companies' product portfolio consists of carbon-intensive products
Management Metrics	Efforts to reduce exposure through measurement and reduction of carbon emissions associated with raw materials production, product manufacturing, distribution and retail. • Does the company evaluate its products' carbon footprint? • Has the company assessed carbon impact or intensity of the following upstream stages? o Raw materials production o Manufacturing stages o Transportation and logistics o Store operations • Does the company track energy consumption and/or carbon emissions of its suppliers? • What are the company's targets on measuring upstream carbon emissions? • Does the company have carbon or energy reduction programs at the following stages? o Raw materials production o Manufacturing stages o Transportation and logistics o Store operations
Industry Groups Using Key Issue	• Consumer Discretionary • Consumer Staples

	• Information Technology
Data Sources	• Company disclosure and news searches • EIO-LCA • Stakeholder working groups (e.g., Textile Exchange, Sustainable Apparel Coalition)

Key Issue: Energy Efficiency

This key issue evaluates the extent to which companies are managing the risk of increased or volatile energy costs across their operations. Companies that take proactive steps to manage and improve the energy efficiency of their operations score higher on this benchmark, while companies highly exposed to energy-intensive business activities and ignore opportunities to improve energy efficiency or take a compliance-based approach to energy usage score lower.

Social or Environmental Impact

- Negative environmental impact of fossil fuels
- Depletion of non-renewable resources

Risk/Opportunity to Company

- Increases or volatility in energy costs
- Increased operational costs to meet energy use regulations

Exposure Metrics

- Extent to which companies' core business operations are highly energy intensive

Management Metrics

Efforts to reduce exposure through identification and implementation of energy efficient production processes

- Policy & Program Commitments
  - Strategy and programs to improve energy efficiency of operations
  - Strategy and programs to improve the energy efficiency of supply chain
  - Strategy and programs to improve the energy efficiency of products and product distribution
  - Disclosure of Energy Consumption
- Targets
  - Targets to improve energy performance
  - Aggressiveness of reduction targets relative to peers
  - Detailed implementation strategy to achieve its energy targets
  - Demonstrated track record of achieving energy reduction targets
- Energy Consumption Rate
- Total Energy Consumption

Industry Groups Using Key Issue

- Materials
- Industrials
- Consumer Discretionary
- Real Estate
- Information Technology

Data Sources	• Company disclosure and news searches
	• US Energy Information Agency:
	  o Manufacturing Energy Consumption Survey (MECS)
	  o Commercial Building Energy Consumption (CBECS)
	  o Transportation (RTECS)

Key Issue: Insuring Climate Change Risk

This key issue evaluates insurance companies' exposure to risks to insured assets or individuals associated with the effects of climate change. Companies that have integrated climate change effects into their actuarial models while developing products to help customers manage climate change related risks score higher on this issue, while companies that are highly exposed to climate change but do not consider it to pose a business risk score lowest.

Social or Environmental Impact	• Under-pricing or mispricing of risk encourages risk-taking behavior, e.g. unsustainable coastal development • Contribution to society's climate change adaptation and mitigation by offering insurance products and solutions
Risk/Opportunity to Company	• Model risk: incorrect model specifications affect balance sheet and income statement assumptions • Timing and size of claims impact cash flows, solvency • Catastrophic risk: more frequent and less predictable catastrophic losses • Reinsurance risk: increase in large-scale or concurrent events can affect solvency of reinsurers, leading to counterparty risk
Exposure Metrics	• Extent to which company is exposed to geographies vulnerable to climate change effects; extent to which company is exposed to higher-risk lines of business.

Management Metrics	Acknowledgement of climate change as a business risk; integration of climate change into risk modeling, pricing, and reserving; product and incentive offerings to reduce or hedge climate change-related risks.
	• Underwriting Risk Management
	    o Does the company list climate change as a business risk factor?
	    o Does the company perform or issue research related to climate change insurance risks? Only include primary research, white papers or presentations; not websites, secondary articles, etc.
	    o Does the company develop or use statistical or mathematical models to model climate change effects in actuarial assessments?
	• Opportunities and Performance
	    o Assessment of company's specialty insurance products related to climate change mitigation (e.g. renewable energy coverage) and/or incentives that mitigate both the company and the customer's exposure (e.g. pay-as-you-go auto policies).
	• Combined ratio
	• Loss ratio

Industry Groups Using Key Issue	• Financials
Data Sources	• Company disclosure and news searches • Nicholls, R. J. et al, OECD Working Papers • Center for International Earth Science Information Network (CIESEN) • National Oceanic and Atmospheric Administration (NOAA) • Center for Research on the Epidemiology of Disasters (CRED)

Key Issue: Water Stress

This key issue evaluates the extent to which companies are at risk of water shortages impacting their ability to operate, losing access to markets due to stakeholder opposition over water use, or being subject to higher water costs. Companies that proactively employ water efficient processes, water recycling and alternative water sources score higher on this key issue, while companies that lack strategies to manage and reduce water use score lower.

Social or Environmental Impact	• Damage to ecosystems due to water withdrawal or water contamination • Depletion of water sources for other community uses
Risk/Opportunity to Company	• Operational disruptions to production processes requiring water as a critical input • Loss of access to markets through community opposition and heightened regulatory hurdles • Increased costs to comply with more stringent regulations, install equipment and systems to reduce water use • Higher water usage costs
Exposure Metrics	• Extent to which companies' operations are located in geographies projected to experience water stress and water scarcity; • Extent to which companies' primary business lines are water intensive

Management Metrics	Efforts to reduce exposure through employing water efficient processes, alternative water sources, and water recycling
	• Governance and Strategy
	  o Is there a specific executive body responsible for the company's water management strategy and performance?
	    ▪ CEO
	    ▪ Senior Executive or Executive Committee
	    ▪ H&S or CSR or Sustainability Committees or H&S task force/risk officer
	    ▪ Other
	  o Assessment of the extent to which the company addresses community relations with regards to its water usage
	  o Assessment of the extent to which the company has successfully implemented water efficient production processes to reduce water intensity
	  o What percentage of the company's total water consumption is from alternative water sources (e.g. grey water, rainwater, sewage)?
	  o What is the company's water recirculation/recycling rate?

	• Targets
	  o Has the company set a target to improve water consumption performance?
	  o What reduction in water consumption is the company targeting to achieve by or in the following years? (2010, 2011, 2012, 2013, Other: Year, Other: Target)
	  o Assessment of the aggressiveness of the company's reduction target in context of its current
	  o Has the company articulated a detailed implementation strategy to achieve reduction in its water use?
	  o Does the company have a demonstrated track record of achieving water reduction?
	• Performance
	  o Total or Net Water Consumption/Withdrawals (2007-2010)
	  o Assessment the company's water consumption relative to industry peers
	  o Controversies: Water Management

Industry Groups Using Key Issue	• Materials • Industrials • Consumer Discretionary • Consumer Staples • Information Technology • Utilities
Data Sources	• Company disclosure and news searches • Yale and Columbia Universities, Water Scarcity and Water Stress Indexes

Key Issue: Biodiversity and Land Use

This key issue evaluates the extent to which companies risk losing access to market and incurring litigation and liability costs due to operations that damage fragile ecosystems. Companies that have policies and programs designed to protect biodiversity and address community concerns on land use, score well on this benchmark. Companies with operations that disturb large and/or fragile, bio-diverse areas and lack strategies to minimize and mitigate biodiversity losses, score poorly.

Social or Environmental Impact

- Adverse biodiversity impact (lost species, reduced diversity)
- Adverse community impact (land devaluation, land contamination)
- Over-exploitation and depletion of natural resource
- Loss of economic value (losses to fisheries, tourism industry)

Risk/Opportunity to Company

- Loss of license to operate
- Litigation by land owners and other affected parties
- Increased costs of land protection and reclamation

Exposure Metrics

- Extent of company operations in regions with fragile ecosystems
- Extent company operations involve significant disturbances of land or marine areas

Management Metrics

Efforts to reduce land or marine disturbances, increase biodiversity protection, engage community stakeholders

- Policies & Disclosure
  - Does the company have a clear policy (policies)covering the following:
    - Sustainably managing natural resources and raw materials use
    - Minimizing disturbance from operationsReclaiming habitat, disturbed land
    - Protecting human rights
    - Respecting Indigenous peoples and minimizing community impacts
  - What is the scope of the policy (or policies)?
  - Does the company have clear targets with regards to land use?
  - Does the company work with credible external stakeholder groups to verify its sustainable practices?
  - What is the scope of the industry or international standard used?
- Programs & Structures
  - Does the company conduct biodiversity and community impact assessment prior to settling in new areas?
  - To what extent does the company make efforts to minimize disturbances from operations?
  - Does the company conduct restoration or rehabilitation activities in

	disturbed areas in which it continues to operate? o Does the company have programs to protect natural ecosystems? • Controversies: Land Use and Biodiversity, Adverse Impact on Local Communities
Industry Groups Using Key Issue	• Energy • Materials
Data Sources	• Company disclosure and news searches • Exposure analysis: UN Statistics Division, UNEP, UNESCO, World Conservation Union, UN Environment Programme - World Conservation Monitoring Centre

Key Issue: Raw Material Sourcing - Environmental

This key issue evaluates the extent to which companies are exposed to risks of damaging their brand value by sourcing or utilizing raw materials with high environmental concerns. Companies that have policies to source materials with lower environmental impact and participate in initiatives to reduce environmental impact of raw materials production score higher on this key issue. Companies that do not utilize sustainably produced raw materials and set no targets for use of such materials in the future score lower.

