

NON-CREDIT RATING ASSESSMENT FRAMEWORK

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Non-financial companies – Global

Corporate governance assessments for publicly traded non-financial companies

- » **Our governance assessment (GA) scoring tool helps compare corporate governance characteristics for publicly traded non-financial companies on a consistent, transparent and verifiable basis.** This report explains the framework, scoring system and data that are used in our assessments. The focus of this framework is on publicly traded non-financial corporates. Over time, we could extend our approach to include financial institutions, privately held companies and other entities.
- » **GAs are not credit ratings and do not directly impact credit ratings.** Governance assessments are Non-Credit Rating Assessments which address elements of risk that may be of interest to investors and other market participants, but which are not credit ratings. While the information underlying a GA may provide insights useful for credit analysis, Moody's uses other analysis in assigning credit ratings, including qualitative considerations in the context of each issuer's particular characteristics and circumstances, that extend beyond the GA framework.
- » **Five key components underpin our GA scores.** Our framework assesses governance in respect of five key components that we believe are relevant to credit: ownership and control; compensation design and disclosure; board of director oversight and effectiveness; financial oversight and capital allocation; and compliance, controls and reporting. In turn, each of the five components is scored by assessing several subcomponents, which comprise a number of questions.
- » **GAs are expressed using a four-point scale relative to a benchmark that we consider to be a creditor-friendly standard.** Companies assigned GA-1 have overall governance practices that generally score at the highest level based on our framework. Companies assigned GA-4 have overall governance practices that generally score at a lower level based on our framework. Sub-component scores are derived from the answers to a series of questions designed to assess the relative positioning of an entity. We assign points for answers that identify governance characteristics that deviate from the benchmark. The fewer the points, the better the score.
- » **Data used to determine GA scores are only drawn from public sources, such as regulatory filings and investor presentations.** Where disclosure is lacking, our scoring logic will penalize the company and result in a less favorable score relative to the benchmark. That said, from a credit perspective we recognize that no disclosure does not necessarily equate to higher credit risk. All questions are designed to be answered in an objective manner based on facts disclosed by the company.

Introduction

Environmental, social and governance (ESG) considerations are emerging as a major focus for fixed-income investors. We see an emerging global policy focus on ESG issues and their potential impact on credit quality, and will look to provide more transparency into how these different considerations are incorporated into credit analysis.

Governance is only one of many factors that determine an issuer's credit quality, where weaknesses can lead to deterioration in a company's credit and strengths can benefit a company's credit.

In recognition of the importance of corporate governance, we have created a governance assessment (GA) scoring tool. Our GA framework will initially focus on publicly traded non-financial companies that are rated by Moody's. But over time, we may extend our approach to include financial institutions and other Moody's-rated entities.

GAs are not credit ratings, and do not directly impact credit ratings or determine the scoring of any of the factors in a rating methodology grid. However, the information underlying a GA and its component scores may provide insights that are beneficial for our credit analysis. (For a more detailed explanation of our approach for considering environmental, social and governance risks in the determination of credit ratings, see "[General Principles for Assessing Environmental, Social and Governance Risks.](#)")

Our consideration of governance in credit ratings extends beyond the components outlined in the GA framework to incorporate qualitative/subjective aspects of governance (e.g., management credibility and track record, the appropriateness of financial policy, etc.) and includes judgments about the importance of all relevant factors in the context of each issuer's particular characteristics and circumstances. Our credit analysis may be informed by elements from the GA framework but does not require the use of the framework or GA score.

The GA provides a stand-alone assessment of certain aspects of governance risk, relative to defined benchmarks and considered from the perspective of the potential impact on creditors. The GA employs an objective and transparent framework that uses a fixed set of characteristics relevant to credit analysis.

This report is intended to inform companies, investors, financial intermediaries and other interested market participants about our governance assessment framework, its key components and sub-components, and the data and information sources we use. We also explain the scoring logic of the governance assessment.

Governance assessments: our general approach

The GA framework provides a standard and transparent approach for assessing governance risk through a focus on a fixed set of credit-relevant characteristics. It provides an isolated, stand-alone assessment of governance risk relative to Moody's defined benchmarks.

The five key governance components are: ownership and control; management compensation design and disclosure; board of director oversight and effectiveness; financial oversight and capital allocation; compliance, controls and reporting. In turn, each of the five components is scored by assessing up to three sub-components. Each of the five key components is equally weighted in the scoring framework.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

GAs are expressed using a four-point scale. Companies assigned GA-1 have overall governance practices that generally score at the highest level based on Moody's framework. In contrast, companies assigned GA-4 have overall governance practices that generally score at a lower level based on Moody's framework. Companies scoring GA-1 or GA-2 exhibit either a low or small number of elements of governance under the framework that might merit further examination as potential risks for creditors. Companies scoring GA-3 or GA-4 exhibit a number or many elements of governance under the framework that might merit further examination.

We believe the scoring framework will provide meaningful differentiation across issuers with regard to the potential impact of corporate governance on credit quality. However, no scoring framework can address all possible circumstances, and a GA does not include qualitative judgments nor does it consider that the credit importance of components may vary based upon characteristics and circumstances that are specific to each issuer.

GA scores and components of those scores

In arriving at a GA score for an issuer, Moody's evaluates five components, listed below with their assigned weightings to the overall score.

EXHIBIT 1

Explanation of the five governance components

Key governance components are equally weighted

Five governance components	Weighting	Explanation of the selection of governance components
Ownership and control	20%	Concentrated ownership or control of a management team can be a credit risk if it results in conflicts of interest and/or related party transactions that are not aligned with creditor interests
Management structure and compensation	20%	Compensation too heavily focused on short-term results or heavily skewed to equity returns might encourage excessive risk-taking by management, a negative for credit quality
Board of director oversight and effectiveness	20%	Boards have a critical oversight role in the area of risk management, including involvement in setting and monitoring the firm's risk appetite and ensuring that a proper risk management framework is in place, protecting the interest of all stakeholders including creditors
Financial oversight and capital allocation	20%	Controls over corporate use of capital are enhanced by governance structures that include reliable and consistent processes and systems for board members to oversee, evaluate and critique management's strategic plans
Compliance, controls and reporting	20%	Effective risk management can prevent operational and administrative failures that could have material impacts on cash flows and business risk. Financial reporting is essential to a better understanding of a company's credit risk.

