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APPLICATION OF EL PASO ELECTRIC COMPANY TO CHANGE RATES	§ § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

EL PASO ELECTRIC COMPANY'S RESPONSE TO
TEXAS INDUSTRIAL ENERGY CONSUMERS'S FIRST REQUEST FOR INFORMATION
QUESTION NOS. TIEC 1-1 THROUGH TIEC 1-17

TABLE OF CONTENTS

AUGUST 9, 2021

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TIEC 1-1:

To the extent not already provided, please provide all schedules, exhibits, tables, figures and supporting workpapers in electronic format with all formulas intact supporting the testimonies of all EPE witnesses. This is an ongoing request for all subsequent testimonies.

RESPONSE:

All schedules, exhibits, tables, figures, and supporting workpapers in electronic format with all formulas intact supporting the testimonies of all El Paso Electric Company witnesses have been provided.

Preparer: Judith M. Parsons Title: Senior Regulatory Case Manager

Sponsor: James Schichtl Title: Vice President – Regulatory & Governmental Affairs

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TIEC 1-2:

Please provide copies of all publications and credit reports referenced in or considered by witnesses Ms. Jennifer E. Nelson and Ms. Lisa D. Budtke. This is an ongoing request for all subsequent testimonies filed by these witnesses.

RESPONSE:

El Paso Electric Company ("EPE") witness Lisa Budtke referred to the reports listed below in addition to those provided in response to STAFF 2-36.

TIEC 1-2 Attachment 1 Confidential - Moody's Investors Service, *Rating Action: Moody's places El Paso Electric on review for downgrade,* Jul. 1, 2019

TIEC 1-2 Attachment 2 Confidential - Moody's Investors Service, *Moody's downgrades El Paso Electric to Baa2, outlook stable,* Sep. 17, 2019.

TIEC 1-2 Attachment 3 – Moody's Investors Service Rating Methodology: Regulated Electric and Gas Utilities

TIEC 1-2 Attachment 4 – Fitch Ratings Corporate Rating Criteria

Please see TIEC 1-2, Attachments 5 through 53, for copies of documents referred or considered by EPE witness Jennifer E. Nelson.

Preparer:	Richard Gonzalez	Title:	Manager – Cash Management & Investor Relations
Sponsor:	Lisa Budtke	Title:	Director – Treasury Services & Investor Relations
	Jennifer E. Nelson		Assistant Vice President – Concentric Energy Advisors

PUBLIC

TIEC 1-2 Attachment 1 is a CONFIDENTIAL and/or HIGHLY SENSITIVE PROTECTED MATERIALS attachment.

PUBLIC

TIEC 1-2 Attachment 2 is a CONFIDENTIAL and/or HIGHLY SENSITIVE PROTECTED MATERIALS attachment.

JUNE 23, 2017 INFRASTRUCTURE

MOODY'S INVESTORS SERVICE

RATING METHODOLOGY

Regulated Electric and Gas Utilities

Table of Contents:

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This rating methodology replaces "Regulated Electric and Gas Utilities" last revised on December 23, 2013. We have updated some outdated links and removed certain issuer-specific information.

Summary

This rating methodology explains our approach to assessing credit risk for regulated electric and gas utilities globally. This document does not include an exhaustive treatment of all factors that are reflected in our ratings but should enable the reader to understand the qualitative considerations and financial information and ratios that are usually most important for ratings in this sector.[1]

This report includes a detailed scorecard which is a reference tool that can be used to approximate credit profiles within the regulated electric and gas utility sector in most cases. The scorecard provides summarized guidance for the factors that are generally most important in assigning ratings to companies in the regulated electric and gas utility industry. However, the scorecard is a summary that does not include every rating consideration. The weights shown for each factor in the scorecard represent an approximation of their importance for rating decisions but actual importance may vary substantially. In addition, the scorecard uses historical results while ratings are based on our forward-looking expectations. As a result, the scorecard-indicated outcome is not expected to match the actual rating of each company.

THIS METHODOLOGY WAS UPDATED ON THE DATES LISTED AS NOTED: ON SEPTEMBER 10, 2020, WE REMOVED POINT-IN-TIME REFERENCES AND ALSO MADE MINOR FORMATTING CHANGES; ON NOVEMBER 4, 2019, WE UPDATED SOME OUTDATED REFERENCES AND ALSO MADE MINOR FORMATTING CHANGES; ON FEBRUARY 22, 2019, WE AMENDED A REFERENCE TO A METHODOLOGY IN APPENDIX E AND REMOVED OUTDATED TEXT; ON AUGUST 2, 2018, WE MADE MINOR FORMATTING CHANGES THROUGHOUT THE METHODOLOGY; ON FEBRUARY 15, 2018, WE CORRECTED THE FORMATTING OF THE FACTOR 4: FINANCIAL STRENGTH TABLE ON PAGE 34; AND ON SEPTEMBER 27, 2017, WE REMOVED A DUPLICATE FOOTNOTE THAT WAS PLACED IN THE MIDDLE OF THE TEXT ON PAGE 7.

[1] This update may not be effective in some jurisdictions until certain requirements are met.

The scorecard contains four key factors that are important in our assessment for ratings in the regulated electric and gas utility sector:

1. Regulatory Framework
2. Ability to Recover Costs and Earn Returns
3. Diversification
4. Financial Strength

Some of these factors also encompass a number of sub-factors. There is also a notching factor for holding company structural subordination.

This rating methodology is not intended to be an exhaustive discussion of all factors that our analysts consider in assigning ratings in this sector. We note that our analysis for ratings in this sector covers factors that are common across all industries such as ownership, management, liquidity, corporate legal structure, governance and country related risks which are not explained in detail in this document, as well as factors that can be meaningful on a company-specific basis. Our ratings consider these and other qualitative considerations that do not lend themselves to a transparent presentation in a scorecard format. The scorecard used for this methodology reflects a decision to favor a relatively simple and transparent presentation rather than a more complex scorecard that might map scorecard-indicated outcomes more closely to actual ratings.

Highlights of this report include:

» An overview of the rated universe
» A summary of the rating methodology
» A discussion of the scorecard factors
» Comments on the rating methodology assumptions and limitations, including a discussion of rating considerations that are not included in the scorecard

The Appendices show the full scorecard (Appendix A), our approach to ratings within a utility family (Appendix B), a description of the various types of companies rated under this methodology (Appendix C), regional and other considerations (Appendix D), and treatment of power purchase agreements (Appendix E).

This methodology describes the analytical framework used in determining credit ratings. In some instances, our analysis is also guided by additional publications which describe our approach for analytical considerations that are not specific to any single sector. Examples of such considerations include but are not limited to: the assignment of short-term ratings, the relative ranking of different classes of debt and hybrid securities, how sovereign credit quality affects non-sovereign issuers, and the assessment of credit support from other entities.[2]

[2] A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

About the Rated Universe

This methodology applies to rate-regulated[3] electric and gas utilities that are not Networks[4]. Regulated electric and gas utilities are companies whose predominant[5] business is the sale of electricity and/or gas or related services under a rate-regulated framework, in most cases to retail customers. Also included under this methodology are rate-regulated utilities that own generating assets as any material part of their business, utilities whose charges or bills to customers include a meaningful component related to the electric or gas commodity, utilities whose rates are regulated at a sub-sovereign level (e.g. by provinces, states or municipalities), and companies providing an independent system operator function to an electric grid. Companies rated under this methodology are primarily rate-regulated monopolies or, in certain circumstances, companies that may not be outright monopolies but where government regulation effectively sets prices and limits competition.

This rating methodology covers regulated electric and gas utilities worldwide. These companies are engaged in the production, transmission, coordination, distribution and/or sale of electricity and/or natural gas, and they are either investor owned companies, commercially oriented government owned companies or, in the case of independent system operators, not-for-profit or similar entities. As detailed in Appendix C, this methodology covers a wide variety of companies active in the sector, including vertically integrated utilities, transmission and distribution utilities with retail customers and/or sub-sovereign regulation, local gas distribution utility companies (LDCs), independent system operators, and regulated generation companies. These companies may be operating companies or holding companies.

An over-arching consideration for regulated utilities is the regulatory environment in which they operate. The nature of regulation can vary significantly from jurisdiction to jurisdiction. While regulation is also a key consideration for networks, a utility's regulatory environment is in comparison often more dynamic and more subject to political intervention. The direct relationship that a regulated utility has with the retail customer, including billing for electric or gas supply that has substantial price volatility, can lead to a more politically charged rate-setting environment. Similarly, regulation at the sub-sovereign level is often more accessible for participation by interveners, including disaffected customers and the politicians who want their votes. Our views of regulatory environments evolve over time in accordance with our observations of regulatory, political, and judicial events that affect issuers in the sector.

This methodology pertains to regulated electric and gas utilities and excludes the following types of issuers, which are covered by separate rating methodologies: regulated networks, unregulated utilities and power companies, public power utilities, municipal joint action agencies, electric cooperatives, regulated water companies and natural gas pipelines.[6]

[3] Companies in many industries are regulated. We use the term rate-regulated to distinguish companies whose rates (by which we also mean tariffs or revenues in general) are set by regulators.

[4] Regulated Electric and Gas Networks are companies whose predominant business is purely the transmission and/or distribution of electricity and/or natural gas without involvement in the procurement or sale of electricity and/or gas; whose charges to customers thus do not include a meaningful commodity cost component; which sell mainly (or in many cases exclusively) to non-retail customers; and which are rate-regulated under a national framework.

[5] We generally consider a company to be predominantly a regulated electric and gas utility when a majority of its cash flows, prospectively and on a sustained basis, are derived from regulated electric and gas utility businesses. Since cash flows can be volatile (such that a company might have a majority of utility cash flows simply due to a cyclical downturn in its non-utility businesses), we may also consider the breakdown of assets and/or debt of a company to determine which business is predominant.

[6] A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

About this Rating Methodology

This report explains the rating methodology for regulated electric and gas utilities in six sections, which are summarized as follows:

1. Identification and Discussion of the Scorecard Factors

The scorecard in this rating methodology focuses on four factors. The four factors are comprised of sub-factors that provide further detail:

Factor / Sub-Factor Weighting - Regulated Utilities

Broad Scorecard Factors	Factor Weighting	Sub-Factor	Sub-Factor Weighting
Regulatory Framework	25%	Legislative and Judicial Underpinnings of the Regulatory Framework	12.5%
		Consistency and Predictability of Regulation	12.5%
Ability to Recover Costs and Earn Returns	25%	Timeliness of Recovery of Operating and Capital Costs	12.5%
		Sufficiency of Rates and Returns	12.5%
Diversification	10%	Market Position	5%*
		Generation and Fuel Diversity	5%**
Financial Strength, Key Financial Metrics	40%		
		CFO pre-WC + Interest / Interest	7.5%
		CFO pre-WC / Debt	15.0%
		CFO pre-WC – Dividends / Debt	10.0%
		Debt/Capitalization	7.5%
Total	100%		100%
Notching Adjustment			
Holding Company Structural Subordination			0 to -3

*10% weight for issuers that lack generation; **0% weight for issuers that lack generation

2. Measurement or Estimation of Factors in the Scorecard

We explain our general approach for scoring each factor and show the weights used in the scorecard. We also provide a rationale for why each of these scorecard components is meaningful as a credit indicator. The information used in assessing the sub-factors is generally found in or calculated from information in company financial statements, derived from other observations or estimated by our analysts. All of the quantitative credit metrics incorporate Moody's standard adjustments to income statement, cash flow statement and balance sheet amounts for restructuring, impairment, off-balance sheet accounts, receivable securitization programs, under-funded pension obligations, and recurring operating leases.[7]

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of a company's performance as well as for peer comparisons. We utilize historical data (in most cases, an average of the last three years of reported results) in the scorecard. However, the factors in the scorecard can be assessed using various time

[7] For more information, see our cross-sector methodology that describes our standard adjustments in the analysis of non-financial corporations. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

periods. For example, rating committees may find it analytically useful to examine both historic and expected future performance for periods of several years or more, or for individual twelve-month periods.

3. Mapping Scorecard Factors to the Rating Categories

After estimating or calculating each sub-factor, the outcomes for each of the sub-factors are mapped to a broad Moody's rating category (Aaa, Aa, A, Baa, Ba, B, or Caa, also called alpha categories).

4. Assumptions Limitations and Rating Considerations Not Included in the Scorecard

This section discusses limitations in the use of the scorecard to map against actual ratings, some of the additional factors that are not included in the scorecard but can be important in determining ratings, and limitations and assumptions that pertain to the overall rating methodology.

5. Determining the Overall Scorecard-Indicated Outcome[8]

To determine the overall scorecard-indicated outcome, we convert each of the sub-factor ratings into a numeric value based upon the scale below.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	3	6	9	12	15	18	20

The numerical score for each sub-factor is multiplied by the weight for that sub-factor with the results then summed to produce a composite weighted-factor score. The composite weighted factor score is then mapped back to an alphanumeric rating based on the ranges in the table below.

Scorecard-Indicated Outcome

Scorecard-Indicated Outcome	Aggregate Weighted Total Factor Score
Aaa	x < 1.5
Aa1	1.5 ≤ x < 2.5
Aa2	2.5 ≤ x < 3.5
Aa3	3.5 ≤ x < 4.5
A1	4.5 ≤ x < 5.5
A2	5.5 ≤ x < 6.5
A3	6.5 ≤ x < 7.5
Baa1	7.5 ≤ x < 8.5
Baa2	8.5 ≤ x < 9.5
Baa3	9.5 ≤ x < 10.5
Ba1	10.5 ≤ x < 11.5
Ba2	11.5 ≤ x < 12.5
Ba3	12.5 ≤ x < 13.5

[8] In general, the scorecard-indicated outcome is oriented to the Corporate Family Rating (CFR) for speculative-grade issuers and the senior unsecured rating for investment-grade issuers. For issuers that benefit from ratings uplift due to parental support, government ownership or other institutional support, the scorecard-indicated outcome is oriented to the baseline credit assessment. For more information, see our cross-sector methodology that describes our general approach for assessing government-related issuers. Individual debt instrument ratings also factor in decisions on notching for seniority level and collateral. For more information, see our cross-sector methodology that describes principles related to loss given default for speculative grade non-financial companies and also our cross-sector methodology that describes the alignment of corporate instrument ratings based on differences in security and priority of claim. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Scorecard-Indicated Outcome

Scorecard-Indicated Outcome	Aggregate Weighted Total Factor Score
B1	13.5 ≤ x < 14.5
B2	14.5 ≤ x < 15.5
B3	15.5 ≤ x < 16.5
Caa1	16.5 ≤ x < 17.5
Caa2	17.5 ≤ x < 18.5
Caa3	18.5 ≤ x < 19.5
Ca	x ≥ 19.5

For example, an issuer with a composite weighted factor score of 11.7 would have a Ba2 scorecard-indicated outcome.

6. Appendices

The Appendices present a full scorecard and provide additional commentary and insights on our view of credit risks in this industry.

Discussion of the Scorecard Factors

Our analysis of electric and gas utilities focuses on four broad factors:

» Regulatory Framework

» Ability to Recover Costs and Earn Returns

» Diversification

» Financial Strength

There is also a notching factor for holding company structural subordination.

Factor 1: Regulatory Framework (25%)

Why It Matters

For rate-regulated utilities, which typically operate as a monopoly, the regulatory environment and how the utility adapts to that environment are the most important credit considerations. The regulatory environment is comprised of two factors - the Regulatory Framework and its corollary factor, the Ability to Recover Costs and Earn Returns. Broadly speaking, the Regulatory Framework is the foundation for how all the decisions that affect utilities are made (including the setting of rates), as well as the predictability and consistency of decision-making provided by that foundation. The Ability to Recover Costs and Earn Returns relates more directly to the actual decisions, including their timeliness and the rate-setting outcomes.

Utility rates[9] are set in a political/regulatory process rather than a competitive or free-market process; thus, the Regulatory Framework is a key determinant of the success of utility. The Regulatory Framework has many components: the governing body and the utility legislation or decrees it enacts, the manner in which regulators are appointed or elected, the rules and procedures promulgated by those regulators, the judiciary

[9] In jurisdictions where utility revenues include material government subsidy payments, we consider utility rates to be inclusive of these payments, and we thus evaluate sub-factors 1a, 1b, 2a and 2b in light of both rates and material subsidy payments. For example, we would consider the legal and judicial underpinnings and consistency and predictability of subsidies as well as rates.

that interprets the laws and rules and that arbitrates disagreements, and the manner in which the utility manages the political and regulatory process. In many cases, utilities have experienced credit stress or default primarily or at least secondarily because of a break-down or obstacle in the Regulatory Framework – for instance, laws that prohibited regulators from including investments in uncompleted power plants or plants not deemed "used and useful" in rates, or a disagreement about rate-making that could not be resolved until after the utility had defaulted on its debts.

How We Assess Legislative and Judicial Underpinnings of the Regulatory Framework for the Scorecard

For this sub-factor, we consider the scope, clarity, transparency, supportiveness and granularity of utility legislation, decrees, and rules as they apply to the issuer. We also consider the strength of the regulator's authority over rate-making and other regulatory issues affecting the utility, the effectiveness of the judiciary or other independent body in arbitrating disputes in a disinterested manner, and whether the utility's monopoly has meaningful or growing carve-outs. In addition, we look at how well developed the framework is – both how fully fleshed out the rules and regulations are and how well tested it is – the extent to which regulatory or judicial decisions have created a body of precedent that will help determine future rate-making. Since the focus of our scoring is on each issuer, we consider how effective the utility is in navigating the regulatory framework – both the utility's ability to shape the framework and adapt to it.

A utility operating in a regulatory framework that is characterized by legislation that is credit supportive of utilities and eliminates doubt by prescribing many of the procedures that the regulators will use in determining fair rates (which legislation may show evidence of being responsive to the needs of the utility in general or specific ways), a long history of transparent rate-setting, and a judiciary that has provided ample precedent by impartially adjudicating disagreements in a manner that addresses ambiguities in the laws and rules will receive higher scores in the Legislative and Judicial Underpinnings sub-factor. A utility operating in a regulatory framework that, by statute or practice, allows the regulator to arbitrarily prevent the utility from recovering its costs or earning a reasonable return on prudently incurred investments, or where regulatory decisions may be reversed by politicians seeking to enhance their populist appeal will receive a much lower score.

In general, we view national utility regulation as being less liable to political intervention than regulation by state, provincial or municipal entities, so the very highest scoring in this sub-factor is reserved for this category. However, we acknowledge that states and provinces in some countries may be larger than small nations, such that their regulators may be equally "above-the-fray" in terms of impartial and technically-oriented rate setting, and very high scoring may be appropriate.

The relevant judicial system can be a major factor in the regulatory framework. This is particularly true in litigious societies like the United States, where disagreements between the utility and its state or municipal regulator may eventually be adjudicated in federal district courts or even by the US Supreme Court. In addition, bankruptcy proceedings in the US take place in federal courts, which have at times been able to impose rate settlement agreements on state or municipal regulators. As a result, the range of decisions available to state regulators may be effectively circumscribed by court precedent at the state or federal level, which we generally view as favorable for the credit- supportiveness of the regulatory framework.

Electric and gas utilities are generally presumed to have a strong monopoly that will continue into the foreseeable future, and this expectation has allowed these companies to have greater leverage than companies in other sectors with similar ratings. Thus, the existence of a monopoly in itself is unlikely to be a driver of strong scoring in this sub-factor. On the other hand, a strong challenge to the monopoly could cause lower scoring, because the utility can only recover its costs and investments and service its debt if customers purchase its services. There have been some instances of incursions into utilities' monopoly, including municipalization, self-generation, distributed generation with net metering, or unauthorized use

(beyond the level for which the utility receives compensation in rates). Incursions that are growing significantly or having a meaningful impact on rates for customers that remain with the utility could have a negative impact on scoring of this sub-factor and on factor 2 - Ability to Recover Costs and Earn Returns.

The scoring of this sub-factor may not be the same for every utility in a particular jurisdiction. We have observed that some utilities appear to have greater sway over the relevant utility legislation and promulgation of rules than other utilities – even those in the same jurisdiction. The content and tone of publicly filed documents and regulatory decisions sometimes indicates that the management team at one utility has better responsiveness to and credibility with its regulators or legislators than the management at another utility.