Social or Environmental Impact	• Contribution to climate change through use of raw materials that are GHG-intensive and/or that lead to deforestation • Depletion or degradation of natural resources through use of raw materials that are resource intensive and/or waste intensive
Risk/Opportunity to Company	• Damage to brand value • Failure to meet consumer demand for more environmentally-sound products
Exposure Metrics	Extent to which companies' sales are dependent on products that are at risk of utilizing material of concern Extent to which companies are vulnerable to public scrutiny based on estimated purchase volume of material of concern
Management Metrics	Policies, initiatives, and targets related to sourcing the following materials of concern: *Seafood and/or Aquaculture, Timber and/or Paper, Palm Oil, Beef and/or Dairy, Leather, Cotton* • Sourcing Policy and Commitments by each Raw Material: o Does the company have a policy to address controversial raw materials? o What percentage of products are externally certified by agencies? o What percentage of products are externally certified by agencies with the most stringent standards? o What percentage of products has traceable origin of raw materials? o What are the company's future targets with regard to raw materials sourcing? o To what extent does the company work with suppliers to address impacts of raw materials? • Controversies: Environment - Supply Chain Management, Illegal/Old Growth logging, and Monocrop farming/Palm Oil
Industry Groups Using Key Issue	• Materials

	• Consumer Discretionary • Consumer Staples
Data Sources	• Company disclosure and news searches • World Wildlife Fund • Rainforest Alliance • Other stakeholder working groups (e.g., Better Cotton Initiative, Textile Exchange, Leather Working Group)

Key Issue: Financing Environmental Impact

This key issue evaluates the extent to which companies are at risk of credit defaults resulting from poor due diligence processes related to environmental concerns. Companies that proactively address the environmental risks embedded in their financing decisions score higher on this key issue, while companies that have not articulated a strategy for managing indirect environmental risks score lower.

Social or Environmental Impact	• Indirect impact through financing companies that generate negative impact, including contribution to climate change; depletion of natural resources; waste generation
Risk/Opportunity to Company	• Increased credit defaults from borrowers that suffer losses related to a range of environmental concerns, including operational disruption, loss of market access, liabilities, asset impairment • Damage to corporate reputation from financing environmentally harmful projects
Exposure Metrics	• Extent to which companies' loan and underwriting portfolios are comprised of companies facing material risks associated with negative environmental impact – "Sustainability Value at Risk (S-VaR) based on proprietary analysis of underwriting and lending activity; carbon intensity of loan portfolio.
Management Metrics	Efforts to mitigate credit risk through integration of ESG risk management policies into company's overall financing and risk management structures • ESG Risk Management Policies o Does the company have a policy or system in place to manage ESG risks in financing and/or investing activities? o How broad is the scope of the ESG due diligence policy in terms of operations covered? o Company is Equator Principles Signatory o Does the company have a lending, credit, or investment policy on each of the following areas? ▪ Agriculture ▪ Biodiversity ▪ Climate Change ▪ Energy ▪ Forestry ▪ Mining ▪ Oil & Gas • Implementation and Oversight o Number of Deals Reviewed by ESG Team- Project Finance

	o Number of Deals Reviewed by ESG Team- Non-Project Finance o Number of Deals Subject to In-House Environmental Screen o Is ESG Risk Management represented on Credit Risk Committee or does Credit Risk have defined responsibilities in the area of ESG risk management? o Is there evidence of formal training of credit officers, bankers on ESG risks and risk management procedures? o Are triggers for the escalation of ESG risks to senior management defined and publicly disclosed? o Are the same level of ESG standards applied to international subsidiaries o Who has ownership over ESG performance of the company's financing and investment activities • Opportunity o Assessment of company's financing of environmental opportunities • Controversies: Financial Investments
Industry Groups Using Key Issue	• Financials
Data Sources	• Company disclosure and news searches • BankTrack.org

Key Issue: Toxic Releases

This key issue evaluates the extent to which companies are at risk of incurring liabilities associated with pollution, contamination, and the emission of toxic and carcinogenic substances. Companies with strong programs and track record of reducing emissions and waste score higher on this Key Issue, while companies that create large volumes of toxic and carcinogenic emissions or waste, yet lack programs or policies to reduce or control these substances and have experienced recent incidents of contamination score lower.

Social or Environmental Impact	• Harm to public health through exposure to toxic substances • Damage to ecosystems through spills, leaks • Decreased property values and barrier to economic growth
Risk/Opportunity to Company	• Increased costs from liabilities associated with damaging health, property Loss of access to market through community opposition, heightened regulatory hurdles • Increased costs to comply with more stringent environmental regulations, install equipments and systems to contain pollution
Exposure Metrics	• Extent to which companies' business segments are associated with generating toxic and carcinogenic byproducts during normal production
Management Metrics	Efforts to control and reduce the amount of toxic and carcinogenic byproducts from operations, and demonstrated performance in implementing related policies and programs • Governance and Strategy: o Does the company have formal policies in place to address environmental impact (air emissions, water discharges, and waste)? o Does the company have an environmental management system (EMS) in place? o What percentage of sites with hazardous waste guidance have achieved HAZWOPER certification or follow ISO 14001 for waste management? o Assessment of the extent to which the company has employed process improvements (e.g. process change, chemical substitution) to reduce its toxic releases o To what extent has the company established a strategy to reduce its toxic release footprint associated with its supply chain? o Does the company regularly audit environmental impacts of its own operations? ▪ Company audits its environmental impacts

- Audits cover full geographic scope of operations
- Audits occur on an annual basis

- Targets and Implementation
  - What reduction in toxic releases is the company targeting to achieve by or in the following years? (2010, 2011, 2012, 2013, Other: Year)
  - Assessment of the aggressiveness of the company's reduction target in context of its current performance
  - To what extent has the company articulated a detailed implementation strategy to reduce air emissions, water effluent, non-hazardous waste, and hazardous waste?
  - Does the company have a demonstrated track record of achieving its toxic emissions targets?
- Performance (absolute emissions, intensity and trend over three years):
  - Air Emissions: NOx Performance
  - Air Emissions: SOx Performance
  - Air Emissions: Mercury Performance
  - Air Emissions: Ozone Depleting Substances Performance
  - Air Emissions: Particulate Matter Performance
  - Air Emissions: VOC Performance
  - Air Emissions: Dioxins Performance
  - Air Emissions: Metals (Ni,Cr,VI,Pb,Co) Performance
  - Releases to Water: Water Effluents Performance
  - Releases to Land: Non-hazardous Waste Performance
  - Releases to Land: Hazardous Waste Performance
  - Releases to Land: High-level Radioactive Waste Performance
- Assessment of the company's performance on toxic releases relative to sector peers.
- Controversies: Toxic Spills and Releases

Industry Groups Using Key Issue	• Energy • Materials • Industrials • Consumer Discretionary • Health Care • Utilities
Data Sources	• Company disclosure and news searches • US EPA Toxic Release Inventory (TRI): volume of every toxin created per

	NAICS code • US EPA the Risk Screening Environmental Indicators (RSEI): the toxicity level and carcinogenic properties per chemical (CAS number) • US Census Bureau: revenue data per NAICS code • EPA's Resource Conservation and Recovery Act (RCRA) Biennial Reporting (BR): amount of waste created per NAICS code

Key Issue: Packaging Materials & Waste

This key issue evaluates the extent to which companies are at risk of losing access to markets or at risk of facing added costs to come into compliance with new regulations related to product packaging content and end-of-life recycling or disposal. Companies that proactively reduce the environmental impact of their packaging, including use of recycled content material and establishment of take-back and recycling programs, score higher on this key issue, while companies that have done little to address packaging impacts or have implemented a packaging strategy that is strictly compliance-driven score lower.

Social or Environmental Impact	• Contribution to climate change and resource depletion through resource intensive packaging • High volumes of waste created by packaging upon disposal
Risk/Opportunity to Company	• Loss of access to markets due to regulatory reform • Loss of revenues due to changing consumer demand • Increased costs to reformulate packaging and comply with producer responsibility regulations
Exposure Metrics	Extent to which companies have sales in markets with stringent or evolving regulations.
Management Metrics	Efforts to get ahead of regulations and changing consumer demand by reformulating packaging, recovering products for recycling, and supporting recycling where it is not mandated. • Policies and Targets o Has the company clearly articulated a strategy to reduce the environmental impact of its packaging? o Company's target(s) related to packaging content (e.g. lightweighted, recycled content) o Does the company report its overall packaging mix by type of material? o Company's targets related to product recovery o Does the company support recycling facilities in locations or circumstances where it is not mandated by law? o Does the company educate consumers on recycling (e.g. take-back locations) and package design and labeling? • Performance o Company achievements on packaging content (e.g. lightweighted, recycled content) o Company achievements on product recovery • Controversies: Impact of Products/Services Controversies (e.g. Packaging and product waste, product toxicity)
Industry Groups Using Key Issue	• Materials

	• Consumer Discretionary • Consumer Staples
Data Sources	• Company disclosure and news searches

Key Issue: E-Waste

This key issue evaluates the extent to which companies that produce electronic waste face risks associated with end-of-life recycling and/or disposal of electronic products. Companies that proactively address e-waste concerns by establishing comprehensive and well-managed product recovery and recycling programs score higher on this benchmark, while companies with a strictly compliance-driven approach score lower.