Source: Moody's Investors Service

Overview of the scoring tool

A company's overall GA score is a weighted average derived from the sum of scores for the five components listed above. In turn, each component score is arrived at by scoring one, two or three sub-components. In total, there are 10 sub-components for the five components.

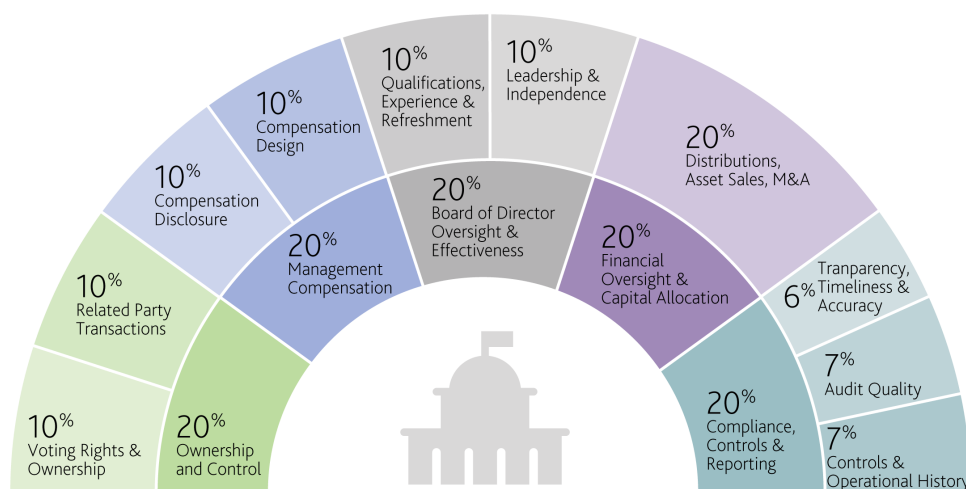
Each sub-component score is the total derived from the answers to a series of questions designed to assess the relative positioning of an entity with respect to the governance benchmark for the sub-component being tested. Each sub-component score is then multiplied by the relevant weighting percentage shown in Exhibit 2 on page 4. The weighted score for each of the sub-components is then summed to give the overall GA score, which is mapped to the GA-1 to GA-4 scale.

EXHIBIT 2

Governance assessment scoring tool

Governance assessment scoring tool

Governance Assessment Factors and Weightings



Source: Moody's Investors Service

In the framework, we score entities based upon 168 questions in total, of which many are mutually exclusive. All questions are addressed by Yes/No answers, and we assign points for answers that identify governance characteristics weaker than the benchmark for that characteristic. The fewer the points, the better the overall score. These benchmarks are explained in greater detail in the following sections, which describe each of the five components and their respective sub-components.

For each question, the further away from the benchmark an issuer is (or where there is no disclosure) the higher the score will be for that question. Each question is assigned a score, and the range of potential scores varies, depending on our view of the relative importance of that consideration. Lower overall scores for a sub-component indicate stronger alignment with the benchmark for that sub-component.

The scoring possibilities assigned for a question may be 0, 1, 2 or 3 points depending on the importance of the governance practice being examined and the degree to which it deviates from the benchmark for that characteristic. A score of 0 points is the best outcome, because the question is answered in a manner that indicates a corporate governance standard that we view as the creditor-friendly benchmark for that characteristic. For example, in assessing a company's ownership structure, a company that has a single class of stock with equal voting rights would receive a score of 0 points for that question, because we believe that ownership structure is better for creditors than one which has two or more classes of stock with unequal

voting rights. For companies with stock structures with unequal voting rights, we would assign 2 points to that question.

There are 28 questions that could receive a score of up to 2 points and seven questions that could receive a score of up to 3 points. The last group comprises questions on the most important specific governance characteristics related to voting rights and ownership structure; compensation design; audit quality; and board of director leadership.

Where companies do not disclose sufficient information publicly for a score to be assigned, we assign a score equivalent to the highest score possible for that question. In other words, the tool assumes that the company has characteristics in respect of that question that are at the lowest level. For some companies, particularly in developing markets, this may result in lower GA scores that reflect different disclosure standards in the particular market. As a result we may not assign GA scores in markets where disclosure standards are such that it would be difficult to assign scores based on disclosed data for a critical mass of companies in the particular market.

EXHIBIT 3

Governance scoring summary

Numerical weighted average of sub-components determines GA Score



Source: Moody's Investors Service

Data sources

Data used to create the GA scores are sourced only from public disclosures. No other data or information is used. Primary data sources are typically filings submitted to official regulatory authorities and stock exchanges. Other sources may include official articles of incorporation, board and committee charters, corporate bylaws or reports from official judicial authorities. In the US, for example, the sources used to identify data may include, but are not limited to, those shown in Exhibit 4.

EXHIBIT 4

Key governance data sources Governance scores are sourced only from publicly disclosed sources

Assessments do not include any material non-public information

Data sources - all regions	Data sources - US	Data sources - EMEA
Notice of Annual Meeting or equivalent	Form 10-Q (Quarterly Earnings Statement)	UK
Annual Financial Report or equivalent	Forms 3, 4, and 5 (Ownership & Control)	Form AR-01
Stock Exchange reporting requirements	Form 13-F, 13-D, and 13-G (shareholder registry filed by investors)	Directors Report – Section 172(1)
	Form NT (Delayed Filings)	Ownership and Voting Control – Schedule 7-13(2)
	Delaware Chancery Court rulings	
	Department of Justice filings	France
		Report on Internal Control and Corporate Governance – Article 221-3 and Article L. 225-37
		Report on Statutory Auditor Fees – Article 222-8
		Report on Share Issuance and Voting Rights – Article 223-16

Source: Moody's Investors Service

The above list is not exhaustive and many other official, publicly available sources are used in all jurisdictions where scores are assigned. By restricting the sourcing of data to official regulatory filings, we believe that the veracity and reliability of our data is increased.