While the underpinnings to the regulatory framework tend to change relatively slowly, they do evolve, and our factor scoring will seek to reflect that evolution. For instance, a new framework will typically become tested over time as regulatory decisions are issued, or perhaps litigated, thereby setting a body of precedent. Utilities may seek changes to laws in order to permit them to securitize certain costs or collect interim rates, or a jurisdiction in which rates were previously recovered primarily in base rate proceedings may institute riders and trackers. These changes would likely impact scoring of sub-factor 2b - Timeliness of Recovery of Operating and Capital Costs, but they may also be sufficiently significant to indicate a change in the regulatory underpinnings. On the negative side, a judiciary that had formerly been independent may start to issue decisions that indicate it is conforming its decisions to the expectations of an executive branch that wants to mandate lower rates.

Factor 1a: Legislative and Judicial Underpinnings of the Regulatory Framework (12.5%)

Aaa	Aa	A	Baa
Utility regulation occurs under a fully developed framework that is national in scope based on legislation that provides the utility a nearly absolute monopoly (see note 1) within its service territory, an unquestioned assurance that rates will be set in a manner that will permit the utility to make and recover all necessary investments, an extremely high degree of clarity as to the manner in which utilities will be regulated and prescriptive methods and procedures for setting rates. Existing utility law is comprehensive and supportive such that changes in legislation are not expected to be necessary; or any changes that have occurred have been strongly supportive of utilities credit quality in general and sufficiently forward-looking so as to address problems before they occurred. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility should they occur, including access to national courts, very strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs under a fully developed national, state or provincial framework based on legislation that provides the utility an extremely strong monopoly (see note 1) within its service territory, a strong assurance, subject to limited review, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a very high degree of clarity as to the manner in which utilities will be regulated and reasonably prescriptive methods and procedures for setting rates. If there have been changes in utility legislation, they have been timely and clearly credit supportive of the issuer in a manner that shows the utility has had a strong voice in the process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur including access to national courts, strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs under a well-developed national, state or provincial framework based on legislation that provides the utility a very strong monopoly (see note 1) within its service territory, an assurance, subject to reasonable prudency requirements, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a high degree of clarity as to the manner in which utilities will be regulated, and overall guidance for methods and procedures for setting rates. If there have been changes in utility legislation, they have been mostly timely and on the whole credit supportive for the issuer, and the utility has had a clear voice in the legislative process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur, including access to national courts, clear judicial precedent in the interpretation of utility law, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation that provides the utility a strong monopoly within its service territory that may have some exceptions such as greater self-generation (see note 1), a general assurance that, subject to prudency requirements that are mostly reasonable, rates will be set will be set in a manner that will permit the utility to make and recover all necessary investments, reasonable clarity as to the manner in which utilities will be regulated and overall guidance for methods and procedures for setting rates; or (ii) under a new framework where independent and transparent regulation exists in other sectors. If there have been changes in utility legislation, they have been credit supportive or at least balanced for the issuer but potentially less timely, and the utility had a voice in the legislative process. There is either (i) an independent judiciary that can arbitrate disagreements between the regulator and the utility, including access to courts at least at the state or provincial level, reasonably clear judicial precedent in the interpretation of utility laws, and a generally strong rule of law; or (ii) regulation has been applied (under a well-developed framework) in a manner such that redress to an independent arbiter has not been required. We expect these conditions to continue.

Ba	B	Caa
Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory that is generally strong but may have a greater level of exceptions (see note 1), and that, subject to prudency requirements which may be stringent, provides a general assurance (with somewhat less certainty) that rates will be set will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where the jurisdiction has a history of less independent and transparent regulation in other sectors. Either: (i) the judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law; or (ii) where there is no independent arbiter, the regulation has mostly been applied in a manner such redress has not been required. We expect these conditions to continue.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility monopoly within its service territory that is reasonably strong but may have important exceptions, and that, subject to prudency requirements which may be stringent or at times arbitrary, provides more limited or less certain assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect less independent and transparent regulation, based either on the regulator's history in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law. Alternately, where there is no independent arbiter, the regulation has been applied in a manner that often requires some redress adding more uncertainty to the regulatory framework. There may be a periodic risk of creditor-unfriendly government intervention in utility markets or rate-setting.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory, but with little assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect unpredictable or adverse regulation, based either on the jurisdiction's history of in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or is viewed as not being fully independent of the regulator or other political pressure. Alternately, there may be no redress to an effective independent arbiter. The ability of the utility to enforce its monopoly or prevent uncompensated usage of its system may be limited. There may be a risk of creditor-unfriendly nationalization or other significant intervention in utility markets or rate-setting.

Note 1: The strength of the monopoly refers to the legal, regulatory and practical obstacles for customers in the utility's territory to obtain service from another provider. Examples of a weakening of the monopoly would include the ability of a city or large user to leave the utility system to set up their own system, the extent to which self-generation is permitted (e.g. cogeneration) and/or encouraged (e.g., net metering, DSM generation). At the lower end of the ratings spectrum, the utility's monopoly may be challenged by pervasive theft and unauthorized use. Since utilities are generally presumed to be monopolies, a strong monopoly position in itself is not sufficient for a strong score in this sub-factor, but a weakening of the monopoly can lower the score.

How We Assess Consistency and Predictability of Regulation for the Scorecard

For the Consistency and Predictability sub-factor, we consider the track record of regulatory decisions in terms of consistency, predictability and supportiveness. We evaluate the utility's interactions in the regulatory process as well as the overall stance of the regulator toward the utility.

In most jurisdictions, the laws and rules seek to make rate-setting a primarily technical process that examines costs the utility incurs and the returns on investments the utility needs to earn so it can make investments that are required to build and maintain the utility infrastructure - power plants, electric transmission and distribution systems, and/or natural gas distribution systems. When the process remains technical and transparent such that regulators can support the financial health of the utility while balancing their public duty to assure that reliable service is provided at a reasonable cost, and when the utility is able to align itself with the policy initiatives of the governing jurisdiction, the utility will receive higher scores in this sub-factor. When the process includes substantial political intervention, which could take the form of legislators or other government officials publicly second-guessing regulators, dismissing regulators who have approved unpopular rate increases, or preventing the implementation of rate increases, or when regulators ignore the laws/rules to deliver an outcome that appears more politically motivated, the utility will receive lower scores in this sub-factor.

As with the prior sub-factor, we may score different utilities in the same jurisdiction differently, based on outcomes that are more or less supportive of credit quality over a period of time. We have observed that some utilities are better able to meet the expectations of their customers and regulators, whether through better service, greater reliability, more stable rates or simply more effective regulatory outreach and communication. These utilities typically receive more consistent and credit supportive outcomes, so they will score higher in this sub-factor. Conversely, if a utility has multiple rapid rate increases, chooses to submit major rate increase requests during a sensitive election cycle or a severe economic downturn, has chronic customer service issues, is viewed as frequently providing incomplete information to regulators, or is tone deaf to the priorities of regulators and politicians, it may receive less consistent and supportive outcomes and thus score lower in this sub-factor.

In scoring this sub-factor, we will primarily evaluate the actions of regulators, politicians and jurists rather than their words. Nonetheless, words matter when they are an indication of future action. We seek to differentiate between political rhetoric that is perhaps oriented toward gaining attention for the viewpoint of the speaker and rhetoric that is indicative of future actions and trends in decision-making.

Factor 1b: Consistency and Predictability of Regulation (12.5%)

Aaa	Aa	A	Baa
The issuer's interaction with the regulator has led to a strong, lengthy track record of predictable, consistent and favorable decisions. The regulator is highly credit supportive of the issuer and utilities in general. We expect these conditions to continue.	The issuer's interaction with the regulator has a led to a considerable track record of predominantly predictable and consistent decisions. The regulator is mostly credit supportive of utilities in general and in almost all instances has been highly credit supportive of the issuer. We expect these conditions to continue.	The issuer's interaction with the regulator has led to a track record of largely predictable and consistent decisions. The regulator may be somewhat less credit supportive of utilities in general, but has been quite credit supportive of the issuer in most circumstances. We expect these conditions to continue.	The issuer's interaction with the regulator has led to an adequate track record. The regulator is generally consistent and predictable, but there may some evidence of inconsistency or unpredictability from time to time, or decisions may at times be politically charged. However, instances of less credit supportive decisions are based on reasonable application of existing rules and statutes and are not overly punitive. We expect these conditions to continue.

Ba	B	Caa
We expect that regulatory decisions will demonstrate considerable inconsistency or unpredictability or that decisions will be politically charged, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. The regulator may have a history of less credit supportive regulatory decisions with respect to the issuer, but we expect that the issuer will be able to obtain support when it encounters financial stress, with some potentially material delays. The regulator's authority may be eroded at times by legislative or political action. The regulator may not follow the framework for some material decisions.	We expect that regulatory decisions will be largely unpredictable or even somewhat arbitrary, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. However, we expect that the issuer will ultimately be able to obtain support when it encounters financial stress, albeit with material or more extended delays. Alternately, the regulator is untested, lacks a consistent track record, or is undergoing substantial change. The regulator's authority may be eroded on frequent occasions by legislative or political action. The regulator may more frequently ignore the framework in a manner detrimental to the issuer.	We expect that regulatory decisions will be highly unpredictable and frequently adverse, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. Alternately, decisions may have credit supportive aspects, but may often be unenforceable. The regulator's authority may have been seriously eroded by legislative or political action. The regulator may consistently ignore the framework to the detriment of the issuer.

Factor 2: Ability to Recover Costs and Earn Returns (25%)

Why It Matters

This scorecard factor examines the ability of a utility to recover its costs and earn a return over a period of time, including during differing market and economic conditions. While the Regulatory Framework looks at the transparency and predictability of the rules that govern the decision-making process with respect to utilities, the Ability to Recover Costs and Earn Returns evaluates the regulatory elements that directly impact the ability of the utility to generate cash flow and service its debt over time. The ability to recover prudently incurred costs on a timely basis and to attract debt and equity capital are crucial credit considerations. The inability to recover costs, for instance if fuel or purchased power costs ballooned during a rate freeze period, has been one of the greatest drivers of financial stress in this sector, as well as the cause of some utility defaults. In a sector that is typically free cash flow negative (due to large capital expenditures and dividends) and that routinely needs to refinance very large maturities of long-term debt, investor concerns about a lack of timely cost recovery or the sufficiency of rates can, in an extreme scenario, strain access to capital markets and potentially lead to insolvency of the utility. While our scoring for the Ability to Recover Costs and Earn Returns may primarily be influenced by our assessment of the regulatory relationship, it can also be highly impacted by the management and business decisions of the utility.

How We Assess Ability to Recover Costs and Earn Returns

The timeliness and sufficiency of rates are scored as separate sub-factors; however, they are interrelated. Timeliness can have an impact on our view of what constitutes sufficient returns, because a strong assurance of timely cost recovery reduces risk. Conversely, utilities may have a strong assurance that they will earn a full return on certain deferred costs until they are able to collect them, or their generally strong returns may allow them to weather some rate lag on recovery of construction-related capital expenditures. The timeliness of cost recovery is particularly important in a period of rapidly rising costs. Utilities have benefitted from low interest rates and generally decreasing fuel costs and purchased power costs, but these market conditions could easily reverse. For example, fuel is a large component of total costs for vertically integrated utilities and for natural gas utilities, and fuel prices are highly volatile, so the timeliness of fuel and purchased power cost recovery is especially important.

While Factors 1 and 2 are closely inter-related, scoring of these factors will not necessarily be the same. We have observed jurisdictions where the Regulatory Framework caused considerable credit concerns – perhaps it was untested or going through a transition to de-regulation, but where the track record of rate case outcomes was quite positive, leading to a higher score in the Ability to Recover Costs and Earn Returns. Conversely, there have been instances of strong Legislative and Judicial Underpinnings of the Regulatory Framework where the commission has ignored the framework (which would affect Consistency and Predictability of Regulation as well as Ability to Recover Costs and Earn Returns) or has used extraordinary measures to prevent or defer an increase that might have been justifiable from a cost perspective but would have caused rate shock.

One might surmise that Factors 2 and 4 should be strongly correlated, since a good Ability to Recover Costs and Earn Returns would normally lead to good financial metrics. However, the scoring for the Ability to Recover Costs and Earn Returns sub-factor places more emphasis on our expectation of timeliness and sufficiency of rates over time; whereas financial metrics may be impacted by one-time events, market conditions or construction cycles - trends that we believe could normalize or even reverse.

How We Assess Timeliness of Recovery of Operating and Capital Costs for the Scorecard

The criteria we consider include provisions and cost recovery mechanisms for operating costs, mechanisms that allow actual operating and/or capital expenditures to be trued-up periodically into rates without having to file a rate case (this may include formula rates, rider and trackers, or the ability to periodically adjust rates

for construction work in progress) as well as the process and timeframe of general tariff/base rate cases – those that are fully reviewed by the regulator, generally in a public format that includes testimony of the utility and other stakeholders and interest groups. We also look at the track record of the utility and regulator for timeliness. For instance, having a formula rate plan is positive, but if the actual process has included reviews that are delayed for long periods, it may dampen the benefit to the utility. In addition, we seek to estimate the lag between the time that a utility incurs a major construction expenditures and the time that the utility will start to recover and/or earn a return on that expenditure.

How We Assess Sufficiency of Rates and Returns for the Scorecard

The criteria we consider include statutory protections that assure full cost recovery and a reasonable return for the utility on its investments, the regulatory mechanisms used to determine what a reasonable return should be, and the track record of the utility in actually recovering costs and earning returns. We examine outcomes of rate cases/tariff reviews and compare them to the request submitted by the utility, to prior rate cases/tariff reviews for the same utility and to recent rate/tariff decisions for a peer group of comparable utilities. In this context, comparable utilities are typically utilities in the same or similar jurisdiction. In cases where the utility is unique or nearly unique in its jurisdiction, comparison will be made to other peers with an adjustment for local differences, including prevailing rates of interest and returns on capital, as well as the timeliness of rate-setting. We look at regulatory disallowances of costs or investments, with a focus on their financial severity and also on the reasons given by the regulator, in order to assess the likelihood that such disallowances will be repeated in the future.

Factor 2a: Timeliness of Recovery of Operating and Capital Costs (12.5%)

Aaa	Aa	A	Baa
Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous return on all incremental capital investments, with statutory provisions in place to preclude the possibility of challenges to rate increases or cost recovery mechanisms. By statute and by practice, general rate cases are efficient, focused on an impartial review, quick, and permit inclusion of fully forward-looking costs.	Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous or near-contemporaneous return on most incremental capital investments, with minimal challenges by regulators to companies' cost assumptions. By statute and by practice, general rate cases are efficient, focused on an impartial review, of a very reasonable duration before non-appealable interim rates can be collected, and primarily permit inclusion of forward-looking costs.	Automatic cost recovery mechanisms provide full and reasonably timely recovery of fuel, purchased power and all other highly variable operating expenses. Material capital investments may be made under tariff formulas or other rate-making permitting reasonably contemporaneous returns, or may be submitted under other types of filings that provide recovery of cost of capital with minimal delays. Instances of regulatory challenges that delay rate increases or cost recovery are generally related to large, unexpected increases in sizeable construction projects. By statute or by practice, general rate cases are reasonably efficient, primarily focused on an impartial review, of a reasonable duration before rates (either permanent or non-refundable interim rates) can be collected, and permit inclusion of important forward-looking costs.	Fuel, purchased power and all other highly variable expenses are generally recovered through mechanisms incorporating delays of less than one year, although some rapid increases in costs may be delayed longer where such deferrals do not place financial stress on the utility. Incremental capital investments may be recovered primarily through general rate cases with moderate lag, with some through tariff formulas. Alternately, there may be formula rates that are untested or unclear. Potentially greater tendency for delays due to regulatory intervention, although this will generally be limited to rates related to large capital projects or rapid increases in operating costs.

Ba	B	Caa
There is an expectation that fuel, purchased power or other highly variable expenses will eventually be recovered with delays that will not place material financial stress on the utility, but there may be some evidence of an unwillingness by regulators to make timely rate changes to address volatility in fuel, or purchased power, or other market-sensitive expenses. Recovery of costs related to capital investments may be subject to delays that are somewhat lengthy, but not so pervasive as to be expected to discourage important investments.	The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to material delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be subject to delays that are material to the issuer, or may be likely to discourage some important investment.	The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to extensive delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be uncertain, subject to delays that are extensive, or that may be likely to discourage even necessary investment.

Note: Tariff formulas include formula rate plans as well as trackers and riders related to capital investment.

Factor 2b: Sufficiency of Rates and Returns (12.5%)

Aaa	Aa	A	Baa
Sufficiency of rates to cover costs and attract capital is (and will continue to be) unquestioned.	Rates are (and we expect will continue to be) set at a level that permits full cost recovery and a fair return on all investments, with minimal challenges by regulators to companies' cost assumptions. This will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are strong relative to global peers.	Rates are (and we expect will continue to be) set at a level that generally provides full cost recovery and a fair return on investments, with limited instances of regulatory challenges and disallowances. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally above average relative to global peers, but may at times be average.	Rates are (and we expect will continue to be) set at a level that generally provides full operating cost recovery and a mostly fair return on investments, but there may be somewhat more instances of regulatory challenges and disallowances, although ultimate rate outcomes are sufficient to attract capital without difficulty. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are average relative to global peers, but may at times be somewhat below average.

Ba	B	Caa
Rates are (and we expect will continue to be) set at a level that generally provides recovery of most operating costs but return on investments may be less predictable, and there may be decidedly more instances of regulatory challenges and disallowances, but ultimate rate outcomes are generally sufficient to attract capital. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally below average relative to global peers, or where allowed returns are average but difficult to earn. Alternately, the tariff formula may not take into account all cost components and/or remuneration of investments may be unclear or at times unfavorable.	We expect rates will be set at a level that at times fails to provide recovery of costs other than cash costs, and regulators may engage in somewhat arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based much more on politics than on prudency reviews. Return on investments may be set at levels that discourage investment. We expect that rate outcomes may be difficult or uncertain, negatively affecting continued access to capital. Alternately, the tariff formula may fail to take into account significant cost components other than cash costs, and/or remuneration of investments may be generally unfavorable.	We expect rates will be set at a level that often fails to provide recovery of material costs, and recovery of cash costs may also be at risk. Regulators may engage in more arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based primarily on politics. Return on investments may be set at levels that discourage necessary maintenance investment. We expect that rate outcomes may often be punitive or highly uncertain, with a markedly negative impact on access to capital. Alternately, the tariff formula may fail to take into account significant cash cost components, and/or remuneration of investments may be primarily unfavorable.

Factor 3: Diversification (10%)

Why It Matters

Diversification of overall business operations helps to mitigate the risk that economic cycles, material changes in a single regulatory regime or commodity price movements will have a severe impact on cash flow and credit quality of a utility. While utilities' sales volumes have lower exposure to economic recessions than many non-financial corporate issuers, some sales components, including industrial sales, are directly affected by economic trends that cause lower production and/or plant closures. In addition, economic activity plays a role in the rate of customer growth in the service territory and (absent energy efficiency and conservation) can often impact usage per customer. The economic strength or weakness of the service territory can affect the political and regulatory environment for rate increase requests by the utility. For utilities in areas prone to severe storms and other natural disasters, the utility's geographic diversity or concentration can be a key determinant for creditworthiness.

Diversity among regulatory regimes can mitigate the impact of a single unfavorable decision affecting one part of the utility's footprint.

For utilities with electric generation, fuel source diversity can mitigate the impact (to the utility and to its rate-payers) of changes in commodity prices, hydrology and water flow, and environmental or other regulations affecting plant operations and economics. We have observed that utilities' regulatory environments are most likely to become unfavorable during periods of rapid rate increases (which are more important than absolute rate levels) and that fuel diversity leads to more stable rates over time.

For that reason, fuel diversity can be important even if fuel and purchased power expenses are an automatic pass-through to the utility's ratepayers. Changes in environmental, safety and other regulations have caused vulnerabilities for certain technologies and fuel sources. These vulnerabilities have varied widely in different countries and have changed over time.