Social or Environmental Impact	• Damage to human health and the environment from hazardous substances contained in electronic products • High volumes of waste created by planned obsolescence of electronics
Risk/Opportunity to Company	• Loss of access to markets due to regulatory reform • Loss of revenues due to changing consumer demand • Increased costs due to compliance with producer responsibility regulations
Exposure Metrics	• Extent to which companies have sales in markets with stringent or evolving regulations

Management Metrics	Best of class: regulations and changing consumer demand by implementing comprehensive product recovery and recycling programs.
	• Product End of Life
	  o Collection of e-Waste
	    ▪ What is the *product* scope of the company's product recycling program?
	    ▪ What is the *geographic* scope of the company's product recycling program?
	    ▪ What is the cost to the consumers of the take-back program?
	  o What are the means available for returning end-of-life electronics to the company?
	    ▪ Drop-off (at a store or designated pick-up locations)
	    ▪ Mail-in
	    ▪ Pick-up
	    ▪ Take-back exists but no details given
	  o Facilities that handle recycling
	    ▪ Does the company operates its own e-waste recycling facilities?
	    ▪ Is the company is part of a network that operates recycling facilities?
	    ▪ Does the company use designated vendors for e-waste

	recycling? ▪ Does a company have a general statement on recycling e-waste with no details? o Does the company explicitly ban exportation of e-waste to non-OECD countries (in accordance with the Basel Ban Amendment to the Basel Convention)? o Assessment of the aggressiveness of targets on collection and recycling o Assessment of the collection and recycling performance to date • Controversies: Environment – Impact of Products/Services
Industry Groups Using Key Issue	• Information Technology
Data Sources	• Company disclosure and news searches • NGOs, including the Silicon Valley Toxics Coalition, Basel Action Network, GoodElectronics, and Greenpeace's Greener Electronics reports

Key Issue: Opportunities in Environmental Technologies

This key issue evaluates the extent to which companies are taking advantages of opportunities in the market for environmental technologies. Companies that proactively invest in product and services addressing issues of resource conservation and climate change score higher on this key issue. Companies lacking strategies and investments targeting these areas score lower on this key issue.

Social or Environmental Impact	• Protection of human health and the environment through technologies that reduce environmental footprint
Risk/Opportunity to Company	• Increased access to markets due to regulatory reforms and incentives • Increased revenues from capturing changing consumer demand • Increased market share in specific market segments due to early mover advantage
Exposure Metrics	• Extent to which companies are engaged in business segments that produce products that address resource conservation and climate change • For select industries and business segments: Extent to which companies sell in markets that provide policy incentives for relevant products or technologies
Management Metrics	Efforts to take advantage of opportunities through strategic targeting of a market for environmental technology or through development of clean tech business segments that are related to company's core business. • Strategy o Has the company adopted a technology development strategy? o What is the company's in-house innovation capacity (i.e. research centers and staff)? o Assessment of the company's innovation programs and initiatives • Research & Development o R&D Expenses (USD million) o R&D/sales o To what extent does the company conduct R&D focused on clean tech applications? • Extent of involvement in each of the following: o Energy Generation ▪ Biofuels (Biogas, Cellulosic Ethanol (excluding corn), Others) ▪ Renewables (Wind, Solar, Geothermal, Biomass, Waste Energy, Wave Tidal, Hydro) ▪ Other Alternative Energy (Nuclear, Clean Coal, Fuel Cells/Hydrogen Systems, Hybrid/Electric Cars, Other) o Energy Storage (Battery, Flywheel Systems, Hydro-power Storage,

	Super Conductors) o Energy and Resource Efficiency ▪ Applications (Eco-building (designing or constructing/retrofitting energy- and resource-efficient buildings), Transportation (e.g. fuel efficiency), Lighting, Household Products, Natural Gas Combined Heat and Power, Other) ▪ Smart Grid o Air Quality (Environmental Information Technology, Conventional Pollution Control, GHG Management, Carbon Capture & Storage) o Water Tech (Water Purification & Management, Other) o Materials ▪ Materials Recovery & Recycling ▪ Nano-technology ▪ Manufacturing/ Industrial ▪ Automotive ▪ Transportation & Logistics ▪ Blended Cement ▪ Low-temperature Asphalt ▪ Specialty Cements/Concrete (e.g. stormwater control, emissions absorption) ▪ Insulation (e.g. wallboard, roofing, glasswool, fiber-cement) ▪ Low Toxicity/VOC Materials (e.g. coatings, sealants, adhesives) ▪ FSC-Certified Lumber ▪ Other
Industry Groups Using Key Issue	• *Energy* • *Materials* • *Industrials* • *Consumer Discretionary* • *Information Technology* • *Financials*
Data Sources	• Company disclosure and news searches

Key Issue: Opportunities in Green Building

This key issue evaluates the extent to which companies are taking advantage of opportunities to develop or refurbish buildings with green building characteristics including lower embodied energy, recycled materials, lower energy and water use, waste reduction, and healthier and more productive working environments. Companies that proactively develop or refurbish buildings to achieve green building certifications score higher on this key issue, while companies that ignore opportunities in green buildings score lower.

Social or Environmental Impact	• Mitigation of climate change through reduction in the built environment's energy usage • Reduced impact on water shortage through reduction in the built environment's water usage • Reduced impact on waste generation
Risk/Opportunity to Company	• Increased access to markets created by regulatory reforms and incentives • Increased revenues from capturing changing tenant demand • Increased market share in specific market segments due to early mover advantage
Exposure Metrics	• Extent to which companies have real estate assets in countries with greenhouse gas reduction commitments • Extent to which companies have building types requiring high energy use per square foot or are generally subject to green building regulation
Management Metrics	Efforts to increase green building certifications across portfolios of real estate assets • Commitments, Training and Initiatives o Does the company have a green building commitment or target? o What is the level of green building commitment compared to relevant national standards? o Does commitment extend to existing buildings in portfolio in addition to new buildings? o Does commitment extend to 100% of portfolio and/or development projects? o Assessment of Green Building Training / Accredited Professionals o Assessment of national mandatory rating system, if one exists, relative to average. o Assessment of non-certified green building efforts • Performance o Number of green certified buildings in portfolio ▪ Number of green certified buildings in portfolio according to company disclosure

	▪ Number of green certified buildings in portfolio according to other sources (e.g. national database) ▪ Assessment of the source of green certified building data if alternate source is used o Green certified space (in million sqf) ▪ Total square footage of green certified buildings in portfolio according to company disclosure ▪ Total square footage of green certified buildings in portfolio according to other sources (e.g. national database)
Industry Groups Using Key Issue	• Real Estate
Data Sources	• Company disclosure and news searches • US Energy Information Agency – Commercial Building Energy Consumption Survey (CBECS)

Key Issue: Opportunities in Renewable Energy

This key issue evaluates the extent to which companies are taking advantages of financial opportunities linked to the development of renewable power production. Companies that proactively invest in renewable power generation and related services score higher on this key issue, while companies lacking any strategic interest in the field score lower.

Social or Environmental Impact

- Mitigating climate change and, indirectly, its adverse effects on human and environmental health

Risk/Opportunity to Company

- Increased revenues from public subsidies
- Increased revenues due to changing consumer demand
- Increased access to markets due to renewable power generation mandates (state, national, or regional objectives)
- Increase market share in specific market segments due to early mover status

Exposure Metrics

- Extent to which companies are involved in electric power generation;
- Extent to which companies may benefit from public subsidies linked to the production of power from renewable energy sources

Management Metrics

Efforts to develop renewable power generation capacity and/or proactively complement the development of renewable power through electrical network expansion, equipment commercialization, and 'green power' offerings to its customers.

- Capacity
  - Current Total Installed Capacity (MW)
  - Percentage of Current Total Capacity Represented by Renewable Sources (Wind, Solar, Geothermal, Biomass, Waste Energy, Save Tidal, Hydro, Other)
    - Total Renewable (incl Hydro)
    - Does the company report current renewable capacity in terms of MW or % of total current capacity?
  - Past Capacity (2005)
    - Renewables + Hydro Capacity (% of total capacity in 2005)
    - Percentage change since 2005
  - Planned Additional Capacity (within five years)
    - What percentage of planned additional capacity is represented by renewables plus hydro?
    - What is the ratio of planned additional renewable-plus-hydro capacity to current total capacity?
    - Renewables as percentage of planned capacity
    - What is the ratio of planned additional renewable-plus-

	hydro capacity to current total capacity? o Does the company have fixed targets to increase renewable capacity? o Has the company established a structure to develop increased renewable capacity? o Has the company made investments related to increased connection of renewable power to electric grid? • Offerings o Does the company offer its customers a green power option? o Is the company commercializing renewable power equipment? o Assessment of the strength of the company's partnerships around renewable energy (e.g. with car manufacturers, energy storage)
Industry Groups Using Key Issue	• Energy • Utilities
Data Sources	• Company disclosure and news searches • Renewable Energy Policy Network for the 21st Century (REN21)

Social Key Issues

Key Issue: Human Capital Development

This key issue evaluates companies' ability to attract, retain and develop human capital based on their provision of benefits, training and development programs, and employee engagement. Companies that proactively manage human capital development through offering competitive benefit packages, implementing formalized training programs, and actively measuring employee satisfaction score highest on this key issue. The companies that rely heavily on highly-skilled employees but show no evidence of such employee engagement score poorly on this key issue.

