

The 2018 Global 100: Overview of Methodology

Global 100 fast facts

Overview

- Annual ranking of corporate sustainability performance
- Released each January during the World Economic Forum in Davos; published in leading media.

Eligibility

- Size: publicly-listed companies with latest gross revenue of a minimum of US\$1 billion
- Industry and geography: All industries and geographies are automatically considered

Approach

- Ranking is based on publicly-disclosed data (e.g., financial filings, sustainability reports). All required datapoints are pre-populated. Submissions from companies are <u>not</u> required.
- Companies on the Global 100 Shortlist are contacted for data verification prior to project completion.
- Methodology is based on up to 17 key performance indicators (KPIs) covering resource, employee, financial management, clean revenue and supplier performance.

Contact info and to learn more

- Email <u>research@corporateknights.com</u> if you would like to confirm the correct contacts for your organization
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- Visit <u>www.global100.org</u> for more details



Ranking is conducted by Corporate Knights, a specialized media and investment research firm

Corporate Knights is a Toronto-based, employee-owned B Corp that operates in three segments:

Corporate Knights Magazine

- World's largest circulating magazine focused on sustainability and responsible business.
- Reaches 380,000 of the world's most influential business and political decision-makers.

CK Research

- CK Research offers a range investment product sustainability ratings and tools
- CK Research also manages several external research projects (e.g. Newsweek Green Rankings, Carbon Clean 200, Sustainable Stock Exchange Ranking).

Council for Clean Capitalism

- CEO-supported group catalyzing smart and efficient public policy.
- Engages with leading public policy-makers.



Key features of the Global 100

- Approach: driven by data, not judgment
- Transparent: clear approach for getting from the project's starting universe (n =5,994 companies) to the 2018 Global 100
- Scoring: Companies are only scored on 'relevant' KPIs for their respective industry
- Data gaps: Companies are scored 0 in the case of non-disclosure for relevant KPIs. The project incentivizes more disclosure, not less disclosure
- Scope: the Global 100 sticks to indicators that can be objectively measured it does not purport
 to gauge companies' exposure to qualitative sustainability risks
- The approach and methodology are reviewed annually through stakeholder consultations and expert input*.



Philosophical perspective of the Global 100

- Relevance: The ranking is meant to be representative of business sustainability in the current socio-economic context.
- Transparency: The precise methodology of the ranking and the results of the process are fully disclosed.
- Objectivity: Eligible companies will only be assessed using quantitative data and performance indicators.
- Public data: Only data-points that are part of the public domain are used
- Comparability: Companies are compared against their industry group peers based on performance indicators for which the underlying data are reasonably well disclosed by their industry group globally.
- Engagement: Companies eligible for the ranking are informed prior to the ranking, so as to have an opportunity to ensure the necessary data is made available publicly.
- Stakeholders: Stakeholder feedback is actively solicited throughout the project. A
 Panel of Experts, consisting of several sustainability practitioners, review and
 comment on all aspects of the methodology.



Overview of Global 100 ranking process

	Description	Details					
Starting Universe	Publicly-listed companies	 All companies that had a market capitalization in excess of US\$ 1 billion revenue 					
	Companies screened for :	 Screening criteria outlined on Slide 6 					
	 Sustainability disclosure practices Financial health 	 Companies that pass all four screens constitute the 2018 Global 100 Shortlist 					
Screening	Product categoriesFinancial Sanctions*	 Any company that was on the 2017 Global 100 is automatically included in the 2018 Global 100 shortlist if it is not in the bottom quartile of the Financial Sanctions screen in both 2016 and 2017 					
Selection	 Companies in the 2018 Global 100 Shortlist are scored on KPIs, covering resource, employee, and financial management 	 Selection criteria outlined on Slide 8-11 Companies only scored on the 'priority KPIs' for their respective GICS industry (see Slides 13-15) 					
The Global 100	 The 2018 Global 100 is populated Consists of the top performing companies within each industry group 	 Each GICS sector is assigned a fixed number of slots in the final Global 100 list, (based on each sector's contribution to the total market capitalization of the Global 100's financial benchmark, the MSCI ACWI*). 					