How We Assess Market Position for the Scorecard

Market position is comprised primarily of the economic diversity of the utility's service territory and the diversity of its regulatory regimes. We also consider the diversity of utility operations (e.g., regulated electric, gas, water, steam) when there are material operations in more than one area.

Economic diversity is a typically a function of the population, size and breadth of the territory and the businesses that drive its GDP and employment. For the size of the territory, we typically consider the number of customers and the volumes of generation and/or throughput. For breadth, we consider the number of sizeable metropolitan areas served, the economic diversity and vitality in those metropolitan areas, and any concentration in a particular area or industry. In our assessment, we may consider various information sources.[10] We also look at the mix of the utility's sales volumes among customer types, as well as the track record of volume sales and any notable payment patterns during economic cycles. For diversity of regulatory regimes, we typically look at the number of regulators and the percentages of revenues and utility assets that are under the purview of each. While the highest scores in the Market Position sub-factor are reserved for issuers regulated in multiple jurisdictions, when there is only one regulator, we make a differentiation of regimes perceived as having lower or higher volatility.

Issuers with multiple supportive regulatory jurisdictions, a balanced sales mix among residential, commercial, industrial and governmental customers in a large service territory with a robust and diverse economy will generally score higher in this sub-factor. An issuer with a small service territory economy that

[10] For example, in the US, information sources on the diversity and vitality of economies of individual states and metropolitan areas may include Moody's Economy.com.

has a high dependence on one or two sectors, especially highly cyclical industries, will generally score lower in this sub-factor, as will issuers with meaningful exposure to economic dislocations caused by natural disasters.

For issuers that are vertically integrated utilities having a meaningful amount of generation, this sub-factor has a weighting of 5%. For electric transmission and distribution utilities without meaningful generation and for natural gas local distribution companies, this sub-factor has a weighting of 10%.

How We Assess Generation and Fuel Diversity for the Scorecard

Criteria include the fuel type of the issuer's generation and important power purchase agreements, the ability of the issuer economically to shift its generation and power purchases when there are changes in fuel prices, the degree to which the utility and its rate-payers are exposed to or insulated from changes in commodity prices, and exposure to Challenged Source and Threatened Sources (see the explanations for how we generally characterize these generation sources in the table below). A regulated utility's capacity mix may not in itself be an indication of fuel diversity or the ability to shift fuels, since utilities may keep old and inefficient plants (e.g., natural gas boilers) to serve peak load. For this reason, we do not incorporate set percentages reflecting an "ideal" or "sub-par" mix for capacity or even generation. In addition to looking at a utility's generation mix to evaluate fuel diversity, we consider the efficiency of the utility's plants, their placement on the regional dispatch curve, and the demonstrated ability/inability of the utility to shift its generation mix in accordance with changing commodity prices.

Issuers having a balanced mix of hydro, coal, natural gas, nuclear and renewable energy as well as low exposure to challenged and threatened sources of generation will score more highly in this sub-factor. Issuers that have concentration in one or two sources of generation, especially if they are threatened or challenged sources, will incur lower scores.

In evaluating an issuer's degree of exposure to challenged and threatened sources, we will consider not only the existence of those plants in the utility's portfolio, but also the relevant factors that will determine the impact on the utility and on its rate-payers. For instance, an issuer that has a fairly high percentage of its generation from challenged sources could be evaluated very differently if its peer utilities face the same magnitude of those issues than if its peers have no exposure to challenged or threatened sources. In evaluating threatened sources, we consider the utility's progress in its plan to replace those sources, its reserve margin, the availability of purchased power capacity in the region, and the overall impact of the replacement plan on the issuer's rates relative to its peer group. Especially if there are no peers in the same jurisdiction, we also examine the extent to which the utility's generation resources plan is aligned with the relevant government's fuel/energy policy.

Factor 3: Diversification (10%)

Weighting 10%	Sub-Factor Weighting	Aaa	Aa	A	Baa
Market Position	5.00% *	A very high degree of multinational and regional diversity in terms of regulatory regimes and/or service territory economies.	Material operations in three or more nations or substantial geographic regions providing very good diversity of regulatory regimes and/or service territory economies.	Material operations in two to three nations, states, provinces or regions that provide good diversity of regulatory regimes and service territory economies. Alternately, operates within a single regulatory regime with low volatility, and the service territory economy is robust, has a very high degree of diversity and has demonstrated resilience in economic cycles.	May operate under a single regulatory regime viewed as having low volatility, or where multiple regulatory regimes are not viewed as providing much diversity. The service territory economy may have some concentration and cyclicality, but is sufficiently resilient that it can absorb reasonably foreseeable increases in utility rates.
Generation and Fuel Diversity	5.00% **	A high degree of diversity in terms of generation and/or fuel sources such that the utility and rate-payers are well insulated from commodity price changes, no generation concentration, and very low exposures to Challenged or Threatened Sources (see definitions below).	Very good diversification in terms of generation and/or fuel sources such that the utility and rate-payers are affected only minimally by commodity price changes, little generation concentration, and low exposures to Challenged or Threatened Sources.	Good diversification in terms of generation and/or fuel sources such that the utility and rate-payers have only modest exposure to commodity price changes; however, may have some concentration in a source that is neither Challenged nor Threatened. Exposure to Threatened Sources is low. While there may be some exposure to Challenged Sources, it is not a cause for concern.	Adequate diversification in terms of generation and/or fuel sources such that the utility and rate-payers have moderate exposure to commodity price changes; however, may have some concentration in a source that is Challenged. Exposure to Threatened Sources is moderate, while exposure to Challenged Sources is manageable.

	Sub-Factor Weighting	Ba	B	Caa	Definitions
Market Position	5.00% *	Operates in a market area with somewhat greater concentration and cyclicality in the service territory economy and/or exposure to storms and other natural disasters, and thus less resilience to absorbing reasonably foreseeable increases in utility rates. May show somewhat greater volatility in the regulatory regime(s).	Operates in a limited market area with material concentration and more severe cyclicality in service territory economy such that cycles are of materially longer duration or reasonably foreseeable increases in utility rates could present a material challenge to the economy. Service territory may have geographic concentration that limits its resilience to storms and other natural disasters, or may be an emerging market. May show decided volatility in the regulatory regime(s).	Operates in a concentrated economic service territory with pronounced concentration, macroeconomic risk factors, and/or exposure to natural disasters.	Challenged Sources are generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe as to be likely require plant closure.

Generation and Fuel Diversity	5.00% **	Modest diversification in generation and/or fuel sources such that the utility or rate-payers have greater exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be more pronounced, but the utility will be able to access alternative sources without undue financial stress.	Operates with little diversification in generation and/or fuel sources such that the utility or rate-payers have high exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be high, and accessing alternate sources may be challenging and cause more financial stress, but ultimately feasible.	Operates with high concentration in generation and/or fuel sources such that the utility or rate-payers have exposure to commodity price shocks. Exposure to Challenged and Threatened Sources may be very high, and accessing alternate sources may be highly uncertain.	Threatened Sources are generation plants that are not currently able to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de-activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges.

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

Factor 4: Financial Strength (40%)

Why It Matters

Electric and gas utilities are regulated, asset-based businesses characterized by large investments in long-lived property, plant and equipment. Financial strength, including the ability to service debt and provide a return to shareholders, is necessary for a utility to attract capital at a reasonable cost in order to invest in its generation, transmission and distribution assets, so that the utility can fulfill its service obligations at a reasonable cost to rate-payers.

How We Assess It for the Scorecard

In comparison to companies in other non-financial corporate sectors, the financial statements of regulated electric and gas utilities have certain unique aspects that impact financial analysis, which is further complicated by disparate treatment of certain elements under US Generally Accepted Accounting Principles (GAAP) versus International Financial Reporting Standards (IFRS). Regulatory accounting may permit utilities to defer certain costs (thereby creating regulatory assets) that a non-utility corporate entity would have to expense. For instance, a regulated utility may be able to defer a substantial portion of costs related to recovery from a storm based on the general regulatory framework for those expenses, even if the utility does not have a specific order to collect the expenses from ratepayers over a set period of time. A regulated utility may be able to accrue and defer a return on equity (in addition to capitalizing interest) for construction-work-in-progress for an approved project based on the assumption that it will be able to collect that deferred equity return once the asset comes into service. For this reason, we focus more on a utility's cash flow than on its reported net income.

Conversely, utilities may collect certain costs in rates well ahead of the time they must be paid (for instance, pension costs), thereby creating regulatory liabilities. Many of our metrics focus on Cash Flow from Operations Before Changes in Working Capital (CFO Pre-WC) because, unlike Funds from Operations (FFO), it captures the changes in long-term regulatory assets and liabilities.

However, under IFRS the two measures are essentially the same. In general, we view changes in working capital as less important in utility financial analysis because they are often either seasonal (for example, power demand is generally greatest in the summer) or caused by changes in fuel prices that are typically a relatively automatic pass-through to the customer. We will nonetheless examine the impact of working capital changes in analyzing a utility's liquidity (see "Other Rating Considerations" – Liquidity).

Given the long-term nature of utility assets and the often lumpy nature of their capital expenditures, it is important to analyze both a utility's historical financial performance as well as its prospective future performance, which may be different from backward-looking measures. Scores under this factor may be higher or lower than what might be expected from historical results, depending on our view of expected future performance. Multi-year periods are usually more representative of credit quality because utilities can experience swings in cash flows from one-time events, including such items as rate refunds, storm cost deferrals that create a regulatory asset, or securitization proceeds that reduce a regulatory asset. Nonetheless, we also look at trends in metrics for individual periods, which may influence our view of future performance and ratings.

For this scoring grid, we have identified four key ratios that we consider the most consistently useful in the analysis of regulated electric and gas utilities. However, no single financial ratio can adequately convey the relative credit strength of these highly diverse companies. Our ratings consider the overall financial strength of a company, and in individual cases other financial indicators may also play an important role.

CFO Pre-Working Capital Plus Interest/Interest or Cash Flow Interest Coverage

The cash flow interest coverage ratio is an indicator for a utility's ability to cover the cost of its borrowed capital. The numerator in the ratio calculation is the sum of CFO Pre-WC and interest expense, and the denominator is interest expense.

CFO Pre-Working Capital / Debt

This important metric is an indicator for the cash generating ability of a utility compared to its total debt. The numerator in the ratio calculation is CFO Pre-WC, and the denominator is total debt.

CFO Pre-Working Capital Minus Dividends / Debt

This ratio is an indicator for financial leverage as well as an indicator of the strength of a utility's cash flow after dividend payments are made. Dividend obligations of utilities are often substantial, quasi- permanent outflows that can affect the ability of a utility to cover its debt obligations, and this ratio can also provide insight into the financial policies of a utility or utility holding company. The higher the level of retained cash flow relative to a utility's debt, the more cash the utility has to support its capital expenditure program. The numerator of this ratio is CFO Pre-WC minus dividends, and the denominator is total debt.

Debt/Capitalization

This ratio is a traditional measure of balance sheet leverage. The numerator is total debt and the denominator is total capitalization. All of our ratios are calculated in accordance with our standard adjustments[11], but we note that our definition of total capitalization includes deferred taxes in addition to total debt, preferred stock, other hybrid securities, and common equity. Since the presence or absence of deferred taxes is a function of national tax policy, comparing utilities using this ratio may be more meaningful among utilities in the same country or in countries with similar tax policies. High debt levels in comparison to capitalization can indicate higher interest obligations, can limit the ability of a utility to raise additional financing if needed, and can lead to leverage covenant violations in bank credit facilities or other financing agreements[12]. A high ratio may result from a regulatory framework that does not permit a robust cushion of equity in the capital structure, or from a material write-off of an asset, which may not have impacted current period cash flows but could affect future period cash flows relative to debt.

There are two sets of thresholds for three of these ratios based on the level of the issuer's business risk – the Standard Grid and the Lower Business Risk (LBR) Grid. In our view, the different types of utility entities covered under this methodology (as described in Appendix C) have different levels of business risk.

Generation utilities and vertically integrated utilities generally have a higher level of business risk because they are engaged in power generation, so we apply the Standard Grid. We view power generation as the highest-risk component of the electric utility business, as generation plants are typically the most expensive part of a utility's infrastructure (representing asset concentration risk) and are subject to the greatest risks in both construction and operation, including the risk that incurred costs will either not be recovered in rates or recovered with material delays.

Other types of utilities may have lower business risk, such that we believe that they are most appropriately assessed using the LBR Grid, due to factors that could include a generally greater transfer of risk to customers, very strong insulation from exposure to commodity price movements, good protection from volumetric risks, fairly limited capex needs and low exposure to storms, major accidents and natural

[11] In certain circumstances, analysts may also apply specific adjustments.

[12] We also examine debt/capitalization ratios as defined in applicable covenants (which typically exclude deferred taxes from capitalization) relative to the covenant threshold level.

disasters. For instance, we tend to view many US natural gas local distribution companies (LDCs) and certain US electric transmission and distribution companies (T&Ds, which lack generation but generally retain some procurement responsibilities for customers), as typically having a lower business risk profile than their vertically integrated peers. In cases of T&Ds that we do not view as having materially lower risk than their vertically integrated peers, we will apply the Standard grid. This could result from a regulatory framework that exposes them to energy supply risk, large capital expenditures for required maintenance or upgrades, a heightened degree of exposure to catastrophic storm damage, or increased regulatory scrutiny due to poor reliability, or other considerations. The Standard Grid will also apply to LDCs that in our view do not have materially lower risk; for instance, due to their ownership of high pressure pipes or older systems requiring extensive gas main replacements, where gas commodity costs are not fully recovered in a reasonably contemporaneous manner, or where the LDC is not well insulated from declining volumes.

The four key ratios, their weighting in the grid, and the Standard and LBR scoring thresholds are detailed in the following table.

Factor 4: Financial Strength

Weighting 40%	Sub-Factor Weighting		Aaa	Aa	A	Baa	Ba	B	Caa
CFO pre-WC + Interest / Interest	7.50%		≥ 8.0x	6.0x - 8.0x	4.5x - 6.0x	3.0x - 4.5x	2.0x - 3.0x	1.0x - 2.0x	< 1.0x
CFO pre-WC / Debt	15.00%	Standard Grid	≥ 40%	30% - 40%	22% - 30%	13% - 22%	5% - 13%	1% - 5%	< 1%
		Low Business Risk Grid	≥ 38%	27% - 38%	19% - 27%	11% - 19%	5% - 11%	1% - 5%	< 1%
CFO pre-WC - Dividends / Debt	10.00%	Standard Grid	≥ 35%	25% - 35%	17% - 25%	9% - 17%	0% - 9%	(5%) - 0%	< (5%)
		Low Business Risk Grid	≥ 34%	23% - 34%	15% - 23%	7% - 15%	0% - 7%	(5%) - 0%	< (5%)
Debt / Capitalization	7.50%	Standard Grid	< 25%	25% - 35%	35% - 45%	45% - 55%	55% - 65%	65% - 75%	≥ 75%
		Low Business Risk Grid	< 29%	29% - 40%	40% - 50%	50% - 59%	59% - 67%	67% - 75%	≥ 75%

Notching for Structural Subordination of Holding Companies

Why It Matters

A typical utility company structure consists of a holding company ("HoldCo") that owns one or more operating subsidiaries (each an "OpCo"). OpCos may be regulated utilities or non-utility companies. A HoldCo typically has no operations – its assets are mostly limited to its equity interests in subsidiaries, and potentially other investments in subsidiaries that are structured as advances, debt, or even hybrid securities.

Most HoldCos present their financial statements on a consolidated basis that blurs legal considerations about priority of creditors based on the legal structure of the family, and scorecard scoring is thus based on consolidated ratios. However, HoldCo creditors typically have a secondary claim on the group's cash flows and assets after OpCo creditors. We refer to this as structural subordination, because it is the corporate legal structure, rather than specific subordination provisions, that causes creditors at each of the utility and non-utility subsidiaries to have a more direct claim on the cash flows and assets of their respective OpCo obligors. By contrast, the debt of the HoldCo is typically serviced primarily by dividends that are up-

streamed by the OpCos[13]. Under normal circumstances, these dividends are made from net income, after payment of the OpCo's interest and preferred dividends. In most non-financial corporate sectors where cash often moves freely between the entities in a single issuer family, this distinction may have less of an impact. However, in the regulated utility sector, barriers to movement of cash among companies in the corporate family can be much more restrictive, depending on the regulatory framework. These barriers can lead to significantly different probabilities of default for HoldCos and OpCos. Structural subordination also affects loss given default. Under most default[14] scenarios, an OpCo's creditors will be satisfied from the value residing at that OpCo before any of the OpCo's assets can be used to satisfy claims of the HoldCo's creditors. The prevalence of debt issuance at the OpCo level is another reason that structural subordination is usually a more serious concern in the utility sector than for investment grade issuers in other non-financial corporate sectors.

The grids for factors 1-4 are primarily oriented to OpCos (and to some degree for HoldCos with minimal current structural subordination; for example, there is no current structural subordination to debt at the operating company if all of the utility family's debt and preferred stock is issued at the HoldCo level, although there is structural subordination to other liabilities at the OpCo level). The additional risk from structural subordination is addressed via a notching adjustment to bring scorecard-indicated outcomes (on average) closer to the actual ratings of HoldCos.

How We Assess It

Scorecard-indicated outcomes of holding companies may be notched down based on structural subordination. The risk factors and mitigants that impact structural subordination are varied and can be present in different combinations, such that a formulaic approach is not practical and case-by-case analyst judgment of the interaction of all pertinent factors that may increase or decrease its importance to the credit risk of an issuer are essential.

Some of the potentially pertinent factors that could increase the degree and/or impact of structural subordination include the following:

» Regulatory or other barriers to cash movement from OpCos to HoldCo

» Specific ring-fencing provisions

» Strict financial covenants at the OpCo level

» Higher leverage at the OpCo level

» Higher leverage at the HoldCo level[15]

» Significant dividend limitations or potential limitations at an important OpCo

» HoldCo exposure to subsidiaries with high business risk or volatile cash flows

» Strained liquidity at the HoldCo level

» The group's investment program is primarily in businesses that are higher risk or new to the group

Some of the potentially mitigating factors that could decrease the degree and/or impact of structural subordination include the following:

[13] The HoldCo and OpCo may also have intercompany agreements, including tax sharing agreements, that can be another source of cash to the HoldCo.

[14] Actual priority in a default scenario will be determined by many factors, including the corporate and bankruptcy laws of the jurisdiction, the asset value of each OpCo, specific financing terms, inter-relationships among members of the family, etc.

[15] While higher leverage at the HoldCo does not increase structural subordination per se, it exacerbates the impact of any structural subordination that exists.

» Substantial diversity in cash flows from a variety of utility OpCos

» Meaningful dividends to HoldCo from unlevered utility OpCos

» Dependable, meaningful dividends to HoldCo from non-utility OpCos

» The group's investment program is primarily in strong utility businesses

» Inter-company guarantees - however, in many jurisdictions the value of an upstream guarantee may be limited by certain factors, including by the value that the OpCo received in exchange for granting the guarantee

Notching for structural subordination within the scorecard may range from 0 to negative 3 notches. Instances of extreme structural subordination are relatively rare, so the scorecard convention does not accommodate wider differences, although in the instances where we believe it is present, actual ratings do reflect the full impact of structural subordination.

A related issue is the relationship of ratings within a utility family with multiple operating companies, and sometimes intermediate holding companies. Some of the key issues are the same, such as the relative amounts of debt at the holding company level compared to the operating company level (or at one OpCo relative to another), and the degree to which operating companies have credit insulation due to regulation or other protective factors. Appendix B has additional insights on ratings within a utility family.

Assumptions, Limitations and Other Rating Considerations

The scorecard in this rating methodology represents a decision to favor simplicity that enhances transparency and to avoid greater complexity that might enable the scorecard to map more closely to actual ratings. Accordingly, the four factors and the notching factor in the scorecard do not constitute an exhaustive treatment of all of the considerations that are important for ratings of companies in the regulated electric and gas utility sector. In addition, our ratings incorporate expectations for future performance, while the financial information that is used in the scorecard is mainly historical. In some cases, our expectations for future performance may be informed by confidential information that we cannot disclose. In other cases, we estimate future results based upon past performance, industry trends, competitor actions or other factors. In either case, predicting the future is subject to the risk of substantial inaccuracy.