In many jurisdictions where the governance assessments are performed, these filings are updated at least annually, which allows for refreshing of information used in the assessment process. However, where disclosures permit, governance assessment scores may be updated more frequently.

Assessment scale

We set out below the summary definitions for each score:

EXHIBIT 5

Governance assessment score description



Issuers assigned GA-1 disclose overall governance practices that generally score at the highest level based on Moody's framework



Issuers assigned GA-2 disclose overall governance practices that generally score at a high level based on Moody's framework



Issuers assigned GA-3 disclose overall governance practices that generally score at a moderate level based on Moody's framework



Issuers assigned GA-4 disclose overall governance practices that generally score at a lower level based on Moody's framework

Source: Moody's Investors Service

In the following sections we describe each of the five components and their respective subcomponents in more detail, and why we believe each of the five key components matter from a credit perspective. We also describe the questions used to score each subcomponent together with their respective weighting in the scoring of the relevant question. The scores for each sub-component are summed and then multiplied by the relevant weighting as described in Exhibit 2 to arrive at a final weighted average score which is then mapped to the ranges shown in exhibit 3 for the GA 1-4 scale. Also provided is a high-level summary of the key issues assessed in order to score an entity in respect of each sub-component.

Discussion of components

Component 1: Ownership and control

From a credit perspective, concentrated ownership and voting control can have either a positive or negative influence on corporate performance and credit outcomes. With concentrated ownership and control, there is increased potential for conflicts of interest and/or related party transactions that are not aligned with creditor interests. For example, concentrated ownership may result in the extraction of private benefits at the expense of other stakeholders. This could include an increased potential for management interference and greater potential for a lack of independent board-level oversight and controls, especially around capital allocation and related-party or related-person transactions.

Concentrated ownership can, under some conditions, be a positive influence on an issuer's credit profile because of its ability to insulate management teams from pressures presented by short-term market gyrations and to enhance business continuity and stability. Effective oversight mechanisms and strong protections for minority shareholders and creditors can help offset the risk of value extraction at companies with controlled ownership structures. Analytical judgment would be needed to assess the risk impact of the

interplay of these factors for an individual issuer. However, on average, concentrated ownership and/or separation of voting control from economic interest highlights a potential risk to credit quality.

In addition to overall ownership conditions, we assess the prevalence of institutional investors on a company's share registry. The presence of a broad variety of institutional holders may result in improved governance outcomes on average.

In addition, controlled companies can have less transparency and be more prone to actions detrimental to creditors than companies with diversified share registries. As a result, concentrated ownership and/or voting control presents a potential risk to credit quality that merits careful examination, particularly regarding the management and governance track record of the controlling shareholder and to assess for the presence of independent, empowered, experienced and engaged board directors.

Assessing ownership and control structure: sub-component questions

We focus on two key elements when examining a company's ownership and control risks: a) voting rights and ownership structure and b) related party transactions and conflicts of interest.

For voting rights, we assess an entity against a benchmark of a single class of ordinary shares, where each share is entitled to a single vote. For ownership structure, we assess an entity against a benchmark of widely dispersed ownership with institutional shareholders owning 67% or more, and where no individual share owner owns more than 10% of the company's ordinary shares/voting rights, senior management owns less than 5% of shares, and there are no cross shareholdings with other related companies.

EXHIBIT 6

Voting rights and ownership structure: sub-component questions

	Voting rights and ownership structure	Yes	No	Rules and requirements
1	All stock has equal voting rights	0	2	
2	Stock is widely held (at least 50 investors) with no shareholder having more than 10% of ownership of outstanding shares (except in the case of nominee custodial holders)	0	0	
3	There are one or more shareholders with more than 10% but less than 30% of shares outstanding (except in the case of nominee custodial holders)	1	0	Questions 2-5 are mutually exclusive. Only one can be answered Yes.
4	There is a shareholder with a block of equal to or more than 30% but less than 50% of shares outstanding (except in the case of nominee custodial holders)	2	0	
5	There is a shareholder with 50% or more of shares outstanding (except in the case of nominee custodial holders)	3	0	
6	At least 67% of shares outstanding are held by institutional investors	0	1	
7	Senior management as a whole own 5% or less of shares outstanding	0	0	
8	Senior management as a whole own more than 5% but less than 10% of shares outstanding	1	0	Questions 7-10 are mutually exclusive. Only one can be answered Yes.
9	Senior management as a whole own 10% or more of shares outstanding	2	0	
10	There is no disclosure regarding the share ownership of senior management	2	0	
11	The company has cross-shareholdings with other related companies	1	0	

Source: Moody's Investors Service

Related-party transactions (also called related-person transactions in some jurisdictions, or RPTs) can present risk to creditors and shareholders in terms of the efficiency of financial allocation decisions, possible fraud, use of inefficient or inappropriate vendors, or distortion of financial disclosures. However, they may also be efficient, particularly when they are motivated by benefits to the company, such as cost savings, and are effectively overseen by an informed and independent board of directors.

From a credit perspective, material conflicts of interest have the potential to weaken credit quality, especially when there is little information regarding oversight and approval by independent board members. It is important for companies to disclose policies and procedures in respect of material RPTs for periodic board-level review/approval. Companies with procedures that are conducted exclusively by independent directors to ensure that transactions are conducted on an arms-length basis/normal commercial terms, are viewed positively. Additionally, clearly defined processes for valuation of RPTs are important, as are processes where boards seek independent external valuation of all material RPTs.

For governance around the risk of RPTs, we assess an entity against a benchmark of disclosure of RPTs, especially with insiders, and the process for approving material RPTs including board level review, as outlined below.