Social or Environmental Impact	• Job creation • Contribution to building human and social capital in the labor pool through training and development of employees
Risk/Opportunity to Company	• Inability to attract skilled talent to fill role requirements, loss of competitiveness • Loss of intellectual and human capital through attrition, key person risk • Increased costs associated with high employee turnover (e.g. recruitment, training) • Low workforce productivity
Exposure Metrics	• Extent to which companies rely on a highly-skilled or highly-trained workforce based on its principal lines of business; • Exposure to recent restructuring events (mass redundancies, mergers) that could exacerbate risks of voluntary attrition.
Management Metrics	Efforts to reduce exposure through strong benefits and training programs, efforts to develop strong employee engagement • Compensation & Benefits o Does the company offer an employee stock ownership plan (ESOP) or employee stock purchase plan (ESPP)? o Is there a variable component to pay for non-officer and non-sales staff? o Does the company offer a pension plan for all its workers? • Employee Satisfaction & Representation o Does the company have formal grievance reporting or escalation procedures? o Does the company monitor employee satisfaction? o Employee turnover rate • Professional Development (Availability of Training and Professional Development) o Evidence of training or professional development support or

	programs for employee o Regular performance appraisals/ feedback and clear lines of promotion o Job-specific development training is available (internal or external, including tuition reimbursement) o Managerial/ leadership development training is available (internal or external, including sabbaticals) • Controversies: Labor Management Relations, Discrimination and Workforce Diversity
Industry Groups Using Key Issue	• Industrials • Consumer Discretionary • Financials • Information Technology • Utilities
Data Sources	• Company disclosure and news searches • U.S. Bureau of Labor Statistics (BLS) • World Health Organization (WHO)

Key Issue: Labor – Operational

This key issue evaluates the extent to which companies are at risk of workflow disruptions due to labor unrest or reduced productivity due to poor job satisfaction. Companies that provide strong employment benefits and performance incentives and offer employee engagement and professional development programs score higher on this key issue. Companies that face high risk of labor unrest due to recent layoffs or operations in markets with high propensity to work stoppages and do not offer strong employment benefits and employee engagement programs score lower on this benchmark.

Social or Environmental Impact	• Increase or perpetuate social inequality • Impede economic growth
Risk/Opportunity to Company	• Production delays due to labor unrest • Reduced productivity and product quality • Loss of growth opportunities, market share, or pricing power due to negative publicity and damage to brand value
Exposure Metrics	• Total size of the workforce as an indicator of complexity in labor management • Incidents of large-scale workforce restructuring as an indicator of potential labor dissatisfaction • Extent to which companies are located in geographies with high risk of labor unrest

Management Metrics	Efforts to mitigate risks through providing competitive compensation, benefits, and performance incentives; efforts to develop formal engagement and communication channels for employees; and programs to assist employees affected by restructuring.
	• Compensation and Benefits
	  o What are the company's restructuring policies and programs?
	  o Does the company offer a pension plan for non-officer or non-executive staff?
	  o Other sector-specific compensation and benefits
	• Employee Relations
	  o Does the company monitor employee satisfaction?
	  o What percentage of the company's total workforce is covered by collective agreements?
	• Professional Development
	  o Evidence of training or professional development support or programs for employees
	• Controversies: Labor Management Relations, Collective Bargaining and

	Union, Discrimination and Workforce Diversity
Industry Groups Using Key Issue	• Materials • Industrials • Consumer Discretionary • Consumer Staples • Information Technology • Telecommunication Services
Data Sources	• Company disclosure and news searches • International Labour Organization • Bureau of Labor Statistics

Key Issue: Health and Safety (H&S)

This key issue evaluates the extent to which companies are at risk of H&S accidents that can lead to production disruptions, litigation, and liabilities. Companies with comprehensive H&S management and superior track record operating in countries with lower level of industrial fatalities score higher on this key issue, while companies with poor strategy and track record score lower.

Social or Environmental Impact	• Damaged health and welfare of the labor pool • Decreased economic productivity of the labor pool • Increased burden on public assistance for disabled workers • Contamination or damage of immediate environment (if accidents involve fire or spills)
Risk/Opportunity to Company	• Decreased operational efficiency, production disruptions • Increased costs from litigation, penalties and fines • Loss of access to markets or growth opportunities from negative reputational effects
Exposure Metrics	• Extent to which companies' operations are located in countries with historically high rates of industrial fatalities; • Extent to which companies' business segments are prone to high injury rates and fatalities

Management Metrics	Efforts to reduce exposure through comprehensive H&S policies and implementation mechanisms across the supply chain, including identification and elimination of sources of H&S risk, training, operations and contractors performance auditing, certification under OHSAS 18001, setting up improvement targets. Assessment of historical performance tracking and reporting.
	• Is there a specific executive body responsible for the company's health & safety strategy and performance?
	    o CEO
	    o Senior Executive or Executive Committee
	    o H&S or CSR or Sustainability Committees or H&S task force/risk officer
	    o Other
	• Is health & safety performance a factor in executive compensation?
	• What percentage of the company's health & safety system certified to OHSAS 18001?
	• Regarding the company's health & safety policy, which of the following apply:
	    o The policy is group-wide (though individual units may have supplemental policies)
	    o Policy applies to contractors
	    o Policy is enforced with auditing

	• Does the company include contractors in its health & safety metrics (e.g. injury and fatality rates)? • Has the company set a target to improve H&S performance? • What reduction in H&S incidents is the company targeting to achieve by or in the following years? • Has the company articulated a detailed implementation strategy to reduce its H&S incidents? • Does the company have a demonstrated track record of reducing its H&S incidents? • Lost Time Incident Rate • Total Recordable Injury Rate • Fatalities • Controversies: Employee Health & Safety
Industry Groups Using Key Issue	• Energy • Materials • Industrials • Consumer Discretionary • Real Estate
Data Sources	• Company disclosure and news searches • International Labor Organization (ILO) • H&S authorities (US Occupational Safety & Health Administration)

Key Issue: Labor – Supply Chain

This key issue evaluates the extent to which companies are exposed to risks of production disruptions and brand value damage due to sub-standard treatment of workers in the company's supply chain. Companies that establish labor management policies meeting stringent international norms, implement programs to verify compliance with the policies, and introduce incentives for compliance among suppliers score higher on this key issue. Companies that lack a comprehensive policy and compliance monitoring systems, to identify and address possible violations of labor standards score lower on this key issue.

Social or Environmental Impact	• Increase or perpetuate social inequality through mis-treatment of and sub-standard pay for low skilled labor • Damage health and welfare of labor pool through poor working conditions
Risk/Opportunity to Company	• Production delays due to labor unrest • Reduced productivity and product quality • Loss of growth opportunities, market share, or pricing power due to negative publicity and damage to brand value
Exposure Metrics	• Extent to which companies' production in the supply chain are located in countries with poor labor standards; • Extent to which the company's brand is vulnerable to public scrutiny or targeting
Management Metrics	Efforts to mitigate poor labor practices in the supply chain through implementation of labor management policies (codes of conduct), compliance verification programs, and initiatives to enhance awareness and compliance among suppliers. • Code of Conduct o Does the suppliers Code of Conduct cover the following elements: ▪ Forced labor ▪ Child Labor ▪ Working Hours ▪ Paid Overtime ▪ Minimum Wage ▪ Anti-discrimination ▪ Freedom of Association ▪ Health & Safety o What steps has the company taken to promote compliance with its Code of Conduct? ▪ Training suppliers on the Code of Conduct and/or specific labor-related social issues ▪ Other efforts

	- Is labor management performance a factor in selecting new suppliers or awarding new contracts with existing suppliers? - Does the company audit suppliers' compliance with the Code of Conduct? • Audits - Does the company audit suppliers' compliance with the Code of Conduct? - Tier 1 (final product assembly) - Tier 2 suppliers (components) - Tier 3 (raw materials) - Does the company publicly report instances of supplier non-compliance or violations of Code of Conduct? - What type of action is taken by the company to address the issues of non-compliance? • Controversies: Labor Rights - Supply Chain - Child Labor, Labor Rights - Supply Chain - Other ILO Contraventions
Industry Groups Using Key Issue	• Consumer Discretionary • Consumer Staples • Information Technology
Data Sources	• Company disclosure and news searches • Interbrand's Top 100 Global Brands • Food Marketing Institute (grocery story product breakdown) • International Labour Organization (Declaration of Fundamental Principles and Rights at Work)

Key Issue: Raw Material Sourcing - Social

This key issue evaluates the extent to which companies are at risk of incurring regulatory compliance costs, reputational damage, or supply chain disruptions resulting from reliance on raw materials that originate in areas associated with severe human rights and labor rights abuses. The range of scoring depends on the material, with different materials relevant for different industries. In general, companies able to trace the origin of their raw materials and certify that they were obtained in a way that minimizes social harm (e.g. slave labor, funding for groups engaged in human rights violations) score higher on this key issue, while companies that do not work with their suppliers and use no certified materials score lower on this key issue.

Social or Environmental Impact	• Social harms vary by the raw material • Conflict minerals: Sourcing of key minerals from illegal mines in the Democratic Republic of Congo fuels ongoing civil war and rampant human rights abuses
Risk/Opportunity to Company	• Reputational risk and potential loss of market share as consumer awareness grows • Costs to comply with new regulation
Exposure Metrics	• Extent to which companies' product portfolio contains the material of concern • Conflict minerals: Extent to which companies' geography of domicile or are subject to regulations on the use of conflict minerals

Management Metrics	Existence and strength of policy addressing the material(s) of concern; whether materials sourced are certified to have been obtained in a way that minimized harm; targets for the future; whether the company has transparency into and works with its suppliers.
	• Sourcing Policy and Commitments - Conflict Minerals
	  o Does the company have a policy to address controversial raw materials?
	  o What percentage of products are externally certified by agencies?
	  o What percentage of products are externally certified by agencies with the most stringent standards?
	  o What percentage of products has traceable origin of raw materials?
	  o What are the company's future targets with regard to raw materials sourcing?
	  o To what extent does the company work with suppliers to address impacts of raw materials?
	• Controversies: Conflict Minerals

Industry Groups Using Key Issue	• Consumer Discretionary • Consumer Staples • Information Technology
Data Sources	• Company disclosure and news searches • Electronics Industry Citizenship Coalition • NGOs including the Enough Project, GoodElectronics, and makeITfair

Key Issue: Product and Service Quality

This key issue evaluates the extent to which companies are at risk of facing major product recalls or losing customer trust through major product quality concerns. Companies that proactively manage product quality by achieving certification to widely acceptable standards, undertaking extensive product testing and building processes to track raw materials or components score higher on this Key Issue. Companies that take a reactive approach to managing recalls and product quality concerns score lower.