Screening criteria

	Description	Details
Sustainability Disclosure Practices	Companies that did not disclose at least 75% of the 'priority KPIs' in their respective industry group are eliminated	 A 'priority KPI' is any of the 17 KPIs disclosed by at least 10% of all companies in a given GICS industry (see slides 9- 11) KPIs 6, 8, 11 and 12 (from slide 8) are part of mandatory disclosure and are therefore applicable to all
Financial Health	Companies with an F score below 5 are eliminated	 The F-Score (the Piotroski F-score) is a measure of the financial strength of a company. The F-score is the sum of the scores for each of nine tests. See Appendix I for details.
Product Categories	Companies with a GICS code that relates to tobacco products or armaments are eliminated	 The sub-industries are i) "Aerospace & Defence" and ii) "Tobacco". In the case of Aerospace & Defense, the company will only be eliminated if it derives a majority of its revenue from its Defense business group
Sanctions	 Companies that are bottom quartile performers in the CK Sanctions* screen are eliminated 	 The screen measures the amount of money that companies paid out in qualifying fines, penalties or settlements over the October 1, 2016 to September 30, 2017 period Sanctions include but are not limited to human rights, labour, environmental, anti-trust and community-related violations

See Appendix II for details.



Updated rating methodology

(2018 Global 100 Ranking)



Resource management KPIs

KPI	Methodology
Energy Intensity	Revenue (converted to USD using PPP exchange rate) / (Energy use – renewable energy use)
Carbon Intensity	Revenue (converted to USD using PPP exchange rate) / GHG emissions: scope 1 & 2
Water Intensity	Revenue (converted to USD using PPP exchange rate) / Water use
Waste Intensity	Revenue (converted to USD using PPP exchange rate) / Non-recycled or reused waste generated
Clean Air Productivity score	 Revenue (converted to USD using PPP exchange rate) / VOC emissions (25%) Revenue (converted to USD using PPP exchange rate) / Nox emissions (25%)
	 Revenue (converted to USD using PPP exchange rate) /Sox emissions (25%)
	 Revenue (converted to USD using PPP exchange rate) / Particulate matter emissions (25%)

Companies will only be scored on the KPIs that are deemed "priority KPIs" for their respective GICS industry + the five universal KPIs (see slide 12)



Financial management KPIs

КРІ	Methodology
Innovation Capacity	R&D expenses / revenue – three year trailing
Percentage Tax Paid	Cash tax amount paid / EBITDA – five year trailing
CEO-Average Employee Pay	CEO compensation / average employee compensation
Pension Fund Status	75% (total DB and DC employer contributions/ FTE employees percentile-ranked against peers) + 1/4(fair value of DB plan assets/FTE employees percentile-ranked - (1-(fair value of DB plan assets/liability percentile-ranked)))
Supplier score	 The company's largest supplier as determined by Bloomberg Largest supplier scored using this same rating methodology for the 2018 Global 100 excluding the "Supplier score" KPI. Primary data source: Bloomberg, FactSet, Thomson Reuters Eikon and CDP

Companies will only be scored on the KPIs that are deemed "priority KPIs" for their respective GICS industry + the five universal KPIs (see slide 12)



Employee management KPIs

KPI	Methodology
Safety Performance	(1) Fatalities, and (2) lost time incidents rate
Employee Turnover	Number of departures / average total employees
Leadership Diversity	(1) Female representation on board of directors, and(2) Female representation in executive management team
	(compared against same industry peers only, but against all companies in the universe)
Sustainability Pay Link	Mechanisms that link senior executive pay to sustainability targets

Companies will only be scored on the KPIs that are deemed "<u>priority KPIs</u>" for their respective GICS industry + the five universal KPIs (see slide 12)