EXHIBIT 7

Related party transactions and conflicts of interest: sub-component questions

	Related party transactions and conflicts of interest	Yes	No	Rules and requirements
12	There is disclosure regarding the board-level process for approving related party transactions (RPT) and conflicts of interest (Col)	0	2	If Q12 is answered No (there is no disclosure) then Q13-14 are Not Applicable. If Q12 is answered Yes then Q13-14 must be answered and are mutually exclusive.
13	Material RPT or Col require approval by a board committee or full board comprised of a majority of independent directors	0	0	
14	Material RPT or Col require approval by board committee or full board comprised of minority of independent directors or no approval required	1	0	If Q15 is Yes, then Q16-18 are Not Applicable. Scores for Questions 16-17 depend on the outcome of Question 12. If Q12 is answered Yes then scores for Q16-17 are lower than if Q12 is answered No.
15	The company has affirmative disclosure that there are no material RPT or COI with board or named executive officers	0	0	
16	There are reported RPT or Col with CEO and/or Chair of the Board	1	2	
17	There are reported RPT or Col with other board members or Named Executive Officers	1	2	
18	There is no disclosure about the existence of RPT or Col with board or Named Executive Officers	2	0	The total score for the subfactor cannot be lower than zero.
19	All material RPT or Col, as defined by the company are valued by an independent third party (audit or valuation firm)	-1	0	

Source: Moody's Investors Service

Component 2: Management compensation

Management compensation is important because it can negatively impact creditor interests if pay and compensation structures are not aligned with sustainable operating performance, could encourage excessive risk taking by management and/or if they incentivize short-term equity outcomes over a stable credit profile. In some cases compensation structures that are aligned specifically with shareholder interests (and neglect metrics aligned with credit investors) underperform peers. As debt investors do not share in the upside, management decisions driven by short-term and/or equity focused compensation rewards are a potential risk to debt holders.

Management compensation structure: sub-component questions

We focus on two key elements when examining a company's management compensation structure: a) compensation disclosure and b) compensation design.

For compensation disclosure, we assess an entity against a benchmark that all short-term and long-term performance metrics for the CEO are fully disclosed; information is provided on management's compensation targets; the board's discretion regarding the awarding of performance-related compensation grants is explained; and there is clear disclosure of all elements of compensation mix that comprise total realizable pay numbers. Additionally, we assess disclosure of compensation rationale, including the impact that compensation practices may have on risk-taking, appropriateness of compensation metrics and their relationship to the long-term financial performance on the company

EXHIBIT 8

Compensation disclosure: sub-component questions

Compensation disclosure		Yes	No
20	Total compensation figure for the CEO for previous year is disclosed	0	1
21	Total Equity payments for the CEO are disclosed	0	1
22	Options and other derivative payments for the CEO are disclosed	0	1
23	Pensions, perquisites and other payments for the CEO are disclosed	0	1
24	Long-term incentive plan compensation for the CEO is disclosed	0	1
25	Compensation rationale is disclosed	0	1
26	Board's role in evaluating Named Executive Officer pay and/or setting performance metrics is disclosed	0	1
27	Explanation of the board's ability to make discretionary payments greater than the stated limits or without achievement of target performance of the short and long-term incentive plan limits is disclosed	0	1
28	Explanation of why selected performance metrics are appropriate is disclosed	0	1

Source: Moody's Investors Service

For compensation design, we focus on whether management's compensation policies and practices are consistent with long-term value creation, the successful execution of strategy, and the effective balancing of shareholders' and creditors' interests. As a result we assess an entity against a benchmark where cash bonus is limited to 2x base salary; short-term incentives are 25% or less of total compensation; more than half of compensation is tied to operational targets or balance-sheet metrics, which could include return on capital, cash flow, or industry or company-specific performance metrics; less than 25% of compensation is tied to shareholder return or earnings targets; at least one-half of the long-term incentive plan is subject to vesting/performance periods of four years or longer; and company disclosures confirm the absence of a change in control arrangement.

EXHIBIT 9

Compensation design: sub-component questions

Compensation design (CEO only - most recent financial year)		Yes	No	Rules and requirements
29	Policy caps cash bonus payments at maximum of 2x base salary (regardless of actual payout)	0	0	Questions 29-33 are mutually exclusive. Only one can be answered Yes
30	Policy caps cash bonus payments at maximum of 4x base salary (regardless of actual payout)	1	0	
31	Policy caps bonus using other balance sheet or operation metrics	1	0	
32	Cash bonus exceeds 4x base salary or is uncapped	2	0	
33	No disclosure regarding size of cash bonus	2	0	

34	Short-term incentive (STI) payments comprise 25% or less of total incentive compensation paid	0	0	
35	STI payments are greater than 25% but less than or equal to 40% of total incentive compensation paid	1	0	Questions 34-37 are mutually exclusive. Only one can be answered yes.
36	STI payments comprise greater than 40% of total incentive compensation payments	2	0	
37	No disclosure regarding size of STI payments relative to total incentive compensation	2	0	
38	Greater than 50% of incentive compensation performance targets tied to operational or balance sheet metrics	0	0	
39	Greater than or equal to 25% but less than or equal to 50% of incentive compensation targets are tied to operational or balance sheet metrics	1	0	Questions 38-41 are mutually exclusive. Only one can be answered yes.
40	Less than 25% of incentive compensation targets are tied to operational or balance sheet metrics	2	0	
41	No disclosure regarding the incentive compensation performance targets	2	0	
42	Total shareholder return (TSR) or EPS is less than 25% of total incentive compensation metrics	0	0	
43	TSR or EPS is equal to or greater than 25% but less than or equal to 50% of total incentive compensation metrics	1	0	Questions 42-45 are mutually exclusive. Only one can be answered yes.
44	TSR or EPS is more than 50% of total incentive compensation metrics	2	0	
45	No disclosure regarding the percentage of TSR or EPS in compensation metrics	2	0	
46	50% or more of the long-term incentive (LTI) is subject to pre-set goals for performance over a period of four years or more	0	0	
47	50% or more of the LTI is subject to pre-set goals for performance over a period of equal to or greater than two years but less than four years	1	0	Questions 46-49 are mutually exclusive. Only one can be answered yes.
48	50% or more of the LTI is not subject to pre-set performance goals and vests/pays out based on service only	2	0	
49	There is no disclosure of performance metrics for the LTI.	2	0	
50	Variable pay is 70% or more of CEO total compensation.	0	0	
51	Variable pay greater than 50% but less than 70% of CEO total compensation.	1	0	Questions 50-54 are mutually exclusive. Only one can be answered yes.
52	Variable pay is 50% or less of the CEO's total compensation.	2	0	
53	There is no material variable component in the CEO's total compensation.	2	0	
54	There is no disclosure regarding the level of variable compensation for the CEO	2	0	
55	A sign-on or retention package paid to the CEO or a named executive officer in the past two years includes a multi-year guaranteed bonus	1	0	
56	There is disclosure regarding a policy for payment to the CEO for "involuntary severance without cause, resulting from a change in control."	0	3	If Question 56 is answered No, then Questions 57-60 are Not Applicable. If Q56 is answered Yes then Q57-60 must be answered. Questions 58-60 are not mutually exclusive.
57	The compensation policy allows for "change in control" payments to departing CEO	0	0	
58	Policy allows a "change in control" payout to a CEO that accelerates the vesting of time-based equity.	1	0	
59	Policy allows a "change in control" payout to a CEO that accelerates the vesting of performance-based equity beyond pro-rata.	1	0	
60	Policy allows a "change in control" payout that includes a cash payout to a CEO greater than two years' salary.	1	0	