Assumptions that may cause our forward-looking expectations to be incorrect include unanticipated changes in any of the following factors: the macroeconomic environment and general financial market conditions, industry competition, disruptive technology, regulatory and legal actions.

Key rating assumptions that apply in this sector include our view that sovereign credit risk is strongly correlated with that of other domestic issuers, that legal priority of claim affects average recovery on different classes of debt, sufficiently to generally warrant differences in ratings for different debt classes of the same issuer, and the assumption that lack of access to liquidity is a strong driver of credit risk.

In choosing metrics for this rating methodology scorecard, we did not explicitly include certain important factors that are common to all companies in any industry such as the quality and experience of management, assessments of corporate governance and the quality of financial reporting and information disclosure. Therefore, ranking these factors by rating category in a scorecard would in some cases suggest too much precision in the relative ranking of particular issuers against all other issuers that are rated in various industry sectors.

Ratings may include additional factors that are difficult to quantify or that have a meaningful effect in differentiating credit quality only in some cases, but not all. Such factors include financial controls, exposure to uncertain licensing regimes and possible government interference in some countries.

Regulatory, litigation, liquidity, technology and reputational risk as well as changes to consumer and business spending patterns, competitor strategies and macroeconomic trends also affect ratings. While these are important considerations, it is not possible precisely to express these in the rating methodology scorecard without making the scorecard excessively complex and significantly less transparent.

Ratings may also reflect circumstances in which the weighting of a particular factor will be substantially different from the weighting suggested by the scorecard.

This variation in weighting rating considerations can also apply to factors that we choose not to represent in the scorecard. For example, liquidity is a consideration frequently critical to ratings and which may not, in other circumstances, have a substantial impact in discriminating between two issuers with a similar credit profile. As an example of the limitations, ratings can be heavily affected by extremely weak liquidity that magnifies default risk. However, two identical companies might be rated the same if their only differentiating feature is that one has a good liquidity position while the other has an extremely good liquidity position.

Other Rating Considerations

We consider other factors in addition to those discussed in this report, but in most cases understanding the considerations discussed herein should enable a good approximation of our view on the credit quality of companies in the regulated electric and gas utilities sector. Ratings consider our assessment of the quality of management, corporate governance, financial controls, liquidity management, event risk and seasonality. The analysis of these factors remains an integral part of our rating process.

Liquidity and Access to Capital Markets

Liquidity analysis is a key element in the financial analysis of electric and gas utilities, and it encompasses a company's ability to generate cash from internal sources as well as the availability of external sources of financing to supplement these internal sources. Liquidity and access to financing are of particular importance in this sector. Utility assets can often have a very long useful life- 30, 40 or even 60 years is not uncommon, as well as high price tags. Partly as a result of construction cycles, the utility sector has experienced prolonged periods of negative free cash flow – essentially, the sum of its dividends and its capital expenditures for maintenance and growth of its infrastructure frequently exceeds cash from operations, such that a portion of capital expenditures must routinely be debt financed. Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to the capital markets to assure adequate sources of funding and to maintain financial flexibility. Substantial portions of capex are non-discretionary (for example, maintenance, adding customers to the network, or meeting environmental mandates); however, utilities have been swift to cut or defer discretionary spending during recessions. Dividends represent a quasi-permanent outlay, since utilities typically only rarely will cut their dividend. Liquidity is also important to meet maturing obligations, which often occur in large chunks, and to meet collateral calls under any hedging agreements.

Due to the importance of liquidity, incorporating it as a factor with a fixed weighting in the scorecard would suggest an importance level that is often far different from the actual weight in the rating. In normal circumstances, most companies in the sector have good access to liquidity. The industry generally requires, and for the most part has, large, syndicated, multi-year committed credit facilities. In addition, utilities have

demonstrated strong access to capital markets, even under difficult conditions. As a result, liquidity generally has not been an issue for most utilities and a utility with very strong liquidity may not warrant a rating distinction compared to a utility with strong liquidity. However, when there is weakness in liquidity or liquidity management, it can be the dominant consideration for ratings.

Our assessment of liquidity for regulated utilities involves an analysis of total sources and uses of cash over the next 12 months or more, as is done for all corporates. Using our financial projections of the utility and our analysis of its available sources of liquidity (including an assessment of the quality and reliability of alternate liquidity such as committed credit facilities), we evaluate how its projected sources of cash (cash from operations, cash on hand and existing committed multi-year credit facilities) compare to its projected uses (including all or most capital expenditures, dividends, maturities of short and long-term debt, our projection of potential liquidity calls on financial hedges, and important issuer-specific items such as special tax payments). We assume no access to capital markets or additional liquidity sources, no renewal of existing credit facilities, and no cut to dividends. We examine a company's liquidity profile under this scenario, its ability to make adjustments to improve its liquidity position, and any dependence on liquidity sources with lower quality and reliability.

Management Quality and Financial Policy

The quality of management is an important factor supporting the credit strength of a regulated utility or utility holding company. Assessing the execution of business plans over time can be helpful in assessing management's business strategies, policies, and philosophies and in evaluating management performance relative to performance of competitors and our projections. A record of consistency provides us with insight into management's likely future performance in stressed situations and can be an indicator of management's tendency to depart significantly from its stated plans and guidelines.

We also assess financial policy (including dividend policy and planned capital expenditures) and how management balances the potentially competing interests of shareholders, fixed income investors and other stakeholders. Dividends and discretionary capital expenditures are the two primary components over which management has the greatest control in the short term. For holding companies, we consider the extent to which management is willing to stretch its payout ratio (through aggressive increases or delays in needed decreases) in order to satisfy common shareholders. For a utility that is a subsidiary of a parent company with several utility subsidiaries, dividends to the parent may be more volatile depending on the cash generation and cash needs of that utility, because parents typically want to assure that each utility maintains the regulatory debt/equity ratio on which its rates have been set. The effect we have observed is that utility subsidiaries often pay higher dividends when they have lower capital needs and lower dividends when they have higher capital expenditures or other cash needs. Any dividend policy that cuts into the regulatory debt/equity ratio is a material credit negative.

Size – Natural Disasters, Customer Concentration and Construction Risks

The size and scale of a regulated utility has generally not been a major determinant of its credit strength in the same way that it has been for most other industrial sectors. While size brings certain economies of scale that can somewhat affect the utility's cost structure and competitiveness, rates are more heavily impacted by costs related to fuel and fixed assets. Smaller utilities have sometimes been better able to focus their attention on meeting the expectations of a single regulator than their multi-state peers.

However, size can be a very important factor in our assessment of certain risks that impact ratings, including exposure to natural disasters, customer concentration (primarily to industrial customers in a single sector) and construction risks associated with large projects. While the scorecard attempts to incorporate the first

two of these into Factor 3, for some issuers these considerations may be sufficiently important that the rating reflects a greater weight for these risks. While construction projects always carry the risk of cost over-runs and delays, these risks are materially heightened for projects that are very large relative to the size of the utility.

Interaction of Utility Ratings with Government Policies and Sovereign Ratings

Compared to most industrial sectors, regulated utilities are more likely to be impacted by government actions. Credit impacts can occur directly through rate regulation, and indirectly through energy, environmental and tax policies. Government actions affect fuel prices, the mix of generating plants, the certainty and timing of revenues and costs, and the likelihood that regulated utilities will experience financial stress. While our evolving view of the impact of such policies and the general economic and financial climate is reflected in ratings for each utility, some considerations do not lend themselves to incorporation in a simple scorecard.[16]

Diversified Operations at the Utility

A small number of regulated utilities have diversified operations that are segments within the utility company, as opposed to the more common practice of housing such operations in one or more separate affiliates. In general, we will seek to evaluate the other businesses that are material in accordance with the appropriate methodology and the rating will reflect considerations from such methodologies. There may be analytical limitations in evaluating the utility and non-utility businesses when segment financial results are not fully broken out and these may be addressed through estimation based on available information. Since regulated utilities are a relatively low risk business compared to other corporate sectors, in most cases diversified non-utility operations increase the business risk profile of a utility. Reflecting this tendency, we note that assigned ratings are typically lower than scorecard-indicated outcomes for such companies.

Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in an issuer's fundamental creditworthiness. Typical special events include mergers and acquisitions, asset sales, spin-offs, capital restructuring programs, litigation and shareholder distributions.

Corporate Governance

Among the areas of focus in corporate governance are audit committee financial expertise, the incentives created by executive compensation packages, related party transactions, interactions with outside auditors, and ownership structure.

Investment and Acquisition Strategy

In our credit assessment, we take into consideration management's investment strategy. Investment strategy is benchmarked with that of the other companies in the rated universe to further verify its consistency. Acquisitions can strengthen a company's business. Our assessment of a company's tolerance for acquisitions at a given rating level takes into consideration (1) management's risk appetite, including the likelihood of further acquisitions over the medium term; (2) share buy-back activity; (3) the company's commitment to specific leverage targets; and (4) the volatility of the underlying businesses, as well as that of the business acquired. Ratings can often hold after acquisitions even if leverage temporarily climbs above normally acceptable ranges. However, this depends on (1) the strategic fit; (2) pro-forma

[16] For more information, see our cross-sector methodology that discusses general principles related to how sovereign credit quality can impact other ratings. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

capitalization/leverage following an acquisition; and (3) our confidence that credit metrics will be restored in a relatively short timeframe.

Financial Controls

We rely on the accuracy of audited financial statements to assign and monitor ratings in this sector. Such accuracy is only possible when companies have sufficient internal controls, including centralized operations, the proper tone at the top and consistency in accounting policies and procedures.

Weaknesses in the overall financial reporting processes, financial statement restatements or delays in regulatory filings can be indications of a potential breakdown in internal controls.

Appendix A: Regulated Electric and Gas Utilities Methodology Factor Scorecard

Factor 1a: Legislative and Judicial Underpinnings of the Regulatory Framework (12.5%)

Aaa	Aa	A	Baa
Utility regulation occurs under a fully developed framework that is national in scope based on legislation that provides the utility a nearly absolute monopoly (see note 1) within its service territory, an unquestioned assurance that rates will be set in a manner that will permit the utility to make and recover all necessary investments, an extremely high degree of clarity as to the manner in which utilities will be regulated and prescriptive methods and procedures for setting rates. Existing utility law is comprehensive and supportive such that changes in legislation are not expected to be necessary; or any changes that have occurred have been strongly supportive of utilities credit quality in general and sufficiently forward-looking so as to address problems before they occurred. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility should they occur, including access to national courts, very strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs under a fully developed national, state or provincial framework based on legislation that provides the utility an extremely strong monopoly (see note 1) within its service territory, a strong assurance, subject to limited review, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a very high degree of clarity as to the manner in which utilities will be regulated and reasonably prescriptive methods and procedures for setting rates. If there have been changes in utility legislation, they have been timely and clearly credit supportive of the issuer in a manner that shows the utility has had a strong voice in the process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur including access to national courts, strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs under a well-developed national, state or provincial framework based on legislation that provides the utility a very strong monopoly (see note 1) within its service territory, an assurance, subject to reasonable prudency requirements, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a high degree of clarity as to the manner in which utilities will be regulated, and overall guidance for methods and procedures for setting rates. If there have been changes in utility legislation, they have been mostly timely and on the whole credit supportive for the issuer, and the utility has had a clear voice in the legislative process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur, including access to national courts, clear judicial precedent in the interpretation of utility law, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation that provides the utility a strong monopoly within its service territory that may have some exceptions such as greater self-generation (see note 1), a general assurance that, subject to prudency requirements that are mostly reasonable, rates will be set will be set in a manner that will permit the utility to make and recover all necessary investments, reasonable clarity as to the manner in which utilities will be regulated and overall guidance for methods and procedures for setting rates; or (ii) under a new framework where independent and transparent regulation exists in other sectors. If there have been changes in utility legislation, they have been credit supportive or at least balanced for the issuer but potentially less timely, and the utility had a voice in the legislative process. There is either (i) an independent judiciary that can arbitrate disagreements between the regulator and the utility, including access to courts at least at the state or provincial level, reasonably clear judicial precedent in the interpretation of utility laws, and a generally strong rule of law; or (ii) regulation has been applied (under a well-developed framework) in a manner such that redress to an independent arbiter has not been required. We expect these conditions to continue.

Ba	B	Caa
Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory that is generally strong but may have a greater level of exceptions (see note 1), and that, subject to prudency requirements which may be stringent, provides a general assurance (with somewhat less certainty) that rates will be set will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where the jurisdiction has a history of less independent and transparent regulation in other sectors. Either: (i) the judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law; or (ii) where there is no independent arbiter, the regulation has mostly been applied in a manner such redress has not been required. We expect these conditions to continue.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility monopoly within its service territory that is reasonably strong but may have important exceptions, and that, subject to prudency requirements which may be stringent or at times arbitrary, provides more limited or less certain assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect less independent and transparent regulation, based either on the regulator's history in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law. Alternately, where there is no independent arbiter, the regulation has been applied in a manner that often requires some redress adding more uncertainty to the regulatory framework. There may be a periodic risk of creditor-unfriendly government intervention in utility markets or rate-setting.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory, but with little assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect unpredictable or adverse regulation, based either on the jurisdiction's history of in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or is viewed as not being fully independent of the regulator or other political pressure. Alternately, there may be no redress to an effective independent arbiter. The ability of the utility to enforce its monopoly or prevent uncompensated usage of its system may be limited. There may be a risk of creditor- unfriendly nationalization or other significant intervention in utility markets or rate-setting.

Note 1: The strength of the monopoly refers to the legal, regulatory and practical obstacles for customers in the utility's territory to obtain service from another provider. Examples of a weakening of the monopoly would include the ability of a city or large user to leave the utility system to set up their own system, the extent to which self-generation is permitted (e.g. cogeneration) and/or encouraged (e.g., net metering, DSM generation). At the lower end of the ratings spectrum, the utility's monopoly may be challenged by pervasive theft and unauthorized use. Since utilities are generally presumed to be monopolies, a strong monopoly position in itself is not sufficient for a strong score in this sub-factor, but a weakening of the monopoly can lower the score.

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

Factor 1b: Consistency and Predictability of Regulation (12.5%)

Aaa	Aa	A	Baa
The issuer's interaction with the regulator has led to a strong, lengthy track record of predictable, consistent and favorable decisions. The regulator is highly credit supportive of the issuer and utilities in general. We expect these conditions to continue.	The issuer's interaction with the regulator has a led to a considerable track record of predominantly predictable and consistent decisions. The regulator is mostly credit supportive of utilities in general and in almost all instances has been highly credit supportive of the issuer. We expect these conditions to continue.	The issuer's interaction with the regulator has led to a track record of largely predictable and consistent decisions. The regulator may be somewhat less credit supportive of utilities in general, but has been quite credit supportive of the issuer in most circumstances. We expect these conditions to continue.	The issuer's interaction with the regulator has led to an adequate track record. The regulator is generally consistent and predictable, but there may some evidence of inconsistency or unpredictability from time to time, or decisions may at times be politically charged. However, instances of less credit supportive decisions are based on reasonable application of existing rules and statutes and are not overly punitive. We expect these conditions to continue.

Ba	B	Caa
We expect that regulatory decisions will demonstrate considerable inconsistency or unpredictability or that decisions will be politically charged, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. The regulator may have a history of less credit supportive regulatory decisions with respect to the issuer, but we expect that the issuer will be able to obtain support when it encounters financial stress, with some potentially material delays. The regulator's authority may be eroded at times by legislative or political action. The regulator may not follow the framework for some material decisions.	We expect that regulatory decisions will be largely unpredictable or even somewhat arbitrary, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. However, we expect that the issuer will ultimately be able to obtain support when it encounters financial stress, albeit with material or more extended delays. Alternately, the regulator is untested, lacks a consistent track record, or is undergoing substantial change. The regulator's authority may be eroded on frequent occasions by legislative or political action. The regulator may more frequently ignore the framework in a manner detrimental to the issuer.	We expect that regulatory decisions will be highly unpredictable and frequently adverse, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. Alternately, decisions may have credit supportive aspects, but may often be unenforceable. The regulator's authority may have been seriously eroded by legislative or political action. The regulator may consistently ignore the framework to the detriment of the issuer.

Factor 2a: Timeliness of Recovery of Operating and Capital Costs (12.5%)

Aaa	Aa	A	Baa
Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous return on all incremental capital investments, with statutory provisions in place to preclude the possibility of challenges to rate increases or cost recovery mechanisms. By statute and by practice, general rate cases are efficient, focused on an impartial review, quick, and permit inclusion of fully forward-looking costs.	Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous or near-contemporaneous return on most incremental capital investments, with minimal challenges by regulators to companies' cost assumptions. By statute and by practice, general rate cases are efficient, focused on an impartial review, of a very reasonable duration before non-appealable interim rates can be collected, and primarily permit inclusion of forward-looking costs.	Automatic cost recovery mechanisms provide full and reasonably timely recovery of fuel, purchased power and all other highly variable operating expenses. Material capital investments may be made under tariff formulas or other rate-making permitting reasonably contemporaneous returns, or may be submitted under other types of filings that provide recovery of cost of capital with minimal delays. Instances of regulatory challenges that delay rate increases or cost recovery are generally related to large, unexpected increases in sizeable construction projects. By statute or by practice, general rate cases are reasonably efficient, primarily focused on an impartial review, of a reasonable duration before rates (either permanent or non-refundable interim rates) can be collected, and permit inclusion of important forward-looking costs.	Fuel, purchased power and all other highly variable expenses are generally recovered through mechanisms incorporating delays of less than one year, although some rapid increases in costs may be delayed longer where such deferrals do not place financial stress on the utility. Incremental capital investments may be recovered primarily through general rate cases with moderate lag, with some through tariff formulas. Alternately, there may be formula rates that are untested or unclear. Potentially greater tendency for delays due to regulatory intervention, although this will generally be limited to rates related to large capital projects or rapid increases in operating costs.

Ba	B	Caa
There is an expectation that fuel, purchased power or other highly variable expenses will eventually be recovered with delays that will not place material financial stress on the utility, but there may be some evidence of an unwillingness by regulators to make timely rate changes to address volatility in fuel, or purchased power, or other market-sensitive expenses. Recovery of costs related to capital investments may be subject to delays that are somewhat lengthy, but not so pervasive as to be expected to discourage important investments.	The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to material delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be subject to delays that are material to the issuer, or may be likely to discourage some important investment.	The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to extensive delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be uncertain, subject to delays that are extensive, or that may be likely to discourage even necessary investment.

Note: Tariff formulas include formula rate plans as well as trackers and riders related to capital investment.

Factor 2b: Sufficiency of Rates and Returns (12.5%)

Aaa	Aa	A	Baa
Sufficiency of rates to cover costs and attract capital is (and will continue to be) unquestioned.	Rates are (and we expect will continue to be) set at a level that permits full cost recovery and a fair return on all investments, with minimal challenges by regulators to companies' cost assumptions. This will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are strong relative to global peers.	Rates are (and we expect will continue to be) set at a level that generally provides full cost recovery and a fair return on investments, with limited instances of regulatory challenges and disallowances. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally above average relative to global peers, but may at times be average.	Rates are (and we expect will continue to be) set at a level that generally provides full operating cost recovery and a mostly fair return on investments, but there may be somewhat more instances of regulatory challenges and disallowances, although ultimate rate outcomes are sufficient to attract capital without difficulty. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are average relative to global peers, but may at times be somewhat below average.

Ba	B	Caa
Rates are (and we expect will continue to be) set at a level that generally provides recovery of most operating costs but return on investments may be less predictable, and there may be decidedly more instances of regulatory challenges and disallowances, but ultimate rate outcomes are generally sufficient to attract capital. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally below average relative to global peers, or where allowed returns are average but difficult to earn. Alternately, the tariff formula may not take into account all cost components and/or remuneration of investments may be unclear or at times unfavorable.	We expect rates will be set at a level that at times fails to provide recovery of costs other than cash costs, and regulators may engage in somewhat arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based much more on politics than on prudency reviews. Return on investments may be set at levels that discourage investment. We expect that rate outcomes may be difficult or uncertain, negatively affecting continued access to capital. Alternately, the tariff formula may fail to take into account significant cost components other than cash costs, and/or remuneration of investments may be generally unfavorable.	We expect rates will be set at a level that often fails to provide recovery of material costs, and recovery of cash costs may also be at risk. Regulators may engage in more arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based primarily on politics. Return on investments may be set at levels that discourage necessary maintenance investment. We expect that rate outcomes may often be punitive or highly uncertain, with a markedly negative impact on access to capital. Alternately, the tariff formula may fail to take into account significant cash cost components, and/or remuneration of investments may be primarily unfavorable.