Additional KPIs

KPI	Calculation and notes
Clean Revenue	Percentage of your total revenue derived from products and services that are categorized as "clean" as defined by: - U.S. Bureau of Labor Statistics Green goods and services. - Statistics Canada Clean technology definitions. - Climate Bonds Initiative green bonds criteria definitions. - Other definitions of clean revenue from private market data providers. Please double-click on the icon below to view the full list of products and services that are categorized as green in a new Excel window
	×
	Microsoft Excel Worksheet
* This is a multi-year project by Corporate Knights to develop and make publicly-available an open-source definition of clean revenue categories; we welcome comments and suggestions in evolving and refining this clean revenue definition.	Example: Company ABC is in the Photovoltaic and Solar Cells and Systems Providers and Wires and Cables Manufacturing segments representing 60% and 40% of their total revenue. Steps 2 and 3 above specifies that the clean revenue percent of Photovoltaic and Solar Cells and Systems Providers is 100% and Wires and Cables Manufacturing is 5%. The clean revenue for Company ABC is: 60% x 100% + 40% x 5% = 62%

This is a Universal KPI: all companies will only be scored on this KPI irrespective of GICS industry (see slide 12)



The Five Universal KPIs

<u>All</u> companies, irrespective of GICS Industry will still be assessed on all five universal KPIs:

- Leadership Diversity,
- Sustainability Pay Link,
- Pension Fund Status,
- Percentage Tax Paid, and
- Clean revenue



Priority KPIs and weighting scheme for each GICS Industry under the new methodology



Impact-weighted KPIs

Philosophy: We take the view that in each industry, its impact on each individual KPIs is different – greater or smaller compared to another industry. The bigger the impact or of a given performance metric is in relation to other GICS Industry groups, the more impactful that metric is and therefore the higher the weight of that KPI.

Impact calculation example - Energy use by the Utilities industry as an example:

The sum of Energy Use (in GJ) for all publicly-listed companies globally (n=5,994) is grouped by GICS Industry Group, then is calculated as a percentage of the total Energy Use for all 5831 companies. For instance, the GICS Industry Utilities accounts for 23.7% of all Energy Use of all 5,994 companies; that industry's impact on Energy Use is 23.7%. The above principle is applied to all remaining KPIs (except Supplier Score and Sustainability pay link which have fixed weights of 2.5% and 5% respectively for all industries) for each of the 24 GICS Industry Groups.

Exceptions: Due to the ongoing economic transition towards clean energy sources, the Automotive, Energy and Utilities industries are given a fixed weight of 50% for the Clean Revenue KPI.

Weighing KPIs according to impact – Utilities GICS Industry Group as an example:

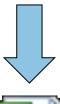
The GICS Utilities Industry Group has 17 priority KPIs. Of these, Supplier Score and Sustainability Pay Link have fixed weights (2.5% and 5% respectively). The remaining 14 KPIs (42.5% of the weights) are assigned ranks based on their calculated impact: for instance, Utilities use more water than any other industry (77.2% of total water withdrawals); this KPIs receives the highest weight (17.8%) according to it relative share of global impact across the 14 KPIs.

	Energy	GHG	Water	Waste	Employee Turnover	Injuries	Fatalities		CEO – Average Employee Pay		Pension Fund Status	Innovation capacity	Women in executive management	Women on board	Clean revenue
Impact	23.7%	35.3%	77.2%	1.4%	2.8%	3.3%	10.5%	7.9%	2.6%	6.4%	6.8%	0.7%	2.6%	3.6%	22.7%
Final Weight	5.5%	8.1%	17.8%	0.3%	0.6%	0.8%	2.4%	1.8%	0.6%	1.5%	1.6%	0.2%	0.6%	0.8%	50.0%



Priority indicators and weights per GICS industry

Please <u>double-click</u> on the icon below to open the list of priority indicators and weights for each GICS Industry in a new Excel window





Microsoft Excel Worksheet



Appendix I: The F-Score

- The F-Score (the Piotroski F-score) is a measure of the financial strength of a company.
- The F-Score is the sum of the scores for each of nine tests. Each test scores one for a pass and zero for a fail.
- The tests are:
 - i) net profit is positive;
 - ii) operating cash flow is positive;
 - iii) net profit ÷ total assets at beginning of year, minus the same number for the previous year is positive;
 - iv) operating cash flow is greater than net profit;
 - v) long term debt ÷ by average assets has not increased;
 - vi) the current ratio has increased (the change is more than zero, so even a negligible increase passes the test);
 - vii) no raising of ordinary (common) equity over the previous year: this test is passed if the company did not issue any ordinary shares (excluding shares from dividend reinvestment plans and employee share plans);
 - viii) gross margin has improved over the previous year; and
 - ix) asset turnover has increased.