Source: Moody's Investors Service

Component 3: Board of directors oversight and effectiveness

Board oversight and effectiveness are important because boards perform a critical role in oversight of risk management. Board oversight includes involvement in setting and monitoring the firm's risk appetite and ensuring that a proper risk management framework is in place. We view board oversight that protects the interests of all stakeholders, including creditors, positively.

The presence of more experienced, educated, diverse and independent directors on a board leads to improved outcomes for both equity and debt holders. Effective board processes, conducted by appropriately qualified directors, in concert with internal reporting and oversight functions, can contribute to lower average compensation packages for senior executives, more effective use of capital, and lower average incidence of corruption and fraud.

Board of directors oversight and effectiveness: sub-component questions

We focus on two key elements when examining a board's oversight and effectiveness: a) board of directors leadership and independence and b) director qualifications, experience and refreshment.

For board leadership and independence, we assess an entity against a benchmark where the board is made up of at least 75% independent directors; there is an independent chairperson and/or lead independent director; the level of gender diversity of board members is at least 30%; the board committees for audit, compensation, governance and nomination committees are composed entirely of independent directors; and there is a board special committee (excluding the executive committee) with at least 75% independent directors. The presence of a special committee is considered beneficial because many companies face risks that go beyond the scope of traditional audit, compensation and nomination committees. Such traditional committees may not have the appropriate skills and/or time to fully evaluate emerging risks faced by companies. In addition, we assess whether there are succession plans for the board, CEO and CFO that are disclosed; and whether the number of general board meetings in the prior year was between four and eight.

EXHIBIT 10

Board of director leadership: sub-component questions

	Board of director leadership	Yes	No	Rules and requirements
61	75% or more of the board is independent	0	0	
62	50% to less than 75% of the board are independent	1	0	Questions 61-64 are mutually exclusive. Only one can be answered Yes.
63	Less than 50% of the board is independent	2	0	
64	There is no disclosure regarding the independence of board directors	2	0	
65	30% or more current or former senior executives serve on the board	1	0	
66	The chair of the board is independent.	0	2	If Q66 is answered Yes, then Q67 is Not Applicable. If Question 66 is No, then Question 67 must also be answered.
67	In event of non-independent chair role, there is a senior or lead independent director.	0	1	
68	The board's audit committee is comprised 100% of members who are independent	0	0	Questions 68-72 are mutually exclusive. Only one can be answered Yes.
69	The board's audit committee is comprised of more than or equal to 75% and less than 100% members who are independent	1	0	
70	The board's audit committee is comprised of more than or equal to 50% and less than 75% members who are independent	2	0	
71	The board's audit committee is comprised of less than 50% of members who are independent or a board audit committee does not exist	3	0	
72	There is no disclosure regarding the existence of a board audit committee	3	0	

73	The board's compensation committee is comprised 100% of members who are independent	0	0	Questions 73-77 are mutually exclusive. Only one can be answered Yes.
74	The board's compensation committee is comprised of more than or equal to 75% and less than 100% members who are independent	1	0	
75	The board's compensation committee is comprised of more than or equal to 50% and less than 75% members who are independent	2	0	
76	The board's compensation committee is comprised of less than 50% members who are independent or a compensation committee does not exist	3	0	
77	There is no disclosure regarding the existence of a board compensation committee	3	0	
78	The board's governance and nomination committee is comprised 100% of members who are independent	0	0	Questions 78-82 are mutually exclusive. Only one can be answered Yes.
79	The board's governance and nomination committee is comprised of more than or equal to 75% and less than-100% members who are independent	1	0	
80	The board's governance and nomination committee is comprised of more than or equal to 50% and less than 75% members who are independent	2	0	
81	The board's governance and nomination committee is comprised of less than 50% members who are independent or there is no governance and nomination committee	3	0	
82	There is no disclosure regarding the existence of a board governance and nomination committee	3	0	
83	The board has a special committee (other than audit, compensation, executive or governance) that is at least 75% independent	0	0	Questions 83-85 are mutually exclusive. Only one can be answered Yes.
84	The board has a special committee (other than audit, compensation, executive or governance) that is less than 75% independent	1	0	
85	There is no disclosure regarding any special board-level committee (other than audit, compensation, executive or governance)	2	0	
86	Does the company disclose the gender identity of its board members?	0	2	If Question 86 is answered No, then Q87-89 are Not Applicable. If Q86 is answered Yes then Q87-89 are mutually exclusive. Only one can be answered Yes.
87	Directors in the predominant gender identity represent up to and including 70% of board members	0	0	
88	Directors in the predominant gender identity represent greater than 70% but less than 85% of board members	1	0	
89	Directors in the predominant gender identity represent greater than or equal to 85% of board members	2	0	
90	Does the company disclose the gender identity of its named executives officers?	0	1	If Question 90 is answered No, then Q 91-92 are Not Applicable. If Q90 is answered Yes, then Q91-92 are mutually exclusive. Only one can be answered Yes.
91	NEOs in the predominant gender identity represent up to 85% of NEOs	0	0	
92	NEOs in the predominant gender identity represent 85% or more of NEOs	1	0	
93	The company discloses a succession plan for its Board.	0	1	
94	The company discloses a succession plan for CEO	0	1	
95	The company discloses a succession plan for the CFO and other Named Executive Officers	0	1	
96	The board met between four and eight times in the previous year	0	0	Questions 96-99 are mutually exclusive. Only one can be answered Yes.
97	The Board met fewer than four times in the previous year	1	0	
98	The Board met more than eight times in the previous year	1	0	
99	There is no disclosure regarding the frequency of board meetings	1	0	