Factor 3: Diversification (10%)

Weighting 10%	Sub-Factor Weighting	Aaa	Aa	A	Baa
Market Position	5% *	A very high degree of multinational and regional diversity in terms of regulatory regimes and/or service territory economies.	Material operations in three or more nations or substantial geographic regions providing very good diversity of regulatory regimes and/or service territory economies.	Material operations in two to three nations, states, provinces or regions that provide good diversity of regulatory regimes and service territory economies. Alternately, operates within a single regulatory regime with low volatility, and the service territory economy is robust, has a very high degree of diversity and has demonstrated resilience in economic cycles.	May operate under a single regulatory regime viewed as having low volatility, or where multiple regulatory regimes are not viewed as providing much diversity. The service territory economy may have some concentration and cyclicality, but is sufficiently resilient that it can absorb reasonably foreseeable increases in utility rates.
Generation and Fuel Diversity	5% **	A high degree of diversity in terms of generation and/or fuel sources such that the utility and rate-payers are well insulated from commodity price changes, no generation concentration, and very low exposures to Challenged or Threatened Sources (see definitions below).	Very good diversification in terms of generation and/or fuel sources such that the utility and rate-payers are affected only minimally by commodity price changes, little generation concentration, and low exposures to Challenged or Threatened Sources.	Good diversification in terms of generation and/or fuel sources such that the utility and rate-payers have only modest exposure to commodity price changes; however, may have some concentration in a source that is neither Challenged nor Threatened. Exposure to Threatened Sources is low. While there may be some exposure to Challenged Sources, it is not a cause for concern.	Adequate diversification in terms of generation and/or fuel sources such that the utility and rate-payers have moderate exposure to commodity price changes; however, may have some concentration in a source that is Challenged. Exposure to Threatened Sources is moderate, while exposure to Challenged Sources is manageable.

	Sub-Factor Weighting	Ba	B	Caa	Definitions
Market Position	5% *	Operates in a market area with somewhat greater concentration and cyclicality in the service territory economy and/or exposure to storms and other natural disasters, and thus less resilience to absorbing reasonably foreseeable increases in utility rates. May show somewhat greater volatility in the regulatory regime(s).	Operates in a limited market area with material concentration and more severe cyclicality in service territory economy such that cycles are of materially longer duration or reasonably foreseeable increases in utility rates could present a material challenge to the economy. Service territory may have geographic concentration that limits its resilience to storms and other natural disasters, or may be an emerging market. May show decided volatility in the regulatory regime(s).	Operates in a concentrated economic service territory with pronounced concentration, macroeconomic risk factors, and/or exposure to natural disasters.	Challenged Sources are generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe as to be likely require plant closure.
Generation and Fuel Diversity	5% **	Modest diversification in generation and/or fuel sources such that the utility or rate- payers have greater exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be more pronounced, but the utility will be able to access alternative sources without undue financial stress.	Operates with little diversification in generation and/or fuel sources such that the utility or rate-payers have high exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be high, and accessing alternate sources may be challenging and cause more financial stress, but ultimately feasible.	Operates with high concentration in generation and/or fuel sources such that the utility or rate-payers have exposure to commodity price shocks. Exposure to Challenged and Threatened Sources may be very high, and accessing alternate sources may be highly uncertain.	Threatened Sources are generation plants that are not currently able to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de-activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges.

* 10% weight for issuers that lack generation **0% weight for issuers that lack generation

Factor 4: Financial Strength

Weighting 40%	Sub-Factor Weighting		Aaa	Aa	A	Baa	Ba	B	Caa
CFO pre-WC + Interest / Interest	7.5%		≥ 8x	6x - 8x	4.5x - 6x	3x - 4.5x	2x - 3x	1x - 2x	< 1x
CFO pre-WC / Debt	15%	Standard Grid	≥ 40%	30% - 40%	22% - 30%	13% - 22%	5% - 13%	1% - 5%	< 1%
		Low Business Risk Grid	≥ 38%	27% - 38%	19% - 27%	11% - 19%	5% - 11%	1% - 5%	< 1%
CFO pre-WC - Dividends / Debt	10%	Standard Grid	≥ 35%	25% - 35%	17% - 25%	9% - 17%	0% - 9%	(5%) - 0%	< (5%)
		Low Business Risk Grid	≥ 34%	23% - 34%	15% - 23%	7% - 15%	0% - 7%	(5%) - 0%	< (5%)
Debt / Capitalization	7.5%	Standard Grid	< 25%	25% - 35%	35% - 45%	45% - 55%	55% - 65%	65% - 75%	≥ 75%
		Low Business Risk Grid	< 29%	29% - 40%	40% - 50%	50% - 59%	59% - 67%	67% - 75%	≥ 75%

Appendix B: Approach to Ratings within a Utility Family

Typical Composition of a Utility Family

A typical utility company structure consists of a holding company ("HoldCo") that owns one or more operating subsidiaries (each an "OpCo"). OpCos may be regulated utilities or non-utility companies. Financing of these entities varies by region, in part due to the regulatory framework. A HoldCo typically has no operations – its assets are mostly limited to its equity interests in subsidiaries, and potentially other investments in subsidiaries or minority interests in other companies. However, in certain cases there may be material operations at the HoldCo level. Financing can occur primarily at the OpCo level, primarily at the HoldCo level, or at both HoldCo and OpCos in varying proportions. When a HoldCo has multiple utility OpCos, they will often be located in different regulatory jurisdictions. A HoldCo may have both levered and unlevered OpCos.

General Approach to a Utility Family

In our analysis, we generally consider the stand-alone credit profile of an OpCo and the credit profile of its ultimate parent HoldCo (and any intermediate HoldCos), as well as the profile of the family as a whole, while acknowledging that these elements can have cross-family credit implications in varying degrees, principally based on the regulatory framework of the OpCos and the financing model (which has often developed in response to the regulatory framework).

In addition to considering individual OpCos under this (or another applicable) methodology, we typically[17] approach a HoldCo rating by assessing the qualitative and quantitative factors in this methodology for the consolidated entity and each of its utility subsidiaries. Ratings of individual entities in the issuer family may be pulled up or down based on the interrelationships among the companies in the family and their relative credit strength.

In considering how closely aligned or how differentiated ratings should be among members of a utility family, we assess a variety of factors, including:

» Regulatory or other barriers to cash movement among OpCos and from OpCos to HoldCo

» Differentiation of the regulatory frameworks of the various OpCos

» Specific ring-fencing provisions at particular OpCos

» Financing arrangements – for instance, each OpCo may have its own financing arrangements, or the sole liquidity facility may be at the parent; there may be a liquidity pool among certain but not all members of the family; certain members of the family may better be able to withstand a temporary hiatus of external liquidity or access to capital markets

» Financial covenants and the extent to which an Event of Default by one OpCo limits availability of liquidity to another member of the family

» The extent to which higher leverage at one entity increases default risk for other members of the family

» An entity's exposure to or insulation from an affiliate with high business risk

» Structural features or other limitations in financing agreements that restrict movements of funds, investments, provision of guarantees or collateral, etc.

» The relative size and financial significance of any particular OpCo to the HoldCo and the family

[17] See paragraph at the end of this section for approaches to Hybrid HoldCos.

See also those factors noted in "Notching for Structural Subordination of Holding Companies".

Our approach to a Hybrid HoldCo (see definition in Appendix C) depends in part on the importance of its non-utility operations and the availability of information on individual businesses. If the businesses are material and their individual results are fully broken out in financial disclosures, we may be able to assess each material business individually by reference to the relevant Moody's methodologies to arrive at a composite assessment for the combined businesses.[18] If non-utility operations are material but are not broken out in financial disclosures, we may look at the consolidated entity under more than one methodology. When non-utility operations are less material but could still impact the overall credit profile, the difference in business risks and our estimation of their impact on financial performance will be qualitatively incorporated in the rating.

Higher Barriers to Cash Movement with Financing Predominantly at the OpCos

Where higher barriers to cash movement exist on an OpCo or OpCos due to the regulatory framework or debt structural features, ratings among family members are likely to be more differentiated. The degree of separateness may be greater or smaller and is assessed on a case-by-case basis, because situational considerations are important.

One area we consider is financing arrangements. For instance, there will tend to be greater differentiation if each member of a family has its own bank credit facilities and difficulties experienced by one entity would not trigger events of default for other entities. While the existence of a money pool might appear to reduce separateness between the participants, there may be regulatory barriers within money pools that preserve separateness. For instance, non-utility entities may have access to the pool only as a borrower, only as a lender, and even the utility entities may have regulatory limits on their borrowings from the pool or their credit exposures to other pool members. If the only source of external liquidity for a money pool is borrowings by the HoldCo under its bank credit facilities, there would be less separateness, especially if the utilities were expected to depend on that liquidity source. However, the ability of an OpCo to finance itself by accessing capital markets must also be considered. Inter-company tax agreements can also have an impact on our view of how separate the risks of default are.

For a HoldCo, the greater the regulatory, economic, and geographic diversity of its OpCos, the greater its potential separation from the default probability of any individual subsidiary. Conversely, if a HoldCo's actions have made it clear that the HoldCo will provide support for an OpCo encountering some financial stress (for instance, due to delays and/or cost over-runs on a major construction project), we would be likely to perceive less separateness.

Even where high barriers to cash movement exist, onerous leverage at a parent company may not only give rise to greater notching for structural subordination at the parent, it may also pressure an OpCo's rating, especially when there is a clear dependence on an OpCo's cash flow to service parent debt.

While most of the regulatory barriers to cash movement are very real, they are not absolute. Furthermore, while it is not usually in the interest of an insolvent parent or its creditors to bring an operating utility into a bankruptcy proceeding, such an occurrence is not impossible.

The greatest separateness occurs where strong regulatory insulation is supplemented by effective ring-fencing provisions that fully separate the management and operations of the OpCo from the rest of the family and limit the parent's ability to cause the OpCo to commence bankruptcy proceedings as well as limiting dividends and cash transfers. Typically, most entities in US utility families (including HoldCos and

[18] A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

OpCos) are rated within 3 notches of each other. However, it is possible for the HoldCo and OpCos in a family to have much wider notching due to the combination of regulatory imperatives and strong ring-fencing that includes a significant minority shareholder who must agree to important corporate decisions, including a voluntary bankruptcy filing.

Lower Barriers to Cash Movement with Financing Predominantly at the OpCos

Our approach to rating issuers within a family where there are lower regulatory barriers to movement of cash from OpCos to HoldCos places greater emphasis on the credit profile of the consolidated group. Individual OpCos are considered based on their individual characteristics and their importance to the family, and their assigned ratings are typically banded closely around the consolidated credit profile of the group due to the expectation that cash will transit relatively freely among family entities.

Some utilities may have OpCos in jurisdictions where cash movement among certain family members is more restricted by the regulatory framework, while cash movement from and/or among OpCos in other jurisdictions is less restricted. In these situations, OpCos with more restrictions may vary more widely from the consolidated credit profile while those with fewer restrictions may be more tightly banded around the other entities in the corporate family group.

Appendix C: Brief Descriptions of the Types of Companies Rated Under This Methodology

The following describes the principal categories of companies rated under this methodology:

Vertically Integrated Utility: Vertically integrated utilities are regulated electric or combination utilities (see below) that own generation, distribution and (in most cases) electric transmission assets. Vertically integrated utilities are generally engaged in all aspects of the electricity business. They build power plants, procure fuel, generate power, build and maintain the electric grid that delivers power from a group of power plants to end-users (including high and low voltage lines, transformers and substations), and generally meet all of the electric needs of the customers in a specific geographic area (also called a service territory). The rates or tariffs for all of these monopolistic activities are set by the relevant regulatory authority.

Transmission & Distribution Utility: Transmission & Distribution utilities (T&Ds) typically operate in deregulated markets where generation is provided under a competitive framework. T&Ds own and operate the electric grid that transmits and/or distributes electricity within a specific state or region.

T&Ds provide electrical transportation and distribution services to carry electricity from power plants and transmission lines to retail, commercial, and industrial customers. T&Ds are typically responsible for billing customers for electric delivery and/or supply, and most have an obligation to provide a standard supply or provider-of-last-resort (POLR) service to customers that have not switched to a competitive supplier. These factors distinguish T&Ds from Networks, whose customers are retail electric suppliers and/or other electricity companies. In a smaller number of cases, T&Ds rated under this methodology may not have an obligation to provide POLR services, but are regulated in sub-sovereign jurisdictions. The rates or tariffs for these monopolistic T&D activities are set by the relevant regulatory authority.

Local Gas Distribution Company: Distribution is the final step in delivering natural gas to customers. While some large industrial, commercial, and electric generation customers receive natural gas directly from high capacity pipelines that carry gas from gas producing basins to areas where gas is consumed, most other users receive natural gas from their local gas utility, also called a local distribution company (LDC). LDCs are regulated utilities involved in the delivery of natural gas to consumers within a specific geographic area. Specifically, LDCs typically transport natural gas from delivery points located on large-diameter pipelines (that usually operate at fairly high pressure) to households and businesses through thousands of miles of small-diameter distribution pipe (that usually operate at fairly low pressure). LDCs are typically responsible for billing customers for gas delivery and/or supply, and most also have the responsibility to procure gas for at least some of their customers, although in some markets gas supply to all customers is on a competitive basis. These factors distinguish LDCs from gas networks, whose customers are retail gas suppliers and/or other natural gas companies. The rates or tariffs for these monopolistic activities are set by the relevant regulatory authority.

Integrated Gas Utility: Integrated gas regulated utilities are regulated utilities that deliver gas to all end users in a particular service territory by sourcing the commodity; operating transport infrastructure that often combines high pressure pipelines with low pressure distribution systems and, in some cases, gas storage, re-gasification or other related facilities; and performing other supply-related activities, such as customer billing and metering. The rates or tariffs for the totality of these activities are set by the relevant regulatory authority. Many integrated gas utilities are national in scope.

Combination Utility: Combination utilities are those that combine an LDC or Integrated Gas Utility with either a vertically integrated utility or a T&D utility. The rates or tariffs for these monopolistic activities are set by the relevant regulatory authority.

Regulated Generation Utility: Regulated generation utilities (Regulated Gencos) are utilities that almost exclusively have generation assets, but their activities are generally regulated like those of vertically integrated utilities. This typically means that the purchasers of their output (typically other investor-owned, municipal or cooperative utilities) pay a regulated rate based on the total allowed costs of the Regulated Genco, including a return on equity based on a capital structure designated by the regulator. Companies that have been included in this group include certain generation companies that are not rate regulated in the usual sense of recovering costs plus a regulated rate of return on either equity or asset value. Instead, we have looked at a combination of governmental action with respect to setting feed-in tariffs and directives on how much generation will be built (or not built) in combination with a generally high degree of government ownership, and we have concluded that these companies are currently best rated under this methodology. Future evolution in our view of the operating and/or regulatory environment of these companies could lead us to conclude that they may be more appropriately rated under a related methodology.[19]

Independent System Operator: An Independent System Operator (ISO) is an organization formed in certain regional electricity markets to act as the sole chief coordinator of an electric grid. In the areas where an ISO is established, it coordinates, controls and monitors the operation of the electrical power system to assure that electric supply and demand are balanced at all times, and, to the extent possible, that electric demand is met with the lowest-cost sources. ISOs seek to assure adequate transmission and generation resources, usually by identifying new transmission needs and planning for a generation reserve margin above expected peak demand. In regions where generation is competitive, they also seek to establish rules that foster a fair and open marketplace, and they may conduct price-setting auctions for energy and/or capacity. The generation resources that an ISO coordinates may belong to vertically integrated utilities or to independent power producers. ISOs may not be rate-regulated in the traditional sense, but fall under governmental oversight. All participants in the regional grid are required to pay a fee or tariff (often volumetric) to the ISO that is designed to recover its costs, including costs of investment in systems and equipment needed to fulfill their function. ISOs may be for profit or not-for-profit entities.

Transmission-Only Utility: Transmission-only utilities are solely focused on owning and operating transmission assets. The transmission lines these utilities own are typically high-voltage and allow energy producers to transport electric power over long distances from where it is generated (or received) to the transmission or distribution system of a T&D or vertically integrated utility. Unlike most of the other utilities rated under this methodology, transmission-only utilities primarily provide services to other utilities and ISOs. Transmission-only utilities in most parts of the world other than the US have typically been rated under a different methodology.[20]

Utility Holding Company (Utility HoldCo): As detailed in Appendix B, regulated electric and gas utilities are often part of corporate families under a parent holding company. The operating subsidiaries of Utility HoldCos are overwhelmingly regulated electric and gas utilities.

Hybrid Holding Company (Hybrid HoldCo): Some utility families contain a mix of regulated electric and gas utilities and other types of companies, but the regulated electric and gas utilities represent the majority of the consolidated cash flows, assets and debt. The parent company is thus a Hybrid HoldCo.

[19] For more information, see our methodology that describes our general approach for assessing unregulated utilities and unregulated power companies. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

[20] For more information, see our methodology that describes our general approach for assessing regulated electric and gas networks. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Appendix D: Regional and Other Considerations

Notching Considerations for US First Mortgage Bonds

In most regions, our approach to notching between different debt classes of the same regulated utility issuer follows the guidance on notching corporate instrument ratings based on differences in security and priority of claim, including a one notch differential between senior secured and senior unsecured debt.[21] However, in most cases we have two notches between the first mortgage bonds and senior unsecured debt of regulated electric and gas utilities in the US. Wider notching differentials between debt classes may also be appropriate in speculative-grade issuers.[22]

First mortgage bond holders in the US generally benefit from a first lien on most of the fixed assets used to provide utility service, including such assets as generating stations, transmission lines, distribution lines, switching stations and substations, and gas distribution facilities, as well as a lien on franchise agreements. In our view, the critical nature of these assets to the issuers and to the communities they serve has been a major factor that has led to very high recovery rates for this class of debt in situations of default, thereby justifying a two-notch uplift. The combination of the breadth of assets pledged and the bankruptcy-tested recovery experience has been unique to the US.

In some cases, there is only a one-notch differential between US first mortgage bonds and the senior unsecured rating. For instance, this is likely when the pledged property is not considered critical infrastructure for the region, or if the mortgage is materially weakened by carve-outs, lien releases or similar creditor-unfriendly terms.

Securitization

The use of securitization, a financing technique utilizing a discrete revenue stream (typically related to recovery of specifically defined expenses) that is dedicated to servicing specific securitization debt, has primarily been used in the US, where it has been pervasive in the past. The first generation of securitization bonds were primarily related to recovery of the negative difference between the market value of utilities' generation assets and their book value when certain states switched to competitive electric supply markets and utilities sold their generation (so-called stranded costs). This technique was then used for significant storm costs (especially hurricanes) and was eventually broadened to include environmental related expenditures, deferred fuel costs, or even deferred miscellaneous expenses. In its simplest form, a securitization isolates and dedicates a stream of cash flow into a separate special purpose entity (SPE). The SPE uses that stream of revenue and cash flow to provide annual debt service for the securitized debt instrument. Securitization is typically underpinned by specific legislation to segregate the securitization revenues from the utility's revenues to assure their continued collection, and the details of the enabling legislation may vary from state to state. The utility benefits from the securitization because it receives an immediate source of cash (although it gives up the opportunity to earn a return on the corresponding asset), and ratepayers benefit because the cost of the securitized debt is lower than the utility's cost of debt and much lower than its all-in cost of capital, which reduces the revenue requirement associated with the cost recovery.