Social or Environmental Impact	• Harm to public health
Risk/Opportunity to Company	• Damage to brand value from loss of consumer trust, negative publicity • Increased costs to comply with additional legal and regulatory requirements, litigation, liabilities Increased costs of implementing large scale product recalls, fulfill warranties
Exposure Metrics	Extent to which companies' product portfolios contain product segments with greater incidents of safety problems or higher associated liability • Percentage sales in segments with higher potential public health impact (e.g. food) or in markets with lower public risk tolerance (e.g. toys) • Percentage sales from high recall frequency categories (autos) • Exposure to jurisdictions with precedent for product liability lawsuits (health care) • Extent of production outsourced to countries with lower product quality standards
Management Metrics	Efforts to mitigate risks of product safety lapses throughout operations and the supply chain; performance on industry-specific product quality metrics. • Policies and Structures o Does the company have a systematic recall policy? o Does the company certify its own production facilities with an internally developed product safety/quality standard? o Does the company certify its own production facilities with a widely accepted product safety/quality standard (e.g. HACCP; ISO 9001; ISO/TS 16949; ISO 13485) o Does the company have a certification program for suppliers? ▪ Tier 1 - Direct supplier facilities and processes certified by company employees or third-party auditors ▪ Tier 2 - Indirect / sub supplier facilities and processes certified by company employees or third-party auditors ▪ Tier 3 - Ingredients / raw materials checked for quality on a regular basis

        - Company issues general statement on supplier certification with no indication of scope of certification
    - Does the company have a system in place to trace products / materials / ingredients / components?
    - Does the company conduct food safety training program for employees?
        - Frequency of training
        - Format of the training
    - Does the company conduct product testing?
        - In-house testing or third party
        - Scope of product testing
    - Does the company carry out global post-marketing surveillance (pharmacoviligance)?
    - Are the company's health plans recognized by an external accreditation organization or other independent body? (e.g. National Committee for Quality Assurance (NCQA))
    - Does the company incorporate comparative effectiveness research (CER) data into its review of therapies and appropriate drug treatments?
    - Does the company measure and report quantitative indicators related to service quality performance or customer protection? (e.g. clinical quality reports, customer surveys)
    - To what extent does the company offer programs (e.g. tools to measure drug interactions, prescription tracking programs) to improve quality of service?
- Recalls over the past year
    - # of incidents
    - # of units recalled
    - Total cost of recalls
    - Score
- Warranty payments
    - Warranty payment
    - Ebitda
    - Warranty payments as % of Ebitda
    - Score
- Warning letters - Pharma
    - Number of FDA warning letters
    - Number of EMA warning letters
    - Year of data
    - Score

	• Number of recalls by severity/health risk according to regulatory agencies' risk assessment o Class I (most severe) o Class II o Class III (and others) o Weighted Sum of Recalls o Score Controversies: Product Safety & Quality, Customer Relations, Marketing and Advertising, Customers - Other
Industry Groups Using Key Issue	• Consumer Discretionary • Consumer Staples • Health Care
Data Sources	• Company disclosure and news searches

Key Issue: Product Safety – Chemicals

This key issue evaluates the extent to which companies are at risk of losing access to markets or at risk of facing costs related to reformulating their products due to the presence of chemicals of concern in their products. Companies that proactively eliminate chemicals of concern from their products score higher on this key issue, while companies that allow legal compliance to determine product strategy score lower.

Social or Environmental Impact

- Adverse effects of chemicals on human and environmental health

Risk/Opportunity to Company

- Loss of access to markets due to regulatory reform
- Loss of revenues due to supply disruptions and changing consumer demand
- Increased costs from reformulating products

Exposure Metrics

- Extent to which companies' product portfolio includes products that are known to contain substances of concern
- Extent to which companies are subject to stringent and changing chemical regulation based on their geographies of sales

Management Metrics

Efforts to identify and eliminate substances of concern; transparency in ingredient formulas; R&D capacity in green chemistry

- Product Design, Manufacture, & Sales
    - Identification: What is the scope of the company's strategy to identify chemicals used in its products?
        - Scope of chemicals
        - Scope of geography
        - Scope of products
    - Phase-Out
        - What is the scope of the company's plan for chemical phase-out?
        - What is the timeline of the company's plan for chemical phase-out?
        - Does the company have a demonstrated track record of reformulating products with chemicals of concern and introducing viable alternatives?
    - Transparency: For products the company makes and/or the brands it owns, does the company's communication of formulation include the following aspects?
        - Full formulation (including fragrances and flavorings)
        - Compliance w/ relevant regulations (e.g. "RoHS-compliant")
        - Presence or absence of particular chemicals of note (e.g.

	"contains PFOA" or "BPA-free") o R&D and Green Chemistry ▪ Has the company integrated a formal process to apply environmental/health standards in new product design? • Controversies: Customers – Produce Safety & Quality, Impact of Products/Services
Industry Groups Using Key Issue	• Materials • Consumer Discretionary • Consumer Staples • Information Technology
Data Sources	• Company disclosure and news searches • International Chemical Secretariat (ChemSec) • ICIS news

Key Issue: Product Safety – Financial

This key issue evaluates the extent to which companies could incur costs associated with unanticipated credit losses, litigation, and regulatory changes through offering financial products that lack transparency or are highly likely to be financially unsustainable to the end-user. Companies that offer transparent financial products based on a borrower's ability to repay score higher on this key issue. Companies that are highly exposed to over-leveraged borrowers and rely on offering controversial products to generate growth score lower.

Social or Environmental Impact	• Reduced longer term economic growth and stability due to excessive indebtedness of individuals or households • Spillover economic effects of large-scale defaults on consumer loans, included mortgages and foreclosures
Risk/Opportunity to Company	• Unanticipated credit losses due to non-transparent or unsustainable products • Loss of markets due to regulatory change • Increased costs from litigation, penalties associated with predatory consumer practices
Exposure Metrics	• Extent to which companies are exposed to over-leveraged consumers and households • Extent to which companies operate in geographies where unsustainable lending is prevalent based on a lax regulatory environment •
Management Metrics	Lending standards (estimated by exposure to specific products with high social risk characteristics); incentives for loan officers and customer-facing staff; customer relations controversies. • High-Risk Loans as percent of tangible book value o Loans with high LTV o Subprime Credit Card and Consumer Loans o Interest Only, Option ARM and Payment Holiday Loans o Subprime and Affordability Loans o No-Doc and Low-Doc Loans o Other High-Risk Consumer Loans: "Door-step" loans, Refund Anticipation Loans, Payday Loans, Subprime Student Loans, etc. • Product and Incentives o Is there evidence company offers Interest Only, Option ARM Payment Holiday, Subprime, Affordability, No-Doc or Low-Doc Loans? o How are incentives of loan officers, brokers and other customer-facing employees aligned with repayment?

	• Strategy o Assessment of the product safety performance of company based on available industry- and market-specific metrics • Controversies; Customers – Customer Relations, Marketing & Advertising
Industry Groups Using Key Issue	• Financials
Data Sources	• Company disclosure and news searches • Center for Responsible Lending • SNL Financial

Key Issue: Privacy & Data Security

This key issue evaluates the extent to which companies are at risk of incurring reputational damage from a data security breach or controversial use of personal data, or having their business model undermined by evolving regulatory requirements on privacy and data protection. Companies with comprehensive privacy policies and data security management systems and companies that do not have business models reliant on trafficking in personal data score well on this key issue. Companies offering few or no assurances regarding the protection of personal data score lower, as do those with business models that rely on trafficking in personal data without consent.

Social or Environmental Impact	• Financial and social harm to individuals whose data is compromised • Violation of individuals' right to privacy
Risk/Opportunity to Company	• Loss of revenues or market share in the event of a data breach • Damage to reputational n the event of a breach or controversy over how data is used • Loss of significant market or forced change in business model in the event that regulatory action restricts how companies may use data • Increased costs to comply with new or evolving regulation
Exposure Metrics	• Extent to which companies operate in countries with stringent or evolving regulations on data security and privacy protection • Extent to which companies' major business segments are involved in collecting and handling sensitive personal data

Management Metrics	Comprehensiveness of privacy policy and internal data security management systems; existence of products or services that enhance privacy or that may inherently violate privacy; occurrence of breaches or other privacy-related controversies.
	• Policy
	  o Does the company's privacy policy disclose the following information?
	    ▪ The purpose of information collected from individuals
	    ▪ The means by which the company collects information about individuals (e.g. from third parties, from customers directly, from transaction history, etc.)
	    ▪ The means for opting in or out of internal marketing
	    ▪ The means for opting in or out of providing data to third parties
	    ▪ The means for verifying and correcting individuals' data
	    ▪ Whether third parties will have access to the individuals' information and for what allowable purposes

- Other notable, non-standard provisions that increase users' privacy Does the company abide by (or commit to abide by) the following best practices?
  - Not collecting personal information from third-party sources
  - Limiting access to personal data to designated personnel (employees or contractors)
  - Monitoring employees' and contractors' access to data in real time (as a means of detecting suspicious use)
  - Providing customers an option to opt out from internal direct marketing
  - Not renting, selling, or providing personal (non-aggregate) information to external parties for the benefit of those external parties
  - Allowing customers (or non-customers on whom data have been collected) to delete all of their data
  - Deleting data after a certain amount of time
  - Informing customers whenever their data is transferred to or handled by external data providers
- What is the scope of the company's privacy policy (as evaluated in the preceding questions)?