Source: Moody's Investors Service

Director qualifications, experience and refreshment

Director qualifications, experience and refreshment For governance around director qualifications, experience and refreshment we assess against a benchmark where directors of the board with 9 years or more of tenure make up at least 25% but less than 50% of the Board; 50% or less of important sub-committees are made up of long tenured directors; 50% or more of board members have experience as a senior manager or board member of a company in a related sector; and there is a board renewal policy in addition to a mandatory retirement age for board members. Additionally, we assess the attendance of directors at board meetings, with an overall average attendance rate of greater than 90% considered most preferable.

EXHIBIT 11

Director qualifications, experience and refreshment: sub-component questions

	Director qualifications, experience and refreshment	Yes	No	Rules and requirements
100	Directors with 10 years or more of tenure comprise at least 25% but less than 50% of the Board	0	0	
101	Directors with 10 years or more of tenure comprise 50% or more of the board	1	0	Questions 100-103 are mutually exclusive. Only one can be answered Yes.
102	Directors with 10 years or more of tenure comprise less than 25% of the board	1	0	
103	There is no disclosure regarding tenure of board service	2	0	
104	The audit committee is comprised of 50% or less of long-tenured directors	0	1	
105	The compensation committee is comprised of 50% or less of long-tenured directors	0	1	
106	The governance and nomination committee is comprised of 50% or less of long-tenured directors	0	1	
107	There is stated disclosure for board refreshment (apart from mandatory retirement age)	0	1	
108	The company discloses a policy regarding mandatory retirement age for the board	0	1	If Question 108 is No, then Q109 is Not Applicable. If Q108 is Yes then Q109 must be answered.
109	If a mandatory retirement age policy does exist do any board members exceed the retirement age?	1	0	
110	Does the company disclose the level of overall board attendance at annual meetings?	0	3	If Question 110 is No, then Q 111-114 are Not Applicable. If Q110 is Yes, then Q111-114 must be answered and are mutually exclusive.
111	Average attendance is greater than 90%	0	0	
112	Average attendance is greater than 75% but less than or equal to 90%	1	0	
113	Average attendance is greater than 60% but less than or equal to 75%	2	0	
114	Average attendance is 60% or less	3	0	
115	Does the company disclose the attendance rate of individual board members?	0	1	If Question 115 is No, then Question 116 is Not Applicable.
116	Did any board member attend less than 75% of board meetings?	1	0	
117	50% or more of the board directors have experience as a senior manager of a company in a related sector	0	0	Questions 117-119 are mutually exclusive. Only one can be answered Yes.
118	25% to less than 50% of board directors have experience as a senior manager of a company in a related sector	1	0	
119	Less than 25% of board directors have experience as a senior manager of a company in a related sector	2	0	

120	50% or more of the board directors have experience as a board director of a company in a related sector	0	0	Questions 120-122 are mutually exclusive. Only one can be answered Yes.
121	25% to less than 50% of the board directors have experience as a board director of a company in a related sector	1	0	
122	Less than 25% of the board directors have experience as a board director of a company in a related sector	2	0	

Source: Moody's Investors Service

Component 4: Financial oversight and capital allocation

Controls of corporate use of capital are important and are enhanced by governance structures that include reliable and consistent processes and systems for board members to oversee, evaluate and critique management's strategic plans. These mechanisms are predicated on effective processes for internal reporting, on independent valuation and approval of material transactions, and on an established system of checks and balances to ensure that corporate capital is used for the long-term benefit of all stakeholders. Higher levels of independence and effective oversight structures can improve capital allocation.

Financial oversight and capital allocation risks: sub-component questions

We focus on three key elements when examining a board's financial oversight and capital allocation: a) share buybacks and distributions (dividend policy), b) asset sales, divestitures or other transactions, and c) mergers and acquisitions.

For governance around share buybacks and distributions, we assess against a benchmark that policies for dividend and buybacks are disclosed; these policies are adhered to; and the company discloses a policy regarding maximum leverage.

With respect to mergers and acquisitions, we look for characteristics where all material M&A transactions are disclosed; where all material M&A transactions require approval by 100% of the independent board and/or committee; and where all material M&A transactions are evaluated by an independent third-party assessor.

With respect to asset divestitures, we look for disclosure of policies for approving all material asset sales and divestitures; where all material asset sales and divestitures require approval by 100% of the independent board and/or committee; and where all material asset sales and divestiture transactions are evaluated by an independent third party.

EXHIBIT 12

Share buyback and distributions (dividend policy), M&A, asset sales and other transactions

FINANCIAL OVERSIGHT AND CAPITAL ALLOCATION - Distributions, asset sales, M&A		Yes	No	Rules and requirements
123	The company has disclosed a policy regarding share repurchases	0	1	If Question 123 is No, then Q124 is Not Applicable
124	The company has adhered to its policy regarding share repurchases over the previous three years	0	1	
125	The company has disclosed a policy regarding regular dividends for ordinary shares	0	1	If Question 125 is No, then Q126 is Not Applicable
126	The company has adhered to its policy regarding the payment of regular dividends over the previous three years	0	1	
127	The company has disclosed a policy regarding maximum leverage.	0	1	