In the presentation of US securitization debt in published financial ratios, we make our own assessment of the appropriate credit representation but in most cases follow the accounting in audited statements under US Generally Accepted Accounting Principles (GAAP), which in turn considers the terms of enabling

[21] A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

[22] For more information, see our cross-sector methodology that describes general principles related to loss given default for speculative-grade companies. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

legislation. As a result, accounting treatment may vary. In most states, utilities have been required to consolidate securitization debt under GAAP, even though it is technically non-recourse.

In general, we view securitization debt of utilities as being on-credit debt, in part because the rates associated with it reduce the utility's headroom to increase rates for other purposes while keeping all-in rates affordable to customers. Thus, where accounting treatment is off balance sheet, we seek to adjust the company's ratios by including the securitization debt and related revenues for our analysis. Where the securitized debt is on balance sheet, our credit analysis also considers the significance of ratios that exclude securitization debt and related revenues. Since securitization debt amortizes mortgage-style, including it makes ratios look worse in early years (when most of the revenue collected goes to pay interest) and better in later years (when most of the revenue collected goes to pay principal).

Appendix E: Treatment of Power Purchase Agreements ("PPAs")

Although many utilities own and operate power stations, some have entered into PPAs to source electricity from third parties to satisfy retail demand. The motivation for these PPAs may be one or more of the following: to outsource operating risks to parties more skilled in power station operation, to provide certainty of supply, to reduce balance sheet debt, to fix the cost of power, or to comply with regulatory mandates regarding power sourcing, including renewable portfolio standards. While we regard PPAs that reduce operating or financial risk as a credit positive, some aspects of PPAs may negatively affect the credit of utilities. The most conservative treatment would be to treat a PPA as a debt obligation of the utility as, by paying the capacity charge, the utility is effectively providing the funds to service the debt associated with the power station. At the other end of the continuum, the financial obligations of the utility could also be regarded as an ongoing operating cost, with no long-term capital component recognized.

Under most PPAs, a utility is obliged to pay a capacity charge to the power station owner (which may be another utility or an Independent Power Producer – IPP); this charge typically covers a portion of the IPP's fixed costs in relation to the power available to the utility. These fixed payments usually help to cover the IPP's debt service and are made irrespective of whether the utility calls on the IPP to generate and deliver power. When the utility requires generation, a further energy charge, to cover the variable costs of the IPP, will also typically be paid by the utility. Some other similar arrangements are characterized as tolling agreements, or long-term supply contracts, but most have similar features to PPAs and thus we analyze them as PPAs.

PPAs are recognized qualitatively to be a future use of cash whether or not they are treated as debt-like obligations in financial ratios

The starting point of our analysis is the issuer's audited financial statements – we consider whether the utility's accountants determine that the PPA should be treated as a debt equivalent, a capitalized lease, an operating lease, or in some other manner. PPAs have a wide variety of operational and financial terms, and it is our understanding that accountants are required to have a very granular view into the particular contractual arrangements in order to account for these PPAs in compliance with applicable accounting rules and standards. However, accounting treatment for PPAs may not be entirely consistent across US GAAP, IFRS or other accounting frameworks. In addition, we may consider that factors not incorporated into the accounting treatment may be relevant (which may include the scale of PPA payments, their regulatory treatment including cost recovery mechanisms, or other factors that create financial or operational risk for the utility that is greater, in our estimation, than the benefits received). When the accounting treatment of a PPA is a debt or lease equivalent (such that it is reported on the balance sheet, or disclosed as an operating lease and thus included in our adjusted debt calculation), we generally do not make adjustments to remove the PPA from the balance sheet.

However, in relevant circumstances we consider making adjustments that impute a debt equivalent to PPAs that are off-balance sheet for accounting purposes.

Regardless of whether we consider that a PPA warrants or does not warrant treatment as a debt obligation, we assess the totality of the impact of the PPA on the issuer's probability of default. Costs of a PPA that cannot be recovered in retail rates creates material risk, especially if they also cannot be recovered through market sales of power.

Additional considerations for PPAs

PPAs have a wide variety of financial and regulatory characteristics, and we may treat each particular circumstance differently. Factors which determine where on the continuum we treat a particular PPA include the following:

» Risk management: An overarching principle is that PPAs have normally been used by utilities as a risk management tool and we recognize that this is the fundamental reason for their existence. Thus, we will not automatically penalize utilities for entering into contracts for the purpose of reducing risk associated with power price and availability. Rather, we will look at the aggregate commercial position, evaluating the risk to a utility's purchase and supply obligations. In addition, PPAs are similar to other long-term supply contracts used by other industries and their treatment should not therefore be fundamentally different from that of other contracts of a similar nature.

» Pass-through capability: Some utilities have the ability to pass through the cost of purchasing power under PPAs to their customers. As a result, the utility takes no risk that the cost of power is greater than the retail price it will receive. Accordingly we regard these PPA obligations as operating costs with no long-term debt-like attributes. PPAs with no pass-through ability have a greater risk profile for utilities. In some markets, the ability to pass through costs of a PPA is enshrined in the regulatory framework, and in others can be dictated by market dynamics. As a market becomes more competitive or if regulatory support for cost recovery deteriorates, the ability to pass through costs may decrease and, as circumstances change, our treatment of PPA obligations will alter accordingly.

» Price considerations: The price of power paid by a utility under a PPA can be substantially above or below the market price of electricity. A below-market price will motivate the utility to purchase power from the IPP in excess of its retail requirements, and to sell excess electricity in the spot market. This can be a significant source of cash flow for some utilities. On the other hand, utilities that are compelled to pay capacity payments to IPPs when they have no demand for the power or at an above-market price may suffer a financial burden if they do not get full recovery in retail rates. We will focus particularly on PPAs that have mark-to-market losses, which typically indicates that they have a material impact on the utility's cash flow.

» Excess Reserve Capacity: In some jurisdictions, there is substantial reserve capacity and thus a significant probability that the electricity available to a utility under PPAs will not be required by the market. This increases the risk to the utility that capacity payments will need to be made when there is no demand for the power. We may determine that all of a utility's PPAs represent excess capacity, or that a portion of PPAs are needed for the utility's supply obligations plus a normal reserve margin, while the remaining portion represents excess capacity. In the latter case, we may impute debt to specific PPAs that are excess or take a proportional approach to all of the utility's PPAs.

» Risk-sharing: Utilities that own power plants bear the associated operational, fuel procurement and other risks. These must be balanced against the financial and liquidity risk of contracting for the purchase of power under a PPA. We will examine on a case-by case basis the relative credit risk associated with PPAs in comparison to plant ownership.

» Purchase requirements: Some PPAs are structured with either options or requirements to purchase the asset at the end of the PPA term. If the utility has an economically meaningful requirement to purchase, we would most likely consider it to be a debt obligation. In most such cases, the obligation would already receive on-balance sheet treatment under relevant accounting standards.

» Default provisions: In most cases, the remedies for default under a PPA do not include acceleration of amounts due, and in many cases PPAs would not be considered as debt in a bankruptcy scenario and could potentially be cancelled. Thus, PPAs may not materially increase Loss Given Default for the

utility. In addition, PPAs are not typically considered debt for cross-default provisions under a utility's debt and liquidity arrangements. However, the existence of non-standard default provisions that are debt-like would have a large impact on our treatment of a PPA. In addition, payments due under PPAs are senior unsecured obligations, and any inability of the utility to make them materially increases default risk.

Each of these factors will be considered by our analysts and a decision will be made as to the importance of the PPA to the risk analysis of the utility.

Methods for estimating a liability amount for PPAs

According to the weighting and importance of the PPA to each utility and the level of disclosure, we may approximate a debt obligation equivalent for PPAs using one or more of the methods discussed below. In each case, we look holistically at the PPA's credit impact on the utility, including the ability to pass through costs and curtail payments, the materiality of the PPA obligation to the overall business risk and cash flows of the utility, operational constraints that the PPA imposes, the maturity of the PPA obligation, the impact of purchased power on market-based power sales (if any) that the utility will engage in, and our view of future market conditions and volatility.

» Operating Cost: If a utility enters into a PPA for the purpose of providing an assured supply and there is reasonable assurance that regulators will allow the costs to be recovered in regulated rates, we may view the PPA as being most akin to an operating cost. Provided that the accounting treatment for the PPA is, in this circumstance, off-balance sheet, we will most likely make no adjustment to bring the obligation onto the utility's balance sheet.

» Annual Obligation x 6: In some situations, the PPA obligation may be estimated by multiplying the annual payments by a factor of six (in most cases). This method is sometimes used in the capitalization of operating leases. This method may be used as an approximation where the analyst determines that the obligation is significant but cannot otherwise be quantified due to limited information.

» Net Present Value: Where the analyst has sufficient information, we may add the NPV of the stream of PPA payments to the debt obligations of the utility. The discount rate used will be our estimate of the cost of capital of the utility.

» Debt Look-Through: In some circumstances, where the debt incurred by the IPP is directly related to the off-taking utility, there may be reason to allocate the entire debt (or a proportional part related to share of power dedicated to the utility) of the IPP to that of the utility.

» Mark-to-Market: In situations in which we believe that the PPA prices exceed the market price and thus will create an ongoing liability for the utility, we may use a net mark-to-market method, in which the NPV of the utility's future out-of-the-money net payments will be added to its total debt obligations.

» Consolidation: In some instances where the IPP is wholly dedicated to the utility, it may be appropriate to consolidate the debt and cash flows of the IPP with that of the utility. If the utility purchases only a portion of the power from the IPP, then that proportion of debt might be consolidated with the utility.

If we have determined to impute debt to a PPA for which the accounting treatment is not on-balance sheet, we will in some circumstances use more than one method to estimate the debt equivalent obligations imposed by the PPA, and compare results. If circumstances (including regulatory treatment or market conditions) change over time, the approach that is used may also vary.

Moody's Related Publications

Credit ratings are primarily determined by sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. An index of sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings, please click here.

For further information, please refer to *Rating Symbols and Definitions*, which is available here.

» contacts continued from page 1

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Corporate Rating Criteria

Master

Table of Contents

This report updates and replaces *Corporate Rating Criteria*, dated 1 May 2020.

Scope

This Master Criteria report identifies factors that Fitch Ratings considers when assigning issuer or instrument ratings. These criteria apply globally to new ratings and the surveillance of existing ratings. Not all rating factors in these criteria may apply to each individual rating or rating action given the broad range of entities within Fitch's Corporates portfolio.

Additional criteria reports, including those specific to a sector, a class of liability, a particular form of cross-sector risk or a particular form of corporate structure, supplement the application of these Master Criteria and are available at fitchratings.com.

Issuer Ratings: An Issuer Default Rating (IDR) is an assessment of a non-financial corporate issuer's relative vulnerability to default on financial obligations and is intended to be comparable across industry groups and countries. Issuers may carry Long-Term and Short-Term IDRs. These ratings are related since they are based on an issuer's fundamental credit characteristics (see *Corporates Short-Term Ratings* section on page 8).

Instrument Ratings: The ratings of individual debt issues incorporate additional information on priority of payment and likely recovery in the event of default. Please see Fitch's *Corporates Notching and Recovery Ratings Criteria* for further detail on how Fitch assigns instrument ratings.

Key Rating Drivers

Qualitative and Quantitative Factors: Fitch's corporate ratings reflect qualitative and quantitative factors encompassing the business and financial risks of issuers and their individual debt issues.

Key Rating Factors

Sector risk profile	Financial profile
Country risk	• Cash flow and profitability
Management strategy/governance	• Financial structure
Group structure	• Financial flexibility
Business profile	

Source: Fitch Ratings

Historical and Projected Profile: Projections are developed with a three- to five-year time horizon. Combined with typically at least the last three years of operating history and financial data, this constitutes one typical economic cycle of the issuer under review. These projections are used in a comparative analysis in which Fitch reviews the strength of an issuer's business and financial risk profile relative to its industry or rating category peer group.

Weighting of Factors Varies: The weighting between individual and aggregate qualitative and quantitative factors varies between entities in a sector as well as over time. As a general guideline, where one factor is significantly weaker than others, this weakest element tends to attract a greater weight in the analysis.

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Rating Approach

The *Corporate Rating Criteria* provides an umbrella framework which guides our ratings for corporate issuers at the level at which the global diversity and dynamism of the corporate sector can be captured on a common basis. Individual rated corporates may span multiple industry categories, some of which are quite small in size and with idiosyncratic characteristics, and will also generally face fast-moving, typically unregulated market forces.

Starting from the range of rating categories most appropriate for a corporate's sector risk profile, the analysis of the country risk, operational and financial characteristics of the issuer enables rating committees to determine the most appropriate peer group and, informed by historical and forecast comparisons, to narrow down the rating outcome to a notch-specific level. Corporate issuers with high investment-grade ratings are likely to demonstrate strong financial and operational flexibility. Ratings may be capped in sectors that possess greater volatility in credit metric performance than others over normal cycles.

Sector Navigators

Sector Navigators guide the application of these criteria's concepts on a sector-specific basis. However, the Navigator factors are not exhaustive. We supplement the Navigators with a Rating Derivation section in our research which explains the positioning of the issuer's rating against its peers and/or the relevant Navigator thresholds, and other considerations that affect the rating that are not included in the Sector Navigator. This may include Country Ceiling and linked ratings (e.g. government related entities, or parent and subsidiary linkage) considerations, for instance.

An issuer's IDR would normally be expected to lie within the three-notch band centred around any reasonable combination of the mid-points of the Navigator's Key Factors. Where this is not the case, the difference will be explained in the Rating Derivation section.

Navigator Selection: Fitch will use the Sector Navigator that best captures the sector the issuer operates in, allowing a more sector-specific view of these criteria's Key Rating Factors and peer comparison. The Generic Navigator may be used if no appropriate sector Navigator exists. If issuers straddle several sectors, Fitch may prepare one Navigator for each relevant sector or focus on the most dominant sector.

Non-Application of Navigators: Navigators are unlikely to be used when issuers are assessed under certain criteria (e.g. the *Investment Holding Companies Rating Criteria* or *National Scale Rating Criteria)* or where the Navigator factors do not adequately reflect the risk profile of the issuer (e.g. an issuer that straddles multiple sectors and none are dominant).

More details on Sector Navigators can be found in *Appendix 6*.

Sector-Risk Profile and Country Risk

Sector-Risk Profile

Fitch determines an issuer's standalone rating within the context of each issuer's industry fundamentals. Industries that are in decline, highly competitive, capital intensive, cyclical or volatile are inherently riskier than stable industries with few competitors, high barriers to entry, national dominance, and predictable demand levels.

While sectors differ greatly (and issuers can often combine a variety of sectors in their operations), the Navigators' sector risk profile provides a typical standalone rating range for the issuers in a variety of industries. The upper boundary of the range is not a hard standalone rating cap for issuers in the industry. However, an issuer rated higher than the boundary would be expected to be a clear positive outlier on most financial and business characteristics. It is unlikely that any issuer would be rated on a standalone basis by more than a couple of notches above the upper boundary of the relevant industry.

Country Risk

Fitch's assessment of country risk on an issuer's ratings comprises two distinct considerations: operating environment (OE); and transfer and convertibility risk ("T&C risk" or "Country Ceiling").

Operating Environment

Every issuer exists within an OE, which is a combination of:

- Economic Environment: the location of its revenues, income and assets;
- Financial Access: the funding environment; and
- Systemic Governance: the systemic governance of its primary location.

OE operates as an asymmetric consideration in that it will only have an impact on the issuer's rating when it is negative. Companies can succeed and fail in the most hospitable environments, typically rendering that environment a neutral ratings consideration. However, a higher-risk environment can actively constrain a company's potential and overall credit profile.

In emerging markets especially, the OE can result in a lower rating profile by one to two notches, depending on the level of challenge posed by that environment. This rating would effectively be the issuer's underlying rating before any consideration of the Country Ceiling.

Please refer to *Appendix 6* for a more detailed description of our approach to the OE assessment.

Transfer and Convertibility Risk

Fitch's Country Ceilings represent a general constraint on an issuer's foreign-currency ratings where the relevant country ceiling is lower than 'AAA'. A Country Ceiling can be exceeded in certain circumstances, as detailed in the *Non-Financial Corporates Exceeding the Country Ceiling Rating Criteria*.

Country Ceilings are an assessment of T&C risk, capturing the risk of imposition of exchange controls that would prevent or materially impede the private sector's ability to convert local currency into foreign currency. By extension, T&C considerations do not affect local currency ratings. See the *Country Ceilings Criteria* for additional detail.

Please note that while T&C risk is closely related to sovereign ratings, sovereign ratings do not have a direct effect on a corporate issuer's ratings and are not captured in our OE assessment. Sovereign ratings capture the likelihood that a sovereign issuer will default and are not a proxy of the general financial health of the economy, much less of an industrial section within a given country.

Please refer to *Appendix 5* for a description on how Foreign-Currency IDR, Local-Currency IDR, OE, Country Ceiling and Sovereign Rating relate to each other.

Management Strategy and Corporate Governance

Management Strategy

Fitch considers the collective management's record in terms of its ability to create a healthy business mix, maintain operating efficiency, and strengthen the market position of the issuer. Financial performance over time provides a useful measure of management's ability to execute its operational and financial strategies.

Corporate goals are evaluated centring upon future strategy and past record. Risk tolerance and consistency are important elements in the assessment. The historical mode of financing acquisitions and internal expansion provides insight into management's risk tolerance.

Corporate Governance

Fitch generally focuses on the following governance characteristics: governance structure, group structure and financial transparency.

Corporate governance operates as an asymmetric consideration. Where it is deemed adequate or strong, it typically has little or no impact on the issuer's credit ratings. Where a deficiency is observed, it may have a negative impact on the rating assigned.

Appendix 6 indicates governance characteristics that are likely to be credit neutral, or likely to be credit negative, putting downward pressure on ratings.

Governance and Group Structure

The purpose of assessing governance and group structure is to assess whether the way effective power within an issuer is distributed prevents (or conversely makes more likely) potential problems of a principal-agent nature (for example, management extracting value from the shareholders or debtholders for its own benefit) or principal-principal nature (for example, a majority shareholder extracting value from minority shareholders or debtholders).

Elements to take into consideration are notably the presence of effective controls for ensuring sound policies, an effective and independent board of directors, management compensation, related-party transactions, integrity of the accounting and audit process, ownership concentration and key-person risk.

Financial Transparency

Financial transparency indicates how easy it is for investors to be in a position to assess an issuer's financial condition and fundamental risks. High-quality and timely financial reporting is generally considered by Fitch to be indicative of robust governance. Likewise, publishing intentionally inaccurate or misleading accounting statements is symptomatic of deeper flaws in an issuer's governance framework.

The assessment of Group Structure and Financial Transparency also takes into account the transparency of the issuer's wider group, particularly when a controlling shareholder exists. An 'aa' score is viewed as exceptional for these sub-factors and is reserved for extremely simple structures combined with exceptionally strong reporting that goes well beyond reporting standards.

Ownership, Support and Group Factors

Relations Between Group Entities

Fitch assigns the IDR to the issuer of debt which has operations that define its creditworthiness. Where the issuer is a holding company for the group, operating subsidiaries may be substantially funded by the parent, inter-group guarantees may be in place or there may be other operational or contractual features that join the group together. Thus the IDR of the holding company represents the operations of the group as a whole.

Where group entities are ring-fenced or have segregated funding, Fitch assesses the group's linkages under the *Parent and Subsidiary Linkage Rating Criteria*, or where the entity is an investment holding company the analytical approach in the *Investment Holding Companies Rating Criteria* is used.

When special-purpose entities are debt-issuance funding vehicles and have no operations, Fitch typically rates the guaranteed debt of the issuer based on the ratings of the guarantor. A guarantee is considered full and worthy of the guaranteed debt being assigned the ratings of the guarantor if it covers 100% of principal payments plus all interest accrued up to the point at which all principal payments are paid.

Where a consolidated approach is not taken – for instance, because of material minority interests – Fitch typically considers the sustainability and predictability of the issuer's income resources (including group cash pooling and upstreaming of conditional dividends) used to service its debt, including the credit quality of the relevant entities and their contribution to the group's financial profile. Please see *Appendix 1*.

Business Profile

Key rating factors related to the business profile cover a broad range of qualitative business risks, tailored to the industry fundamentals for each sector. Commonly observed or expected elements for a number of key corporate industries are included in our relevant Sector Navigators to provide guidance for the application of the concepts of the *Corporate Rating Criteria*.