Appendix II: The CK Financial Sanctions Screen

 The CK Financial Sanctions* screen measures the amount of money that companies have paid out in qualifying fines, penalties or settlements on a trailing one-year (October 1, 2016 – September 30, 2017) basis.

Approach

- A keyword search for "fines, penalties or settlements" is run for each company. Payouts may relate to legal repercussions from environmental accidents, generalized environmental pollution, infringement of labor standards, human rights-related abuses, child exploitation or violation of collective bargaining arrangements.
- 2. Payouts that occurred from October 1, 2016 to September 30, 2017 are totaled and converted to USD (using the prevailing exchange rate at the time of the payout) and then divided by total revenue reported over the same period.
- The resulting ratio is then percent-ranked against all companies that remain at this stage of the ranking.
- 4. Those companies that receive a bottom quartile percent score (e.g. 25% or below) are eliminated.
- 5. Constituents of the 2017 Global 100 that receive bottom quartile percent score (e.g. 25% or below) for the periods from October 1, 2015 to September 30, 2016 and October 1, 2016 to September 30, 2017 are eliminated from the Short List.



Appendix III: Detailed scoring methodology

#	Name of KPI	Measurement
1	Energy Productivity	In the first step, each company's Energy Productivity is calculated. Energy Productivity is defined as Revenue (\$US PPP-converted) / Total Energy Use (GJ) – Renewable Energy Use (GJ). It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Energy Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.5 and then by 0.25. In the third step, the value from the first and second steps are totaled.
2	Carbon Productivity	In the first step, each company's Carbon Productivity is calculated. Carbon Productivity is defined as Revenue (\$US PPP-converted) / Total Greenhouse gas (GHG) Emissions (CO2e). Only Scope 1 and Scope 2 emissions are included according to the GHG Protocol. It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Carbon Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.5 and then by 0.25. In the third step, the value from the first and second steps are totaled.



3	Water Productivity	In the first step, each company's Water Productivity is calculated. Water Productivity is defined as Revenue (\$US PPP-converted) / Total water (m3). It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Water Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is bottom quartile, the percent-rank is multiplied by 0.5 and then by 0.25. In the third step, the value from the first and second steps are totaled.
4	Waste Productivity	In the first step, each company's Waste Productivity is calculated Waste Productivity is defined as Revenue (\$US PPP-converted) / [Total waste generated (metric tonnes) – waste recycled (metric tonnes)]. It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's Waste Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.5 and then by 0.25. In the third step, the value from the first and second steps are totaled.
5	Innovation Capacity	In the first step, each company's Innovation Capacity score is determined by measuring the ratio of research and development (R&D) expenditures to total revenue averaged over a trailing three-year period. In the second step, each company's Innovation Capacity score is percent-ranked against that of all same-industry group peers within the CK coverage universe.



6	Percentage Tax Paid	In the first step, each company's Percentage Tax Paid is calculated as the amount of taxes paid in cash over a trailing five year period divided by their total EBITDA over the same period. Companies score a 0% in the event that their total EBITDA or taxes paid in cash is zero or lower over the five year period. In the second step, each company's Percentage Tax Paid is percent-ranked against that of all same-industry group peers within the CK coverage universe.
7	CEO-Average Employee Pay	In the first step, each company's CEO to Average Employee Pay ratio is calculated as total CEO compensation divided by average employee compensation. Average employee compensation is calculated by dividing the company's total wage bill by the total number of employees. In the second step, each company's CEO to Average Employee Pay ratio is percent-ranked against that of all same-industry group peers within the CK coverage universe. The lower the ratio, the higher the rank.
8	Pension Fund Status	In the first step, the sum of the company's contribution to the defined benefit and defined contribution pension plans are added up, then divided by the total number of full-time equivalent employees. This ratio is then percent-ranked against that of all same-industry group peers within the CK coverage universe. This is labelled as "A" In the second step, the fair value of the defined benefit plan assets is divided by the total number of full-time equivalent employees; this ratio is then percent-ranked against that of all same-industry group peers within the CK coverage universe. This is labelled as "B", In the third step, the fair value of the defined benefit plan assets is divided by the projected defined benefit plan obligations, then percent-ranked against that of all same-industry group peers within the CK coverage universe. This is labelled as "C". The Pension Fund Status Score is arrived at by the following formula: (0.75 x A) + 0.25(B – (1 – C))