- Enforcement
  - What is the highest level of responsibility for the company's data privacy and security?
  - Does the company conduct inspections to ensure data security?
  - Does the company conduct employee training related to data security and/or privacy?
- Products & Services
  - Does the company offer products or services with the following characteristics?
    - With notably privacy-enhancing features, or whose purpose is to protect privacy
    - Whose business model depends on use of individuals' data without their consent and/or direct benefit (such as tracking online habits through cookies or spyware, or recording personal details for sale for marketing purposes)
- Controversies: Data breaches, Other privacy controversies.

Industry Groups Using Key Issue	• Materials

	• Consumer Durables & Apparel • Retailing • Technology Hardware & Equipment • Semiconductors & Semiconductor Equipment
Data Sources	• Company disclosure and news searches

Key Issue: Responsible Investing

This key issue evaluates the extent to which companies' investment portfolios are exposed to ESG-related risks. Companies that mitigate ESG risks in their investments by integrating ESG risk analysis into their due diligence process across all investment portfolios and asset classes score higher on this key issue. Companies that are more exposed to potential ESG event risk and lack efforts to conduct ESG due diligence score poorly on this key issue.

Social or Environmental Impact	• Loss of value in client funds, particularly pension and retirement plans or retail consumer assets
Risk/Opportunity to Company	• Lower security values due to unmitigated or overlooked ESG risks • Client attrition due to mismanagement of investment risk
Exposure Metrics	The extent to which companies' portfolios are exposed to ESG risks based on the geographies of investment and distribution between asset-classes

Management Metrics	Level of integration of environmental and social factors in the investment due diligence and engagement processes.
	• ESG Integration
	  o Does the company participate in a major industry consortium or initiative related to Responsible Investment or ESG?
	    ▪ UN Principles for Responsible Investment (UNPRI)
	    ▪ Investor Network on Climate Risk (INCR)
	    ▪ International Investors Group on Climate Change (IIGCC)
	    ▪ Investor Group on Climate Change (IGCC)
	    ▪ Social Investment Forum (SIF) / EuroSIF
	    ▪ Other
	  o What is the approximate average asset mix?
	    ▪ Listed equity (developed markets)
	    ▪ Listed equity (emerging markets)
	    ▪ Fixed income (sovereign and non-corporate issuers)
	    ▪ Fixed income (corporate issuers)
	    ▪ Private equity
	    ▪ Non-listed real estate or property
	    ▪ Hedge funds
	    ▪ Other / Unknown
	  o To what extent does the company incorporate environmental, social and governance (ESG) considerations into its internal management processes?
	    ▪ Listed equity (developed markets)

	▪ Listed equity (emerging markets) ▪ Fixed income (sovereign and non-corporate issuers) ▪ Fixed income (corporate issuers) ▪ Private equity ▪ Non-listed real estate or property ▪ Hedge funds o Approximately what percent of assets or assets under management are covered by the company's ESG approach? o Does the company disclose its policies on ESG issues? o Does the company have a dedicated staff responsible for analyzing ESG issues or does it offer training to financial analysts on ESG issues? • ESG Opportunities o Assessment of the company's own investments in cleantech, microfinance, global health, or other environmental, social or governance opportunities and/or mitigants. Assessment reflect size and impact (relative to core business) and innovativeness of investments o Assessment of the company's development of investment products or funds in cleantech, microfinance, global health, or other environmental, social or governance opportunities and/or mitigants. Assessment reflect size and impact (relative to assets under management) and innovativeness of investment products • Engagement o Does the company publicly disclose its company engagement or proxy voting policy? o Does the company's engagement or proxy voting policy address environmental, social and governance (ESG) issues? o Does the company have a dedicated staff responsible for implementing and monitoring the company's ESG engagement policies? • Controversies: Controversial Investment
Industry Groups Using Key Issue	• Financials
Data Sources	• Company disclosure and news searches • World Bank • International Monetary Fund • Socioeconomic Data and Applications Center

- MSCI Carbon Beta
- Global Footprint Network
- Transparency International
- CIA World Factbook
- United Nations Principles for Responsible Investing

Key Issue: Insuring Health and Demographic Risk

This key issue evaluates insurance companies' exposure to emerging risks associated with public health trends and demographic change. Companies that have systems in place to identify and model emerging risks associated with health and demographic changes score higher on this key issue, while companies that do not acknowledge emerging risks score lower.

Social or Environmental Impact	• Mis-pricing the risks associated with emerging public health issues and changing demographics can impact individual behavior, public policy and medical practices around key health threats. • Mitigation of health and demographic risks by offering related insurance products and solutions
Risk/Opportunity to Company	• Model risk: incorrect model specifications affect balance sheet and income statement assumptions • Business risk: changing demographics and health trends in company's core geography may require business mix change to stay profitable • Opportunities in new product development
Exposure Metrics	• Extent to which company is exposed to demographic change and emerging health risks such as rising obesity or pollution-related illness based on geographic distribution of premiums; • Extent to which company is exposed to higher-risk lines of business.
Management Metrics	Systems and processes to identify and manage emerging risks; integration of relevant health and demographic risks into risk modeling, pricing, and reserving; product and incentive offerings to reduce or hedge demographic or public health risks. • Underwriting Risk Management o Does the company list any of the following emerging risks as a business risk factor? ▪ Obesity ▪ Aging Population ▪ Urbanization ▪ Climate Change Related Pandemic Events ▪ Other Emerging Risk ▪ Other Emerging Risk - Please Specify (comment) o Does the company perform or issue research related to any of the following emerging risks? (e.g. primary research, white papers or presentations) ▪ Obesity ▪ Aging Population ▪ Urbanization

	▪ Climate Change Related Pandemic Events ▪ Other Emerging Risk ▪ Other Emerging Risk - Please Specify (comment) • Opportunities and Performance o Assessment of the company's products and/or incentives that mitigate both the company and the customer's exposure to the following emerging risks, excluding charitable activities. ▪ Obesity ▪ Aging Population ▪ Urbanization ▪ Climate Change Related Pandemic Events ▪ Other Emerging Risk ▪ Other Emerging Risk - Please Specify (comment)
Industry Groups Using Key Issue	• Financials
Data Sources	• Company disclosure and news searches • World Health Organization (WHO) • World Development Indicators (WDI), World Bank • Selin, N.E. et al (2009) 'Global Health and Economic Impacts of Future Ozone Pollution'

Key Issue: Opportunities in Nutrition and Health

This key issue evaluates the extent to which companies are innovating to take advantage of the market for healthier products. Companies that offer products with an improved nutritional or healthier profile and have sought credible verification for its healthier status score higher on this key issue, while companies that do not offer such products to respond to new consumer demand in this area score lower on this key issue.

Social or Environmental Impact	• Improved public health
Risk/Opportunity to Company	• Increased revenue from growing demand for nutritional and healthier products • Reputational damage from controversies related to false marketing claims
Exposure Metrics	• Extent to which companies' sales are distributed in countries with strong demand for healthier products; • Extent to which companies' product portfolio include market segments where nutritional and healthier products are projected to grow quickly
Management Metrics	Efforts to introduce products with improved nutritional or health profile; credibility of the product claims (third party certification); R&D capacity; controversies related to false marketing claims • Policy and Commitments o Food and Beverage ▪ Organic ▪ Less fertilizer ▪ Less sugar ▪ Less fat ▪ Less sodium ▪ Fewer artificial ingredients (preservatives, colorings, aspartame; other 'controversial' ingredients) ▪ Enhance/fortified (vitamins, nutrients, probiotics) ▪ Medical nutrition ▪ Other (please specify): o Personal Products / Cosmetics ▪ Does this company produce or market personal products or cosmetics? ▪ Organic ▪ Fewer artificial or 'controversial' ingredients ▪ More natural (vegetable based) ingredients o Other Household Products

	▪ Does this company produce or market household products? ▪ EU Eco Label or 3rd party equivalent ▪ Fewer artificial or 'controversial' ingredients (phosphates, chlorine) ▪ More natural (vegetable based) ingredients ▪ Other • Controversies: Customers – Marketing and Advertising
Industry Groups Using Key Issue	• Consumer Discretionary • Consumer Staples
Data Sources	• Company disclosure and news searches • Nutrition Business Journal: Global Nutrition Industry Sales by Region 1995-2014e, Historical & Projected Global Nutrition Industry Sales by Product Category, 1995-2013e

Key Issue: Access to Communications

This key issue evaluates the extent to which companies are taking advantage of opportunities for growth in historically underserved markets, including developing countries and underserved populations in developed countries (such as rural areas and the elderly). Companies with considerable operations in developing countries score well on this key issue, as do those with substantial activities focused on expanding access through relevant initiatives and philanthropic efforts. Companies focused mainly on developed countries and well-served populations score lower.