Financial Profile

The quantitative aspect of Fitch's corporate ratings focuses on an issuer's financial profile and its ability to service its obligations from a combination of internal and external resources.

Fitch considers these factors in all the Sector Navigators: Profitability, Financial Flexibility and Financial Structure. These are assessed on a forward-looking, through the cycle basis. These are discussed in greater detail in the sections below.

Emphasis on Cash Flow Metrics: Fitch's financial analysis attributes substantially more weight to cash flow measures of earnings, coverage and leverage than equity-based ratios such as debt-to-equity and debt-to-capital. The latter rely on book valuations which do not always reflect current market values or the ability of the asset base to generate cash flow to service debt. In addition, book values are a similarly weaker measure in the analysis of loss given default than cash flow-based approaches.

However, when the repayment of the debt is more likely to come from the sale of assets than cash flow generated by operations, in sectors such as property investment companies or investment holdings, and the value of the assets is based on sufficiently reliable data, Fitch may take into account balance-sheet-based ratios such as loan-to-value (LTV).

Fitch regards the analysis of trends in a number of ratios as more relevant than any individual ratio, which represents only one performance measure at a single point in time.

Sector-Specific Benchmarks: Credit metrics are not used in a determinate fashion to assign ratings as varying conclusions can be drawn from the same ratio depending on the sector under review. In its *Sector Navigators - Addendum to the Corporate Rating Criteria* report, Fitch specifies financial ratios consistent with the different rating categories for various sectors on a regional or global basis based on factors observed or extrapolated from Fitch's judgment on rated issuers.

Forward-Looking Through-the-Cycle Approach

Forecasting Model (COMFORT)

Corporate forecasting is facilitated by the Corporate Monitoring and Forecasting Model (COMFORT). COMFORT is a forecasting model with balance sheet, profit and loss and cash flow statement used to project the key ratios in the *Corporate Ratings Criteria* under a number of scenarios as set out in the criteria.

The model does not employ any statistical modelling techniques, nor are any standard forecast assumptions applied. Its primary purpose is to support Fitch's rating analysis by ensuring the key ratios are projected in a globally consistent fashion in order to generate issuer-specific financial forecasts in line with Fitch's methodologies for use in rating committees.

The COMFORT model may not be used for issuers such as investment holding companies or when Fitch needs to make significant adjustments to the balance sheet structure (for example, when a large portion of the business needs to be deconsolidated or partially de-consolidated), in which case forecasts will be produced using a bespoke approach.

Ratings Case and Stress Scenarios

Fitch evaluates risks of rated entities and structures under a variety of scenarios to ensure rating stability. The ratings-case and stress-case forecasts help to determine the amount of headroom in a company's credit ratings and inform the appropriateness of a change in rating Outlook.

Scenarios are developed based on potential risks an issuer may encounter through both ratings and stress cases. Financial projections are based on the issuer's current and historical operating and financial performances, its strategic orientation and analysis of wider industry trends. The macroeconomic backdrop for the ratings case may be supported by Fitch's latest *Global Economic Outlook* commentary and forecasts.

The ratings case is defined as a set of conservative projections which form the basis of the assessment of the issuer. Ratings-case projections are developed with a three- to five-year time horizon. Combined with typically at least the last three years of operating history and financial data, this constitutes one typical economic cycle of the issuer under review. Fitch believes this represents a reasonable time frame for forecasts beyond which projections are less meaningful.

A stress case, defined as a scenario that may cause the rating to be downgraded by at least one notch, is also undertaken.

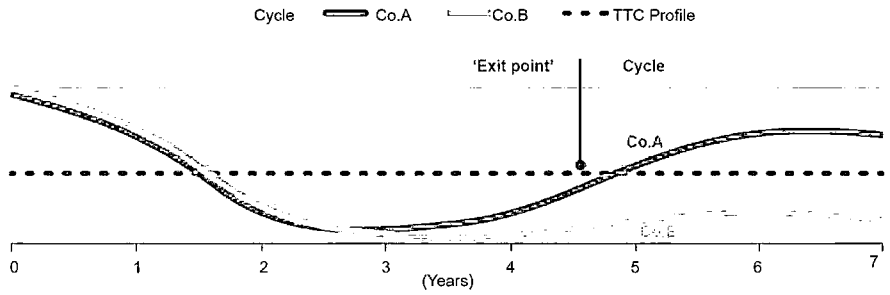
Through-the-Cycle Approach

In rating cyclical companies, Fitch's forecasts take a view on credit-protection measures and profitability "through-the-cycle". The primary challenge in rating a cyclical issuer is deciding when a fundamental shift in financial policy or a structural change in the OE has occurred that would necessitate a rating change.

The "Rating Through-the-Cycle" chart below illustrates two highly stylised examples. Company A suffers through the recession, but is forecast to regain its through-the-cycle profile, represented by the dotted line, by the "exit point" 18 to 24 months after the recession trough. The dotted line represents (quantitative and qualitative) parameters consistent with a particular rating level.

Company B, on the other hand, suffers more significantly during the recession, and is unable to respond as effectively. This may be because of lower rebased ongoing cash-flow expectations, or the assumption of significant new leverage to offset cash shortfalls during the recession. It may alternatively, or additionally, be the result of a fundamental shift in the business model, risks during the recession, or transformational changes in market demand. Company B will typically see its rating lowered to match a lower credit profile, which would be represented, in a stylised manner, by a parallel but lower dotted line illustrating the through-the-cycle profile of a lower rating.

Rating Through the Cycle



Source: Fitch Ratings

Application to Commodity Companies

In assessing commodity companies' credit rating, Fitch projects future operational performance and financial profiles using various assumptions including market-based forward-price indications for the near term, and a "mid-cycle commodity price" for the medium-term profile. For oil and gas companies, this is called a price deck. Both the market-based and mid-cycle prices used by Fitch are conservative in nature and typically below consensus levels during periods of rising prices. Conversely, they may remain above market prices during severe market downturns where the current market prices are influenced by distorting short-term factors.

Fitch's market-based and mid-cycle oil and gas price forecasts are not meant to be price forecasts. Rather, they are intended to reflect a corridor of future price levels for modelling and rating purposes, and for evaluating future commodity price expectations from a debtholder's perspective. In developing its forward-price assumptions Fitch takes account of industry supply and demand fundamentals, marginal producer cost levels and investment flows, among other factors.

Where commodity companies have undertaken capex expansion and these projects have yet to come on stream and their profits flow to reduce debt, perhaps just as commodity prices have fallen, Fitch's rating sensitivities may quote near-term metrics commensurate with the rating acknowledging a trough in commodity prices combined with a temporary higher debt burden. It may also quote a more normal "through-the-cycle" metric to be achieved in the near term. This analysis would have already assessed the project's qualities including its timing to completion and cost-curve position.

Cash Flow and Profitability

Fitch's analysis focuses on the stability of earnings and continuing cash flow from the issuer's major business lines. Sustainable operating cash flow supports the issuer's ability to service debt and finance its operations and capital requirements without the reliance on external funding.

While earnings form the basis for cash flow, adjustments must be made for such items as non-cash provisions and contingency reserves, asset write-downs with no effect on cash and one-time charges. Please refer to *Appendix 4* for further detail.

Financial Structure

Fitch analyses financial structure to determine an issuer's level of dependence on external financing. Several factors are considered to assess the credit implications of an issuer's financial leverage, including the nature of its business environment and the principal funds flows from operations (see *Appendix 4*).

As part of this process, an issuer's level of debt is typically adjusted for a range of off-balance-sheet liabilities by adding these to the total on-balance-sheet debt level.

See *Appendix 1* for the standard adjustments applicable across corporates.

Financial Flexibility

Financial flexibility allows an issuer to meet its debt-service obligations and manage periods of volatility without eroding credit quality. The more conservatively capitalised an issuer, the greater its financial flexibility. In general, a commitment to maintaining debt within a certain range, or relative to cash flow or LTV, allows an issuer to cope better with unexpected events.

Other factors that contribute to financial flexibility are the ability to revise plans for capital spending, strong banking relationships, the degree of access to a range of debt and equity markets (domestic or international), committed, long-dated bank lines and the proportion of short-term debt in the capital structure. Where relevant, these issues are incorporated in the analysis of liquidity.

Investment-grade companies typically access predominantly unsecured debt. Some asset-intensive sectors, such as real estate, in certain markets, access secured debt but Fitch's analysis assesses the level of unencumbered assets relative to unsecured debt from a financial flexibility, cost and recovery perspective, which can affect the entity's IDR and unsecured instrument rating. For sub-investment-grade companies, the analytical approach to forms of prior-ranking debt is detailed in *Corporates Notching and Recovery Ratings Criteria*.

Treatment of Event Risk

"Event risk" describes the risk of a typically unforeseen event, which, until the event is explicit and defined, is excluded from existing ratings. Event risks can be externally triggered, e.g. via a change in law, a natural disaster or a hostile takeover bid from another entity, or internally triggered, such as a change in policy on capital structure, a major acquisition or a strategic restructuring. Merger and acquisition risk has statistically been the single most common event risk, and can serve as an example of how event risk may be included or excluded from ratings.

Event Risk Example – Treating Merger & Acquisition Risk in Ratings

Event	Rating incorporation
Company announces opportunistic acquisition, against previously declared strategy of organic growth.	Event not factored into existing ratings. Event typically generates a rating review based on materiality and impact, depending on funding mix and cost.
Company announces opportunistic acquisition, in line with previously declared intention to undertake sizeable debt-funded acquisitions over three years in the company's current sector.	Event largely factored into existing ratings. Event nonetheless generates a rating review to ensure parameters of current acquisition consistent with expectations already incorporated in the rating.
Company announces intention to expand through acquisitions. No clear indication of cost or anticipated funding mix.	Event not factored into existing rating. Event typically generates a rating review, which may lead to Outlook or rating revisions, depending on Fitch's assessment of likely targets, bid sizes, valuations, the company's record in funding mixes and leverage flexibility.

Source: Fitch Ratings

Corporates Short-Term Ratings

The time horizon of short-term ratings does not explicitly relate to the 13 months immediately following a given date. Instead, it relates to the continual liquidity profile of the rated entity that would be expected to endure over the time horizon of the long-term IDR, typically one economic cycle. This approach places less emphasis on favourable or unfavourable features of the liquidity profile when they are considered temporary.

Short-term ratings are assigned to obligations whose initial maturity is viewed as short term based on market convention. This means up to 13 months for corporates. Short-term ratings are linked to long-term ratings according to Fitch's rating correspondence table as liquidity and near-term concerns are part of the long-term credit profile review.

Rating Correspondence Table

Long-term IDR	Short-term IDR
AAA to AA-	F1+
A+	F1 or F1+
A	F1 or F1+
A-	F1 or F2
BBB+	F1 or F2
BBB	F2 or F3
BBB-	F3
BB+ to B–	B
CCC to C	C
RD/D	RD/D

Source: Fitch Ratings

Distinguishing Between Short-Term Ratings

Fitch's navigators incorporate factors that have specific relevance to short-term risks and liquidity. The primary navigator factor addressing these issues is the Financial Flexibility factor.

This factor is composed of sub-factors addressing financial policy discipline, liquidity and fixed-charge/interest cover ratios and exposure to currency volatility. This Financial Flexibility factor will be used to determine the distinction between the "baseline" and "higher" option for short-term ratings at a cusp, by measuring the degree to which the factor outcome (typically measured on a lower case 'aaa' scale) exceeds the Long-Term IDR.

Specifically, the Financial Flexibility factor (mid-point of three-notch band) will need to be scored at a level equivalent to the minimum level at which the higher short-term rating would always apply, as shown in the tables below.

Minimum Financial Flexibility Factor Required to Achieve Higher Short-Term Rating

F1+	aa-
F1	a
F2	bbb+

Source: Fitch Ratings

In deriving the overall Financial Flexibility factor, analysts will give greater weight to the Liquidity sub-factor, with the other sub-factors (fixed-charge/interest coverage, financial discipline and foreign-exchange exposure) being mainly factored in if they show a material weakness.

Two "control" conditions, also based on navigator factors, would also be required for the higher short-term rating option to be applied:

- The Financial Structure factor (mid-point of three-notch band), which measures leverage and the medium- to long-term capital structure, is not a material weakness for the issuer in relation to its IDR. Specifically, the Financial Structure factor level would be scored at or above the thresholds below:

Minimum Financial Structure Factor Required to Achieve Higher Short-Term Rating

F1+	a
F1	bbb
F2	bbb-

Source: Fitch Ratings

- The OE factor (upper-end of rating band) will need to be at least 'a-' to ensure that the results do not unduly favour lowly levered entities in weaker jurisdictions that by their nature would work against achieving the higher short-term rating outcome.

Additional consideration will also be given by rating committees to other factors, such as corporate governance or other material short-term uncertainties, which could override the general rule set outlined above.

Where an issuer's long-term ratings are equalised with a parent or sponsor based on our *Parent and Subsidiary Linkage Rating Criteria* or *Government-Related Entities Rating Criteria*, the short-term ratings will also be equalised. Where an issuer's rating is supported on a top-down notching basis, the higher of the two short-term rating options will apply, capped at the supporting parent's short-term rating level. When an issuer's rating is supported on a bottom-up notching basis, the short-term rating option will be chosen on a standalone basis, using the rationale outlined above.

Corporate Credit Opinion Model

The Corporate Credit Opinion Model (CCOM) produces model-based Credit Opinions (MBCOs) that are private, point-in-time, credit designations.

The CCOM uses a quantitative approach for both monitoring previously assigned Credit Opinions (COs) and assigning new MBCOs. The CCOM is applied to industrial (i.e. non-financial) leveraged finance companies, typically in the mid-market in the US.

The CCOM is calibrated using a pool of issuers that is representative of those to be evaluated using the model, acknowledging the limited dataset available. Specifically, the CCOM captures

the relationship between key credit metrics identified by Fitch's leveraged finance team and previously assigned ratings and COs, using an ordinal logistic regression model.

The independent variables used in the model are four basic credit metrics: total leverage; average interest; the EBITDA margin; and revenue. The relationship between each of these and actual indications assigned is examined, quantified and calibrated against a regional pool for the US. For some sectors and in some instances, the model may de-emphasise some variables if statistical analysis does not support their inclusion.

The CCOM also has an integrated overlay of limitations based on analytical rules intended to better-represent final committee outcomes with respect to the model output, control potential outlier results and impose scale restrictions on ultra-small entities. Specifically, the model requires a minimum Fitch-adjusted EBITDA of USD5 million for the model to apply.

The reason for the minimum Fitch-adjusted EBITDA level is that Fitch believes that it may not be appropriate to assign credit indications, including MBCOs, to entities below a particular size, below which entities behave differently to typical corporate debt issuers and therefore fall outside broadly common expectations related to liquidity, legal structure and other similar considerations.

The model uses a computation of EBITDA which starts from the borrower's reported, adjusted EBITDA but considers similar adjustments to those made under Fitch operating EBITDA (see *Appendix 4*), subject to the informational limitations applied to MBCOs.

At the committee stage, analysts review the model output in conjunction with a simple liquidity ratio calculation (Fitch-defined readily available cash plus available revolver divided by total debt with equity credit) to consider whether a higher or lower CO may be warranted (typically by a single-notch adjustment) relative to that suggested by the CCOM model, based on sector knowledge, conflicting metric levels or any additional factor deemed relevant.

While COs derived using the CCOM do not contain forecast data or sensitivity analyses, adjustments made to CCOM EBITDA may include forward-looking elements. The model only produces results in the 'b+*' to '<=ccc+*' range.

COs derived using the CCOM are used, on a pooled basis, as one input in the determination of mid-market collateralised loan obligation (CLO) ratings. For more details on COs, including the different informational standards, please see *Credit Opinions: Key Differences with Credit Ratings* (February 2019) and *Rating Definitions* (June 2020) at www.fitchratings.com.

Indicative Examples of Key Credit Metric Ranges for MBCO Levels

MBCO level	Debt/EBITDA leverage (x)	Interest coverage (x)	Liquidity ratio (%)
<=ccc+*	>8	<1	<10
b-*	6.5-8	>1	10-15
b*	5-6.5	>1	10-15
b+*	<5	>1	>15

Source: Fitch Ratings

Information and Limitations

Accounting

Fitch's rating process is not an audit of an issuer's financial statements. However, the issuer's choice of accounting policies may inform Fitch's opinion on the extent to which an issuer's financial statements reflect its financial performance.

Since different accounting standards can affect the presentation of an issuer's financial position, Fitch may adjust figures as part of the rating process to enhance the comparability of financial information across the peer group, including where different accounting standards are used.

The general principle Fitch applies in its adjustments is to get back to measurements of cash: cash balances, cash flow and cash needs.

Fitch typically uses audited accounts that are prepared according to either International Financial Reporting Standards (IFRS) or US Generally Accepted Accounting Principles (US GAAP). If such statements are not available, Fitch will use accounts in local GAAP, other statements provided and management comments to make appropriate adjustments for comparative analysis, provided the quality of the auditors or other reviewing parties employed and disclosure is adequate.

Data adjustments performed by Fitch, while standardised as far as possible, will still contain differences between issuers, and for the same issuer over time, generated by differences in accounting framework, issuer financial and accounting policy choices, audit advice to issuers and national and regional variations in accounting and reporting practice.

The standardised financial adjustments performed by Fitch analysts typically require varying levels of ancillary disclosure and/or subjective estimates. Such ancillary disclosure may be insufficient, either in absolute terms, or reliably over the course of an issuer's ongoing disclosure, for Fitch to apply standardised adjustments. Fitch works with audited and unaudited financial statements, issuer projections and Fitch-prepared projections, all of which represent aggregated data points embedding varying degrees of approximation.

In preparing the agency's forecasts, Fitch further aggregates a number of financial data points to produce summary projections that are comparable with those derived from historical statements. These projections thus unavoidably contain further informational compression through aggregation.

Data Sources

Key assumptions underlying these criteria are developed by the analysis of data on corporates and their vulnerability to credit risk. This includes the analysis of the key rating drivers and their performance over prolonged periods, analytical conclusions drawn from financial reports, public and private sector information, and analytical information received from issuers and other market participants. Assumptions are derived from experienced analytical judgement using such information.

For OE specifically, we derive the Viability Rating (VR) BSI scores from the latest *Macro Prudential Risk Monitor* report.

Information Usage by Fitch

The primary source of information for ratings is the public information disclosed by the issuer, including its audited financial statements, strategic objectives, and investor presentations. Other information reviewed includes peer group data, sector and regulatory analyses, and forward-looking assumptions on the issuer or its industry.

The exact composition of data required to assign and maintain ratings will vary over time. Amongst other factors, this reflects that:

- the operational and financial profiles of rated issuers evolve constantly and this evolution may require greater or lesser emphasis on specific information elements in the rating calculus;
- different and fresh challenges from macroeconomic, financing or other environmental factors will arise for rated issuers over time, which in turn each require greater or lesser emphasis on specific information elements.

Fitch's own rating criteria will evolve over time, and with them, the relative emphasis placed on specific elements. In most cases, the public disclosure of a major capital markets issuer should be sufficient for Fitch to assign a rating. Nonetheless, where the information falls below an acceptable level, for any reason, Fitch will withdraw any affected ratings.

Direct participation from the issuer can add information to the process. The level, quality and relevance of direct participation itself, however, varies between issuers, and also may vary for each individual issuer over time. For more detail on the topic of issuer participation in the rating process and how this is communicated to rating users, see the *Rating Solicitation and Participation Disclosure Policy* at www.fitchratings.com/ethics.

Information levels generally show a stronger relationship to geography than to the level of the issuer's direct participation in the rating process. In high-disclosure jurisdictions, the sum of public information alone for an entity providing limited non-public information to Fitch will often exceed the sum of public and non-public information for other issuers in low-disclosure jurisdictions who participate fully in the rating process. Where the aggregate information falls below an acceptable level for any reason, Fitch will withdraw any affected ratings.

Fitch's analysis of the issuer's record will include consideration of some or all of:

- three or more years' audited financial statements;
- three or more years' operational data regarding the underlying assets and business of the group;
- pro forma financial statements, which are often subject to some form of third-party review;
- when key assets are at a relatively early stage of operation, an expert assessment of the operations of these specific assets in an established sector including financial results.