9 - 10	Safety Performance	Each company's Safety Performance is comprised of the Lost Time Injury Score and the Fatality Score. The Lost Time Injury Score is determined by calculating the company's lost time injury rate (defined as the number of lost time incidents per 200,000 employee hours) and percent-ranking it against that of all same-industry group peers within the CK coverage universe. The Fatality Score is determined by calculating the company's fatality rate (defined as the number of fatalities divided by the total number of fill-time equivalent employees) and percent-ranking it against that of all same-industry group peers within the CK coverage universe.
11	Employee Turnover	Each company's Employee Turnover is percent-ranked against that of all same industry group peers within the CK coverage universe. The lower the ratio, the higher the rank.
12 - 13	Leadership Diversity	Each company's Leadership Diversity is comprised of the Board Diversity Score and Executive Diversity Score The Board Diversity Score is calculated by determining the proportion of the Board of Directors that is comprised of female directors and percent-ranking it against that of all companies within the CK coverage universe. The Executive Diversity Score is calculated by determining the proportion of the senior executive team that is comprised of female executives and percent-ranking it against all companies within the CK coverage universe. The Leadership Diversity Score is then the sum of the Board Diversity Score and the Executive Diversity Score.
14	Sustainability Pay Link	The Sustainability Pay Link indicator is designed to reward companies that have set up mechanisms to link the remuneration of senior executives with the achievement of sustainability goals or targets. A score of 100% is given to companies that describe such a mechanism (e.g. the company specifies the proportion of a particular named executive's compensation that is linked to the achievement of a corporate clean capitalism target, such as reducing emissions, improving energy efficiency, or reducing health & safety accidents). A score of 0% is given to companies that do not report any linking mechanisms. Unlike all other indicators, Clean Capitalism Pay Link does not use any percent-ranking.



15	Supplier Score	Each company's largest supplier is identified based on Bloomberg data. That supplier is then scored using the Global 100 methodology, excluding the Supplier Score KPI.
16	Clean Air Productivity	The Clean Air Productivity consists of four sub-indicators, each worth 25% of the Clean Air Productivity indicator:
		a) VOC Productivity b) Nox Productivity c) Sox Productivity d) Particulate Matter Productivity.
		Each of the above four sub-indicators are calculated in the same way, as follows:
		In the first step, each company's sub-indicator Productivity is calculated by dividing Revenue (\$US PPP-converted) by the air pollutant. It is then percent-ranked against that of all same-industry group peers within the CK coverage universe, and multiplied by 0.75. In the second step, the change in each company's sub-indicator Productivity over a two-year period is calculated and percent-ranked against that of all same-industry group peers within the CK coverage universe. If the company's percent-rank is top quartile, the percent-rank is multiplied by 1 and then by 0.25. If the company's percent-rank is second quartile, the percent-rank is multiplied by 0.75 and then by 0.25. If the company's percent-rank is third quartile, the percent-rank is multiplied by 0.25 and then by 0.25. In the third step, the value from the first and second steps are totaled.
17	Clean revenue	Percentage of your total revenue that are derived from products and services that are categorized as "clean" by: - U.S. Bureau of Labor Statistics Green goods and services Statistics Canada Clean technology definitions Climate Bonds Initiative green bonds definitions Other definitions of clean revenue from private market data providers.



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