128	The company discloses a policy regarding board approval for M&A transactions	0	2	
129	Material mergers or acquisitions must be approved by board or committee comprised of 100% independent directors	0	0	If Question 128 is No, then Q129-131 are Not Applicable. If Question 128 is Yes, then Q129-131 must be answered and are mutually exclusive.
130	Material M&A transaction must be approved by Board or Committee comprised of a majority of independent directors	1	0	
131	No board or committee approval required or material M&A transactions must be approved by Board or Committee comprised of less than 50% independent directors	2	0	
132	Disclosed policy requires all material M&A transactions required to be evaluated by independent third-party	0	1	
133	The company discloses a process for board approval of asset sales or divestitures	0	2	
134	All material asset sales or divestitures must be approved by board or committee comprised of 100% independent directors	0	0	If Question 133 is No, then Q134-136 are Not Applicable. If Q133 is Yes, then Q134-136 must be answered and are mutually exclusive.
135	Material asset sales approved by board or committee comprised of a majority of independent directors	1	0	
136	No board or committee approval required or material asset sales must be approved by board or committee comprised of less than 50% independent directors	2	0	
137	Disclosed policy requires material asset sales or purchase transactions to be evaluated by independent third-party	0	1	

Source: Moody's Investors Service

Component 5: Compliance, controls and reporting

Effective risk management is important because it can prevent operational and administrative failures that could have material impacts on cash flows and business risk. Financial reporting is essential to a better understanding of a company's credit risk.

Financial controls and reporting are important for many reasons. A well-functioning and deeply embedded system of controls and of internal checks and balances demonstrates a focus on the importance of the mechanisms of risk management and oversight. Such a focus can reduce operational risk and the overall risk profile of a company.

Reliable, transparent and timely financial reporting is vital for efficient understanding of the business and financial profile of an entity. It can reduce the scope for insiders to mislead as to the true picture of a company's creditworthiness. Increased transparency can result in enhanced share price and cost of capital and there appears to be a positive correlation between transparency and credit quality.

Compliance, controls and reporting risks: sub-component questions

We consider three key elements when assessing a company's compliance, controls and reporting: a) transparency, timeliness and accuracy of financial reporting, b) audit quality, and c) compliance controls.

We assess transparency, timeliness and accuracy of financial reporting against a benchmark where audited financials have been published on a regular timeline over the prior three years; the most recent proxy statement was filed on a timely basis; and the previous five annual audit reports are unqualified.

EXHIBIT 13

Transparency, timeliness and accuracy of financial reporting: sub-component questions

Transparency, timeliness and accuracy of financial reporting		Yes	No
138	The company has published its audited financial statements annually (without deviation from stated timeline) over the previous three years	0	1
139	The auditors have expressed a non-qualified opinion on the company's most recent financial statements	0	2
140	The auditors have expressed a non-qualified opinion on the company's financial statements over the previous five years, not including the most recent year	0	1
141	The company published its most recent proxy statement, notice of annual meeting, management circular (or equivalent) according to required timeframe	0	1

Source: Moody's Investors Service

For governance around audit quality we assess against a benchmark where: the auditors are disclosed; any change in the auditor was caused by a rotation policy or the reason for the change was clearly disclosed and no disagreements with the auditors were filed; the board audit committee met four to eight times during the past year; and fees paid to the auditor for the audit over the past year exceed fees paid for other services.

EXHIBIT 14

Audit quality: sub-component questions

Audit quality		Yes	No	Rules and requirements
142	There has been no change to the auditor in the past five years.	0	0	If Question 142 is Yes, then Q143-146 are Not Applicable. If Q142 is No, then Q143-146 must be answered and are mutually exclusive.
143	The auditor has changed in the past five years, due to rotation policy.	0	0	
144	The auditor has changed in the past five years, however a clearly stated reason for the change was disclosed, and the company has had no filed disagreements with the former auditors.	0	0	
145	The auditor has changed in the last five years, with no reason disclosed for the transition.	1	0	
146	The auditor has changed in the last five years, due to disclosed auditor disagreements with the company.	2	0	
147	The audit committee met four to eight times during the year.	0	0	Questions 147-150 are mutually exclusive. Only one can be answered Yes.
148	The audit committee met more than eight times during the year.	1	0	
149	The audit committee less than four times during the year.	1	0	
150	There is no disclosure regarding frequency of audit committee meetings.	2	0	
151	The company paid its auditor more for audit services than for other services in the last fiscal year	0	1	

Source: Moody's Investors Service

For governance around compliance controls we assess against a benchmark including where: the company has not been the subject of any regulatory investigation regarding accounting practices or investor protection in the past two years; the company discloses that its chief compliance officer is required to report to the board in an executive session at least annually; the company discloses discussion of cyber security risk in annual filings; the chief information security officer (or equivalent) reports directly to the board at least annually; that the board identifies at least one director as having cyber risk experience; no named officer has been dismissed for personal conduct or misrepresentation in the past two years; the company has not been the subject of any anti-corruption action for the past five years; there is a formal ethics/whistleblower program; and the company has not been in violation of stock listing rules for over five years.

EXHIBIT 15

Compliance controls: sub-component questions

Compliance controls	Yes	No	Rules and requirements
152 The company has not been the subject of any regulatory action regarding accounting practices in the past two financial years	0	0	
153 The company has been formally investigated for accounting practices in the past two years but no settlement or judgment was made	1	0	If Question 152 is Yes, then Q153-154 are Not Applicable.
154 The company has been subject to fine, settlement or conviction for issues related to its accounting practices in the past two years?	2	0	
155 The company has not been the subject of any regulatory action regarding investor protection in the past two years	0	0	
156 The company has been investigated for issues related to securities fraud, misrepresentation, or deficiencies in investor protection in the past 2 years?	1	0	If Question 155 is Yes, then Q156-157 are Not Applicable.
157 The company has been subject to fine, settlement or conviction for issues related to securities fraud, misrepresentation, or deficiencies in investor protection in the past two years?	2	0	
158 Company discloses a formal requirement for the Chief Compliance Officer's to report directly to the board of directors in executive session at least annually	0	1	
159 The CEO or CFO have been dismissed for criminal or other prosecution for personal misconduct or misrepresentation in the past two years?	2	0	
160 The company has not been subject to any FCPA (or other anti-corruption code) action in the past five years	0	0	Questions 160-161 are mutually exclusive. Only one can be answered Yes.
161 The company has been found in violation of FCPA (or other anti-corruption code) in the past five years	1	0	
162 Does the company disclose discussion of cyber security risk in the annual report or notice of annual meeting?	0	2	
163 Does the company disclose a requirement for the chief cyber security officer (CSO) to report to the board of directors	0	2	If Question 163 is No, then Q164-166 are Not Applicable. Q164-166 are mutually exclusive. Only one can be answered Yes
164 The CSO reports directly to the full board	0	0	
165 The CSO reports directly to a board committee that is at least 75% independent	1	0	
166 The CSO does not report in person at formal board or committee meetings	2	0	
167 Does the board identify any board member with cyber security experience?	0	1	
168 The company has a formal ethics or compliance (whistleblower) program.	0	1	


Source: Moody's Investors Service

The following appendices provide illustrative examples of the governance characteristics of a hypothetical issuer and the resulting score under the GA tool. We have provided a sample of sub component scoring and high-level description of key governance issues that help distinguish between the four main GA scores. These examples are illustrative and are not actual scores.