Social or Environmental Impact	• Social benefit from expanded access to communications and information in historically underserved markets and populations
Risk/Opportunity to Company	• Growth opportunity from providing service in unsaturated markets
Exposure Metrics	Not applicable.

Management Metrics	Provision of expanded access to communications as measured by extent of presence in developing country markets and initiatives to provide access, either through charitable support or business strategy, to underserved areas and populations.
	• Current Operations
	    o Do the company's current operations include:
	        ▪ Direct operations or fully-owned subsidiaries in emerging markets?
	        ▪ Ownership stakes in regional operators?
	    o Is the company engaged in philanthropic activities that explicitly support access to communications in developing countries?
	    o Does the company have programs to extend services to the following (including all markets in which it operates):
	        ▪ Elderly
	        ▪ Children
	        ▪ People with disabilities
	        ▪ Low-income households
	        ▪ Remote areas
	• Targets for Expansion
	    o Does the company have targets for implementing its Access to Communication (ATC) or Digital Divide strategy?

Industry Groups Using Key Issue	• Information Technology • Telecommunication Services
Data Sources	• Company disclosure and news searches

Key Issue: Access to Finance

This key issue evaluates the extent to which a company is taking advantage of opportunities for growth and strengthening reputation through providing lending, financing, or products to underrepresented or underbanked communities. Top performing companies will offer products and services to communities with limited or no access to financial products, where weak performers limit their product offerings to more saturated financial markets.

Social or Environmental Impact	• Support economic growth, increase socio-economic equality and socio-political stability through increased opportunity for small and medium business development, individual or family asset accrual, and means to develop credit or otherwise benefit from financial products.
Risk/Opportunity to Company	• Capture market share in un- or under-developed markets • Strengthen brand through financial inclusion
Exposure Metrics	Not applicable.

Management Metrics	Availability of lending products to underbanked communities and SMEs, as well as investments in micro finance or micro insurance programs. Companies are also benchmarked on their involvement in controversial customer practices and the incentive schemes for loan or product officers
	• Underbanked Lending Activity
	  o Loans to Small and Medium Enterprises (SME)
	  o Total Loans
	  o Loans to SMEs as a % of Total Loans
	  o Loans to disadvantaged or underbanked communities in home markets:
	  o % of Lending or % of Business to disadvantaged or underbanked communities in home markets
	  o Geographic Data
	    ▪ % of Assets/Premiums/Sales in Underbanked Markets:
	    ▪ % of US Branches that are Underbanked:
	    ▪ % of Assets in US:
	    ▪ Total % of Business in Underbanked:
	• Programs and Initiatives
	  o What is the highest level of involvement in the company's microfinance/ microinsurance strategy?
	  o Does the company undertake research on any aspects of financial inclusion or microfinance?
	• Incentives
	  o How are incentives of loan officers, brokers and other customer-

	facing employees aligned with repayment or protection of the customer's financial interests? • Controversies: Customer Relations
Industry Groups Using Key Issue	• Financials
Data Sources	• Company disclosure and news searches • SNL Financial • Consultative Group to Assist the Poor • International Monetary Fund • World Development Indicators

Key Issue: Access to Healthcare

This key issue evaluates the extent to which companies are taking advantage of opportunities for longer term growth and protecting license to operate through efforts to improve access to healthcare in developing countries and for under-served populations in developed markets. In developing countries, companies that adapt their business models to reflect the specific needs of individuals in these markets through areas such as R&D, pricing, and licensing strategies will score higher on this benchmark than companies with less developed access programs. In developed markets, companies that take advantage of opportunities driven by regulatory changes to capture the uninsured market will score higher on this benchmark than companies with few or no plans to address differences across the market in healthcare access.

Social or Environmental Impact	• Improved public health outcomes
Risk/Opportunity to Company	Non Healthcare Providers & Services (HCP&S): • Opportunities for revenue and profit growth in the medium to long term from increased penetration of underserved populations • Protect license to operate and current business model from regulatory and public pressure on pricing and access
Exposure Metrics	• Non HCP&S: no exposure • HCP&S: extent to which companies obtain health premiums in regions with higher levels of uninsured individuals

Management Metrics	Non HCP&S industries: targeted access approach based on specific needs and challenges existent in developing regions and ability to adapt access strategy to address such innate challenges (e.g. socio-economic and environmental constraints, lack of R&D for diseases prevalent in developing countries)
	
	HCP&S: improve access for uninsured individuals and assess companies' strategies to mitigate risk of financial losses due to regulatory enforcement measures
	
	Non HCP&S industries:
	• Does the company have a management system to implement and monitor its Access to Healthcare strategy?
	    o Board level representation for Access to Healthcare issues
	    o Specific director for Access to Healthcare issues
	    o Executive committee for Access to Healthcare issues
	• Does the company's disclosure of its Access to Healthcare-related lobbying activities include the following?
	    o Explicit support of generic competition
	    o Explicit support of entire Doha Declaration on TRIPS
	    o General support of TRIPS with exceptions
	    o Support of compulsory licensing limited to exceptional

  - circumstances
  - Support of parallel importation
- Does the company have equitable pricing policies for products and services in developing countries based on affordability?
  - Equitable pricing policies
  - Number of products
- Does the company engage in non-exclusive voluntary licensing?
  - Licenses and quality checks
  - Number of products
- Is the company involved in capacity advancement initiatives in developing countries?
  - Improving pharmaceutical supply chains
  - Supporting local R&D capacity through PPPs
  - Supporting post-market surveillance (pharmacovigilance)
  - Assisting local manufacturers to achieve international drug manufacturing standards (e.g. WHO GMP)
  - Training local health workers
  - Increasing public health awareness through education & training
- To what extent does the company address: Neglected tropical diseases; Top 10 Communicable diseases (based on DALYs); Top 10 Non-Communicable diseases (based on DALYs); Orphan Drugs?
  - Products on market
  - Ongoing R&D
  - Extent of focus on developing countries

- Scope of product donations in developing countries targeting Access to Healthcare
- Access to Medicine Index Performance
- What is the company's status with regard to Medicines Patent Pool (MPP)?
  - Explicitly entered into licensing contract
  - Scope - countries

HCP&S industries:

- Strength of the company's approach and policy toward addressing the uninsured population
- Medical Loss Ratio (MLR) or Medical Cost Ratio (MCR) (3-year average)
- Does company have pricing policies for lower income individuals and/or other flexible health insurance programs geared toward affordability? (e.g. Health Savings Accounts)
- Administrative costs as % of premiums earned (3 year average) (selling, general, and administrative expense / premiums earned)
- What is the extent of partnerships and initiatives with governments, NGOs, or stakeholder groups to address healthcare reform and/or healthcare access?

Industry Groups Using Key Issue	• Health Care
Data Sources	• Company disclosure and news searches • US Food and Drug Administration (FDA) • European Medicines Agency (EMA) • Therapeutic Goods Administration (TGA) • Industry trade organizations (e.g. IFPMA, PhRMA, AdvaMed) • World Health Organization (WHO) • Medicines Patent Pool • NGOs (Medecins Sans Frontieres, Oxfam America)

Governance Key Issues

Key Issue: Corruption and Instability

This key issue evaluates the extent to which companies are at risk of suffering operational disruptions or loss of market access due to violence, property destruction or sabotage, political instability, demands for bribes, and costly litigation related to corrupt practices. Companies that have programs, guidelines, and clear policies to avoid corrupt business dealings; have strong partnerships with local communities; and have high level of disclosure and transparency score higher on this key issue. Companies with a history of community opposition, that face security problems, and lack transparency in ESG and financial information score lower on this key issue.

Social or Environmental Impact

- Increase or enable social inequality, political instability, and civil unrest through financial support of political regimes with a record of poor human rights practices
- Increase or enable economic inefficiency through financial support of political elites and their monopoly power

Risk/Opportunity to Company

- Loss of company assets and infrastructure due to political events or violence, including nationalization or expropriation
- Loss of access to market due to political events or violence
- Increased costs and increased uncertainty regarding future costs to maintain operations due to demands for bribes
- Increased costs from liabilities and fines associated with violations of foreign corruption laws of domicile
- Operational disruptions due to political events, bribe demands
- Operational disruptions or loss of market access due to community opposition

Exposure Metrics

- Extent to which companies' operations are located in countries that suffer from corruption, violence or terrorism, and political instability
- The extent to which the industry is associated with corrupt practices or relies heavily on government contracts

Management Metrics

The implementation of policies for ethical business practices especially in foreign markets, trust and support from stakeholders to avoid being embroiled in local conflicts and to lower the chances of public opposition, the security of company assets, and the respect for human rights by security guards.

- Policies related to corruption or ethical business conducting including Bribery & Corruption, Violence & Conflict, and Civil Liberties & Freedom of Speech

	• Whether policies extent to suppliers, subsidiaries, and contract security providers • Commitment to external standards for ethics, or signatory to sector specific ethical groups or codes • Company structure or procedures in place to ensure compliance with ethical standards (internal/external auditors, training, whistleblower protection, or other) • Support for local communities in which companies operate by developing infrastructure and/or engaging in human capital capacity building • Quality of programs in place • Transparency: reporting on financial, extra-financial, and industry specific measures • Controversies: o Governance - Bribery & Fraud o Governance - Controversial Investments o Human Rights - Adverse Impact on Local Communities o Human Rights - Freedom of Expression & Censorship o Human Rights - Human Rights Abuse o Human Rights - Other
Industry Groups Using Key Issue	• Energy • Materials • Industrials • Consumer Discretionary • Financials • Health Care • Information Technology
Data Sources	• Company disclosure and news searches • World Bank metrics: 'Voice and Accountability', 'Political Stability and Absence of Violence/Terrorism', 'Government Effectiveness', Regulatory Quality', 'Rule of Law', 'Control of Corruption' • Transparency International Corruption Perception Index (CPI) • Transparency International: Bribe Payer Index (BPI)

Key Issue: Financial System Instability

This key issue evaluates the extent to which a company contributes to systemic risk in financial markets. Companies that institute strong governance structures, demonstrate a high level of transparency, and avoid large scale controversy score well on this key issue. Companies that are large and deeply interconnected to other financial institutions but have limited checks and balances in their governance structures and have incentives for short-term risk-taking at the expense of long-term economic value creation score poorly on this key issue.