Appendix A - Case Study - North American manufacturing issuer

EXHIBIT 16

GA-1 driven by dispersed share ownership; limited disclosure on financial allocation

	Governance Characteristics	Sub-Factor Score
	Ownership & control Stock widely held, with no shareholder owning more than 10% 0.0 No stated related party transaction(s) with named executive officer; board has adopted related party transaction process 0.0	
	Compensation design & disclosure All CEO compensation package metrics disclosed 0.0 Half of CEO package consists of long-term incentives that are tied to preset goals of three years; bonus cap exceeds 2x base salary 0.4	
	Board oversight & effectiveness Independent directors make up 93% of board, which met five times in 2017; chair of board independent. No succession plan disclosed 0.3 More than half of board comprised of directors with 10+ years tenure; 67% of compensation committee comprised of long tenured board (flagged) 0.3	
	Financial oversight & capital allocation Does not disclose share buyback policy; dividend and asset sales policy; and board's role in M&A and asset sales. 1.4	
	Compliance, controls & reporting Transparency, timeliness, accuracy of financial reporting 0.0 No changes to company's auditors 0.0 No settlements for anti-corruption or accounting practices 0.0	
		Total = 2.4


Note: This GA scorecard example highlights governance characteristics that may be disclosed for issuers that score GA-1. This is meant to be illustrative and does not represent an actual score.

Source: Moody's Investors Service

Appendix B - Case Study - Asia-Pacific telecommunications issuer

EXHIBIT 17

GA-2 driven by concentrated ownership and board; strong disclosure on financial allocation and compensation

	Governance Characteristics	Sub-Factor Score
	Ownership & control 52% of shares owned by one company; Less than two-thirds of shares held by institutional investors 0.4 No related party transactions and conflicts of interest 0.0	
	Compensation design & disclosure All CEO compensation package metrics disclosed 0.0 Short-term incentives comprise 40% of incentive payments; bonus capped using balance sheet metrics 0.7	
	Board oversight & effectiveness Independent directors make up 70% of board, 65% of audit committee; Chair of board is not independent 0.9 More than 25% of board comprised of directors with 10+ years tenure; Most directors lack related industry experience 0.4	
	Financial oversight & capital allocation Share buyback policy, dividend and asset sales policy disclosed; Board role in M&A and asset sales not disclosed. 1.4	
	Compliance, controls & reporting Transparency, timeliness, accuracy of financial reporting 0.0 No changes to company's auditors 0.0 No settlements for anti-corruption or accounting practices 0.0	
		Total = 3.8


Note: This GA scorecard example highlights governance characteristics that may be disclosed for issuers that score GA-2. This is meant to be illustrative and does not represent an actual score.

Source: Moody's Investors Service

Appendix C - Case Study - European utility issuer

EXHIBIT 18

GA-3 driven by concentrated ownership and board; limited disclosure on financial allocation

	Governance Characteristics	Sub-Factor Score
	Ownership & control	24% of shares owned by one individual; Less than two-thirds of shares held by institutional investors 0.4 No related party transactions and conflicts of interest 0.2
	Compensation design & disclosure	All CEO compensation package metrics disclosed 0.0 CEO package consists of 50-50 fixed pay vs. short-term incentives (flagged); bonus capped at 2x salary. 0.7
	Board oversight & effectiveness	Independent directors make up 53% of board (flagged); board met 15 times in 2017; Chair of board independent 0.8 More than 25% of board comprised of directors with 10+ years tenure (<25%); Most directors lack related industry experience 0.5
	Financial oversight & capital allocation	Share buyback policy disclosed Dividend and asset sales policy not disclosed; board role in M&A and asset sales not disclosed 1.6
	Compliance, controls & reporting	Transparency, timeliness, accuracy of financial reporting 0.7 Audit committee met 10 times (flagged) 0.0 No settlements for anti-corruption or accounting practices 0.0
		Total = 4.9


Note: This GA scorecard example highlights governance characteristics that may be disclosed for issuers that score GA-3. This is meant to be illustrative and does not represent an actual score.

Source: Moody's Investors Service

Appendix D - Case Study - European chemicals issuer

EXHIBIT 19

GA-4 driven by concentrated ownership and board; limited disclosure on financial allocation and CEO compensation

	Governance Characteristics	Sub-Factor Score
	Ownership & control	60% shares owned by one individual; Less than two-thirds of shares held by institutional investors 0.6 Related party transactions and conflicts of interest not disclosed 0.4
	Compensation design & disclosure	CEO compensation package not disclosed 0.7 CEO compensation design not disclosed 1.5
	Board oversight & effectiveness	Independent directors make up 50% of board, which met 12 times in 2017; chair of board is not independent and no independent lead director 1.5 More than 25% of board comprised of directors with 10+ years tenure; Most directors lack related industry experience 0.6
	Financial oversight & capital allocation	Share buyback policy, dividend and asset sales policy disclosed Board role in M&A & asset sales not disclosed. 1.4
	Compliance, controls & reporting	Transparency, timeliness, accuracy of financial reporting 0.0 Audit committee met 10 times 0.4 No settlements for anti-corruption or accounting practices 0.0
		Total = 7.1

Note: This GA scorecard example highlights governance characteristics that may be disclosed for issuers that score GA-4. This is meant to be illustrative and does not represent an actual score.

Source: Moody's Investors Service

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