Social or Environmental Impact	• Cost to taxpayers to shore up financial system • Economic losses to society due to financial instability through loss of savings, loss of equity, and limited liquidity
Risk/Opportunity to Company	• Loss of growth opportunities or access to market through regulatory changes • Bankruptcy or forced merger/acquisition • Reputational damage
Exposure Metrics	• Probability of receiving government support based on geographies of operation • Level of systemic importance or "too big to fail" status based on size, interconnectedness, complexity, cross-jurisdictional activity and role in global financial infrastructure.
Management Metrics	Governance structures, integration of long-term performance and risk measures in incentive schemes, reporting transparency, and track record of controversial business practices (insider trading, front-running, fraud, conflicts of interest, etc.). • Risk Management and Incentives o Compensation tied to long-term risk-adjusted performance o Independence of Risk Committee • Transparency and Audit o Audit red flags (restatements, adverse opinion, regulatory action) o Reporting transparency score • Net Social Value Creation o Creation of real economic value o Distribution of economic value to external stakeholders • Controversies: Bribery and Fraud, Governance Structures
Industry Groups Using Key Issue	• Financials
Data Sources	• Company disclosure and news searches

- Moody's, S&P and Fitch
- ISS Governance Risk Indicators (GRId)

Key Issue: Other Ethics Issues

This key issue evaluates industry-specific business ethics issues that are not captured by any of the other standard key issue benchmarks, including but not limited to anti-competitive practices, pricing fraud, controversial customer practices, and insider trading. Companies that have avoided controversies in these areas score higher on this key issue, while companies that have faced moderate or severe controversies over the past three years score lower.

Social or Environmental Impact	Impacts vary by industry, but could include the following: • Monopoly or oligopoly pricing, economic inefficiencies due to lack of competition • Market inefficiencies due to trading on insider information or price discrimination • Adverse impact on customers, communities
Risk/Opportunity to Company	Risks vary by industry, but could include the following: • Regulatory and legal risks • Threatened license to operate, restrictions on growth • Reputational risk, decline in consumer trust or brand value
Exposure Metrics	We do not measure exposure on this key issue.
Management Metrics	Controversies over the past three years, scored based on severity and whether the controversy is judged to be structural (systematic problem throughout the company's governance and management) or nonstructural (likely to be a one-off or isolated incident). The specific categories are defined at the industry level based on the specific risks the benchmark is trying to capture in that industry. • Has the company experienced controversies in the following areas over the past three years? o Anticompetitive Practices o Customer Relations o Marketing & Advertising o Product Quality & Safety o Customers – Other o Bribery & Fraud o Governance – Other o Human Rights – Adverse Impact on Local Communities o Human Rights Abuses o Human Rights – Other
Industry Groups Using Key Issue	• Commercial Services

	• Consumer Discretionary • Health Care • Financials • Telecommunication Services
Data Sources	• Company disclosure and news searches

Appendix 3 – Determination of Letter Ratings

Letter ratings are relative within each IVA industry.

Each company receives a final numeric score arising from the weighted sum of the Key Issue scores. The highest-scoring company receives a 'AAA' and the lowest-scoring company receives a 'CCC'. The range between the highest and lowest numeric scores is divided into seven equal ranges, one corresponding to each letter rating.

In the following example, the best scoring company receives a 9.0, the worst receives a 2.0 and others are in between:

Company	Final Weighted Score
Company 1	9.0
Company 2	7.5
Company 3	5.5
Company 4	2.0

In this case, the ranges for each letter rating would be set such that the maximum is **9.0** and the minimum is **2.0**:

Letter Rating	Score Range
AAA	8.0 – **9.0**
AA	7.0 – 7.9
A	6.0 – 6.9
BBB	5.0 – 5.9
BB	4.0 – 4.9
B	3.0 – 3.9
CCC	**2.0** – 2.9

The final ratings would be:

Company	Final Weighted Score	Final Letter Rating
Company 1	9.0	**AAA**
Company 2	7.5	**AA**
Company 3	5.5	**BBB**
Company 4	2.0	**CCC**

Ratings generated through this calculation may be over-ridden by the Ratings Review Committee under certain circumstances. Please refer to 'Reality Check' on page 9.

Appendix 4 – Legacy Subscores

In the legacy subscores file, each key issue score is mapped to **one** IVA subscore and assigned the weight that was determined in step 1 of the research process. The remaining non-key subscores also receive 0-10 scores based on ESG data including policies, controversies and performance. Because these issues are not considered key to the company's core business impact, each non-key subscore is weighted at 0% and has no impact on the overall rating. For industries published prior to June, 2011, each non-key subscore is weighted at less than 2%; and all non-key subscores in total comprised 20% or less of the final rating.

IVA Factor	IVA Subscore	Weight	Key Metrics
Strategic Governance	SG1) Strategy	<2%	Overall governance; score composed of total scores of non-Key Issues
	SG2) Strategic Capability / Adaptability	<2%	Management of CSR issues, partnership in multi-stakeholder initiatives
	SG3) Traditional Governance Concerns	<2%	Board independence, management of CSR issues, board diversity, compensation practices, controversies involving executive compensation and governance.
Human Capital	HC1) Workplace Practices	<2%	Workforce diversity, policies and programs to promote diversity, work/life benefits, discrimination-related controversies
	HC2) Labor Relations	**20%**	**KEY ISSUE: LABOR RELATIONS** » Benefits, strikes, union relations, controversies, risk of work stoppages, etc.
	HC3) Health & Safety	<2%	H&S policies and systems, implementation and monitoring of those systems, performance (injury rate, etc.), safety-related incidents and controversies
Stakeholder Capital	SC1) Stakeholder Partnerships	<2%	Customer initiatives, customer-related controversies, firm's support for public policies with noteworthy benefits for stakeholders
	SC2) Local Communities	<2%	Policies, systems and initiatives involving local communities (esp. indigenous peoples), controversies related to firm's interactions with communities
	SC3) Supply Chain	<2%	Policies and systems to protect supply-chain workers' and contractors' rights, initiatives toward improving labor conditions, supply-chain-related controversies
Products and Services	PS1) Intellectual Capital/ Product Development	<2%	Beneficial products and services, including efforts that benefit the disadvantaged, reduce consumption of energy and resources, and production of hazardous chemicals; average of two scores
	PS2) Product Safety	<2%	Product quality, health and safety initiatives, controversies related to the quality or safety of a firm's products, including legal cases, recalls, criticism
Emerging Markets	EM1) EM Strategy	<2%	Default = 5, unless there is company specific exposure that is highly significant
	EM2) Human Rights/ Child and Forced Labor	<2%	Policies, support for values in Universal Declaration of Human Rights, initiatives to promote human rights, human rights controversies
	EM3) Oppressive regimes	<2%	Controversies, substantive involvement in countries with poor HR records
Environmental Risk Factors	ER1) Historic Liabilities	<2%	Controversies including natural resource-related cases, widespread or egregious environmental impacts
	ER2) Operating Risk	<2%	Emissions to air, discharges to water, emission of toxic chemicals, nuclear energy, controversies involving non-GHG emissions
	ER3) Leading/ Sustainability Risk Indicators	<2%	Water management and use, use of recycled materials, sourcing, sustainable resource management, climate change policy and transparency, climate change initiatives, absolute and normalized emissions output, controversies
	ER4) Industry Specific Risk	**25%**	**KEY ISSUE: CARBON** » Targets, emissions intensity relative to peers, estimated cost of compliance
Environmental	EMC1) Environmental	<2%	Policies to integrate environmental considerations into all operations,

Management Capacity	Strategy		environmental management systems, regulatory compliance, controversies
	EMC2) Corporate Governance	<2%	Board independence, management of CSR issues, board diversity, compensation practices, controversies involving executive compensation and governance.
	EMC3) Environmental Management Systems	<2%	Establishment and monitoring of environmental performance targets, presence of environmental training, stakeholder engagement
	EMC4) Audit	<2%	External independent audits of environmental performance
	EMC5) Environmental Accounting/ Reporting	<2%	Reporting frequency, reporting quality
	EMC6) Env. Training & Development	<2%	Presence of environmental training and communications programs for employees
	EMC7) Certification	<2%	Certifications by ISO or other industry- and country-specific third party auditors
	EMC8) Products/ Materials	<2%	Positive and negative impact of products & services, end-of-life product management, controversies related to environmental impact of P&S.
Environmental Opportunity Factors	EO1) Strategic Competence	<2%	Policies to integrate environmental considerations into all operations and reduce environmental impact of operations, products & services, environmental management systems, regulatory compliance
	EO2) Environmental Opportunity	**35%**	**KEY ISSUE: Opportunities in Cleantech** » Product dvpt in cleantech, R&D relative to sales and trend, innovation capacity
	EO3) Performance	<2%	Percent of revenue represented by identified beneficial products & services

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