Whether the information available is sufficient and robust enough to allow a rating to be assigned is a decision for a rating committee.

Rating Assumption Sensitivity

Ratings are sensitive to assumptions about the following factors: industry risk, OE, company profile, management strategy/governance, group structure, cash flow and earnings, capital structure and financial flexibility.

Fitch's opinions are forward looking and include Fitch's views of future performance. Non-financial corporate ratings are subject to positive or negative adjustment based on actual or projected financial and operational performance. The list below includes a non-exhaustive list of the primary sensitivities that can influence the ratings and/or Outlook.

Industry Risk: Changes in long-term growth prospects, competitive intensity and volatility of the relevant industry resulting from social, demographic, regulatory and technological developments.

Country Risk: Deterioration in an issuer OE due to weakening of the general economic environment, financial market health and systemic governance in the countries where the issuer is operating as well as possible imposition of foreign-exchange controls.

Business Risk: Developments in an issuer's ability to withstand competitive pressures as shown in its position in key markets, its diversification, its level of product dominance, its ability to influence price and its operating efficiency.

Financial Risk: Changes in an issuer's financial profile either due to the impact of operational developments, the issuer's management financial policy or the availability of funding in a case of market disruption potentially leading to liquidity pressures.

Limitations of *Corporate Rating Criteria*

Ratings, including Rating Watches and Outlooks, assigned by Fitch are subject to the limitations specified in Fitch's Ratings Definitions and available at https://www.fitchratings.com/site/definitions.

Variations from Criteria

Fitch's criteria are designed to be used in conjunction with experienced analytical judgment exercised through a committee process. The combination of transparent criteria, analytical judgment applied on a transaction-by-transaction or issuer-by-issuer basis, and full disclosure via rating commentary strengthens Fitch's rating process while assisting market participants in understanding the analysis behind our ratings.

A rating committee may adjust the application of these criteria to reflect the risks of a specific transaction or entity. Such adjustments are called variations. All variations will be disclosed in the respective Rating Action Commentaries, including their impact on the rating where appropriate.

A variation can be approved by a ratings committee where the risk, feature, or other factor relevant to the assignment of a rating and the methodology applied to it are both included within the scope of the criteria, but where the analysis described in the criteria requires modification to address factors specific to the particular transaction or entity.

Criteria Disclosure

The following elements are included in Fitch's Rating Action Commentary and issuer research reports.

- A Rating Derivation section which explains the positioning of the issuer's rating against its peers and/or the Navigator thresholds, and describes additional considerations impacting the rating not included in the Navigator. These include in particular cross-sector criteria considerations such as the Country Ceiling or the impact of Parent-Subsidiary relationships. Ratings that fall out outside the three-notch band centred around any reasonable combination of the mid-points of the Navigator's Key Factors will be explained in this section.
- The choice of the lease multiple used if it deviates materially from the conventional multiples described in *Appendix 1*.
- A description of those factors most relevant to the individual rating action.

Appendix 1: Main Analytical Adjustments

Fitch encourages an analytical climate where financial statements are regarded as a source material, providing broad indications of the financial position, rather than as a comprehensive register of immutable facts. The limitations of the source material – corporate group financial statements – are many and varied.

For example, it is not unusual for major groups to be composed of hundreds of legal entities. Financial statements present a high-level consolidated picture, but material differences will exist in the precise financial position – income, expense, obligations and cash-generating ability – of different legal entities within a consolidated group, which may be swept up and masked by the process of accounting consolidation.

Similarly, the apparently smooth and orderly sequential flow of the published income and cash flow does not reflect an actual linear flow of payments through a company's hands or a legal waterfall of priorities, but rather aggregates a theoretical flow. In practice, the company does not write a cheque for its entire annual operating expenditure, followed the next month by one amount for its annual interest bill, followed by one instalment for its tax bill, followed only then by one payment for its annual capital expenditure (capex) bill and so on.

Furthermore, financial statements present only a snapshot of assets and liabilities and are subject to often very broad and subjective decisions on accounting treatments.

Reflecting the aggregated and approximate nature of the source data, Fitch applies a series of common adjustments, outlined below.

Adjustments that are not material to the credit analysis do not have to be made.

1. Leases

Analytical Approach

Lease accounting standards IFRS 16 and ASC 842, both effective for accounting periods beginning 1 January 2019 ("the New Standards") marked a significant change in lease accounting. The rationale for the approach taken below has been outlined in our report *Exposure Draft: Leases Rating Criteria*.

Approach is Accounting Treatment-Neutral Regardless of Accounting Standards

We expect ratings to be globally consistent and credit metrics comparable across geographies. We seek to provide globally comparable credit metrics by bridging differences in US GAAP and IFRS financial statement accounting; rebasing income statements and cash-flow metrics to be consistent globally; adopting consistent lease terms and costs based on asset life rather than lease length; and excluding capitalised leases from debt for many sectors.

Lease Costs are Treated as an Operating Expense

The New Standards diverge in the treatment of lease costs in the income and cash flow statements. IFRS 16 treats all leases much as finance (aka capital) leases are accounted for today. In the income statement, costs are reported as depreciation of a leased asset and interest cost on the lease liability. In the cash flow statement, principal and interest payments related to the lease liability are shown. While IFRS affords some flexibility in classification of interest costs (operating or financing cash flows), we expect both to be most frequently classified under financing activities.

In contrast to IFRS, US GAAP continues previous accounting in the income and cash flow statements, maintaining separate disclosure between finance leases and operating leases, and treating operating lease costs as an expense in both statements.

Fitch addresses these differences by making adjustments to reclassify any lease costs reported under depreciation and interest as operating costs in the income statement or operating cash outflow in the cash flow statement. This reclassification also applies to finance lease-related costs and cash flows reported under US GAAP, to achieve global consistency. EBITDA and FFO will be lower compared with reported figures as a result.

Leases Are Not Classified as Debt in Most Sectors

Fitch does not classify lease liabilities, including finance lease liabilities under US GAAP, as debt in any sector other than airlines and shipping. In all other sectors, these liabilities are classified as 'other liabilities' rather than debt.

In most sectors, we focus on credit metrics with no lease adjustment.

For a minority of sectors in which the lease/buy decision is a core financial decision, we focus on lease-adjusted leverage metrics, which include a lease-equivalent debt based on a multiple of rent expense.

Sector Navigators and their corresponding lease treatments are summarised below:

Multiple (8x rent)	As reported amount (IFRS16/ASC842)	Opex (lease debt excluded from total leverage)
Generic	Airlines	Aerospace & Defense
Food Retail	Shipping	Alcoholic Beverages
Non-Food Retail	Generic	APAC Property/REITS
Hotels	(Transportation only)	Asia-Pacific Regulated Network Utilities
Restaurant Companies		Asia-Pacific Utilities
Gaming		Australian Regulated Network Utilities
		Auto Suppliers
		Automotive Manufacturers
		Building Materials
		Building Products
		Business Services (Data & Processing)
		Business Services (General)
		Chemicals
		Chinese Homebuilders
		Commodity Processing and Trading Companies
		Consumer Products
		Diversified Industrials and Capital Goods
		EMEA Real Estate and Property
		EMEA Regulated Networks
		EMEA Utilities
		Engineering and Construction
		Generic
		Latin America Utilities
		Latin America Real Estate
		Media
		Medical Devices, Diagnostic and Products
		Midstream, Pipelines and Master Limited Partnerships
		Mining
		Non-Alcoholic Beverages
		Oil & Gas Production Companies
		Oil Refining and Marketing
		Oilfield Services
		Packaged Food
		Pharmaceuticals
		Protein
		Steel
		Technology
		Telecommunications
		Tobacco Companies
		U.S. Utilities, Power and Gas
		U.S. Equity REITs and REOCs
		U.S. Healthcare Providers
		U.S. Homebuilders

Source: Fitch Ratings

Given the wide variability in companies that may use the Generic Navigator, issuers that fall under this Sector Navigator have the option of using either the multiple or opex approach. The approach taken will depend on the degree of reliance on real estate. If the issuer is heavily reliant on real estate and it forms a core element of its operations, the multiple approach is likely

to be more appropriate. The choice of approach and rationale will be detailed in Fitch's reports on the issuer.

Many issuers have characteristics that straddle different navigators. Where appropriate to the issuer's business model, Fitch may present additional ratios to supplement the core approach outlined above. For example, a cinema chain, which we would classify as a media company, is likely to have real-estate rentals as a major cost and important part of the business model. Here we would supplement the core unadjusted credit metrics comparable with other media credits with lease-adjusted metrics to allow fuller comparison with retail peers which may also be relevant.

Summary Adjustments

The tables below summarise the adjustments we make to financial statements for issuers reporting under the New Standards.

IFRS Adjustments

Line item	Treatment
Balance sheet	
Right of use assets	No adjustment to balance sheet.
Lease Liabilities	No adjustment to balance sheet, classify as other liabilities not debt.
Income statement	
Depreciation of right of use assets (a)	Reclassify as lease expense.
Interest on lease liabilities (b)	Reclassify as lease expense.
Cash flow statement	
Payment of principal element of lease liabilities (financing cash flows)	Reclassify an amount equal to (a) as cash operating lease costs (a reduction in operating cash flows).
Interest paid on lease liabilities	Reclassify an amount equal to (b) to cash operating lease expense (a reduction in operating cash flows).[a]
Credit metrics	
For sectors in which lease adjustments are still considered relevant	Compute lease-equivalent debt as (a + b) multiplied by a multiple (default 8x) and add to debt in lease-adjusted ratios. For transport substitute with IFRS 16/ASC 842 lease liabilities.
For all sectors, if relevant per sector Navigator	Compute FFO interest coverage and FFO fixed-charge coverage with (a+b) classified as a fixed cost.

[a] Unless already classified as an operating cash outflow.
Source: Fitch Ratings

US GAAP Adjustments

Line item	Treatment
Balance sheet	
Right of use assets	No adjustment to balance sheet.
Lease liabilities	No adjustment to balance sheet. Do not classify as debt.
Income statement	
Depreciation of finance lease assets (a)	Reclassify as lease expense.
Interest on finance lease Liabilities (b)	Reclassify as lease expense.
Operating lease charge (c)	Unchanged (total lease expense =a+b+c).
Cash flow statement	
Payment of principal element of finance lease liabilities (financing cash flows	Reclassify an amount equal to (a) as cash lease costs (a reduction in operating cash flows).

US GAAP Adjustments (Cont.)

Line item	Treatment
Interest paid on finance lease liabilities	US GAAP default is to classify as operating cash outflows. If so, no adjustment; otherwise reclassify an amount equal to (b) as cash lease cost (a reduction in operating cash flows).
Cash payments in respect of operating leases	No change.
Credit Metrics	
For sectors in which lease adjustments are still considered relevant	Compute lease-equivalent debt as (a + b + c) multiplied by a multiple (default 8x) and add to debt in lease-adjusted ratios. For transport substitute with IFRS 16/ASC 842 lease liabilities.
For all sectors, if relevant per sector navigator	Compute FFO interest coverage and FFO fixed-charge coverage with (a+b+c) classified as a fixed cost.

Source: Fitch Ratings

Please see pages 21 and 22 for worked examples of Fitch's adjustments to IFRS16 and US GAAP reporting.

Lease Capitalisation Sectors Other than Transport

For sectors in where we consider leases to be a core financing decision, such as those relying heavily on real estate, we capitalise using a multiple approach based on standard asset lives and discount rate assumptions. This contrasts with the New Standards, which base capitalisation on lease terms that can vary dramatically across geographies and entities, leading to a loss of comparability between entities that we would consider similar.

We will use the income statement charge (depreciation of leased assets + interest on leased liabilities + operating lease charge (US GAAP)) as the basis of our rent-multiple adjustment.

Fitch capitalises this number, hereafter referred to as the "lease charge", using a multiple to create a debt-equivalent. This represents the estimated funding level for a hypothetical purchase of the leased asset. Even when the asset may have a shorter lease financing structure, Fitch's debt-equivalent assumes a purchase of the asset for its full economic life. This enables a broad comparison between rated entities that incur debt to finance an operational asset and those that have leased it.

The standard 8x multiple is appropriate for assets with a long economic life, such as property, in an average interest-rate environment (6% cost of funding for the corporate). The multiple can be adapted to reflect the nature of the leased assets: lower multiples for assets with a shorter economic life, and mostly in emerging markets, to reflect sharply different interest-rate environments in the countries concerned. Fitch may vary the multiple when there is a strong reason to believe that a higher or lower multiple is more appropriate for an individual issuer, market sector, or country. The choice of the multiple used, if the result of its use deviates materially from the conventional multiples derived from the two tables on the following pages, will be noted in Fitch's research on the issuer .

Relevant Multiple (x) Per Interest-Rate Environment and the Leased Asset's Remaining Useful Life

Leased asset's economic life	Leased asset's remaining useful life	Interest rate environment (%)				
		10	8	6	4	2
50	25	7.1	8.3	10.0	12.5	16.7
30	15	6.0	6.8	7.9	9.4	11.5
15	7.5	4.3	4.7	5.2	5.8	6.5
6	3	2.3	2.4	2.5	2.7	2.8

Source: Fitch Ratings

We do not hold periodic minor resets of derived thresholds to add value to our analysis. Although today's interest rates are low in various developed markets, many companies' existing long-dated leases were incurred during periods of "normal" or higher than today's interest rates. Since companies have a steady stream of amortising lease profiles, more recent interest-rate changes have not translated into lower lease charges.

Fitch however differentiates and reviews periodically the multiple used in countries where interest rates are significantly higher or lower that in the reference OECD countries such as Germany, the US, France, Italy or the UK where the 10-year government bond yield median over the 2003-2018 period ranged typically between 3.5% and 4.5%, which after adding the risk premium for a good-quality corporate risk is broadly consistent with the 6% interest rate environment used for defining the lease multiples.

For countries, such as Japan, where the median 10-year government bond yield is closer to 1%, a 9x multiple is more appropriate. At the opposite end, in countries such as South Africa or Russia where the median 10-year government bond yield is above 8%, a multiple of 6x should be used. For issuers with a multinational assets base, Fitch may use a blended approach depending on which countries leased assets are located. If this level of detail is unavailable or Fitch is aware that the country-specific multiple is not appropriate (for example, when leases are denominated in hard currencies), Fitch may either use the standard 8x multiple or take the multiple of the most relevant country for the issuers if one dominant country of operations can be defined.

Where there is evidence for a class of asset that a company's borrowing costs to acquire the asset would be more reflective of global than local financing costs, both in the same currency, Fitch may use an 8x multiple in jurisdictions where a different multiple is the norm for leased financings. Examples of such asset classes include aircraft and ships, which are typically financed in US dollars in global and local markets. Rating committees will evaluate this case by case and relevant evidence may include consideration of interest rate costs (including lessee premiums) implicit in operating or finance leases and absolute lease payments.

Country-Specific Lease Standard[a] Capitalisation Multiples

8x multiple	7x multiple	6x multiple	Other multiples
APAC			
Malaysia, Thailand, China/Hong Kong, South Korea	Australia, New Zealand	India, Philippines, Sri Lanka, Vietnam	Indonesia: 5x Japan : 9x Singapore: 9x Taiwan: 9x
Americas			
Bolivia, Canada, El Salvador, Guatemala, Panama, US	Argentina, Chile, Peru, Venezuela	Dominican Republic, Mexico	Brazil: 5x Colombia: 5x Costa Rica: 4x
EMEA			
Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Lithuania, Netherlands, Norway, Portugal, Saudi Arabia, Slovakia, Slovenia, Spain, Sweden, UK	Bulgaria, Greece, Hungary, Poland, Romania, Serbia	Azerbaijan, Georgia, Iran, Kazakhstan, Moldova, Namibia, Russia, South Africa	Switzerland: 9x Luxembourg: 9x Turkey: 5x Ukraine: 5x Belarus: 5x

[a] Standard refers to the multiple applied to assets with a 15-year average remaining life
Source: Fitch Ratings

When Not to Capitalise

Even for sectors in which Fitch considers the capitalisation of leases to be relevant, we can also choose not to capitalise certain leases, acknowledging cases where a lease has more the character of an operating cost rather than a payment under a longer-term funding structure. Fitch would consider not capitalising lease commitments in the following cases:

- Leased assets that have a short average remaining useful life of five years or less (implying a multiple of 3.0x to 3.5x). Since rated entities are usually leveraged above 3x, it makes little difference if these types of leased assets are included.
- Leased assets that are linked to a specific concession or contract with a finite term, where the lease obligations on bespoke assets co-terminate with completion or expiry of the contract.
- The rated entity has no choice but to lease fixed assets owned or managed by third parties (airport terminals, national infrastructure access, other "regulated" shared services). This is not intended to capture situations where issuers have spun off assets into separately traded entities, as for example, with TMT companies and their tower masts. This exception to capitalise lease payments is meant to capture situations where the purchasing of the asset is not an option for sector participants.
- Where the company has demonstrably been able to manage its lease costs to match the stage of the business cycle, making lease payments more akin to a variable operating cost rather than a long-term financial commitment. This may also lead to the capitalisation of a lower, base level of operating lease expenses when the rentals above that level have proved to be flexibly managed across the cycle.

Airlines and Other Transportation Sectors

For transport (primarily airlines, buses, shipping), we deviate from the multiple approach and use IFRS 16/ASC 842 reported lease liabilities as our lease adjustment to reflect the unique features of the leasing model for these sectors.

We believe the New Standards provide the most appropriate measure in this sector because:

- The aircraft and shipping markets are global and do not have the regional lease length variations we see in other sectors, such as real estate;
- We believe the opportunity to recast lease contracts as service contracts is limited, given the highly developed financing sector backing aircraft and other transport asset leasing;
- Many transport companies make frequent use of finance leases, often consisting of non-linear payment terms and/or purchase options, and which are often actively managed. In these circumstances, there is unlikely to be enough data in the public domain to determine an appropriate multiple to reflect these nuances, potentially leading to misleading comparisons. The New Standards allow this complexity to be incorporated in a consistent manner;
- Publicly available global databases exist that provide basic ownership and leasing data on an aircraft-by-aircraft basis in this sector. This will allow us to take into account any major distortions caused by lease length variations, due perhaps to a very young and growing fleet, and reflect these in our rating triggers, if appropriate.

Other Analytical Considerations

Leases with Variable Components

Under the New Standards, companies are required to capitalise variable lease payments linked to inflation or an index (LIBOR, other interest rates) but can exclude payments tied to sales or other operational metrics that can vary across companies based on the stage of business cycle. To avoid any loss of comparability, we, by default, treat all variable lease costs as part of the total lease charge.

However, when disclosure is both sufficient and reliably consistent, we may reflect the additional flexibility provided by the variable component by discounting the rental amount used in the computation of the debt equivalent, when this adjustment is made.

Short-Term Leases

We exclude short-term lease costs from the calculation of the lease-equivalent debt. Short-term leases are defined as any leases with a term of 12 months or less or leases ending within 12 months of date of first implementation of New Standards.

Cash Flow Metrics

In response to the complexities introduced by the New Standards, we introduced two additional cash-flow-based metrics defined as: [CFO-capex] divided by gross debt and [CFO-capex] divided by net debt. There are several benefits the use of these metrics:

- All non-discretionary asset costs are accounted for in this measure, be they lease costs, services, or maintenance capex;
- The metrics are a good complement to EBITDA/FFO margin metrics, as they account for the recurring capex and associated funding needed to maintain a certain level of market positioning and profitability;
- They remove the noise of shareholder capital allocation (mainly common dividends) to assess the true financial flexibility/capacity available to a company to repay all of its debt, absent external pressures.

The importance and use of these ratios vary due to capex patterns intrinsic to each sector. The new ratios are most directly relevant for sectors, such as telecommunications or industrials, in which companies tend to have relatively steady capex, but carry less analytical significance for utilities, natural resources, gaming, or airlines sectors, where capex is typically more volatile and growth-oriented. When relevant to the individual sector, the new ratios are shown in the Ratings Navigator.

Worked Examples

Company A: Adjusting IFRS 16 to Fitch's Proposed Lease Treatment (P&L & Cashflow Statement)

Company A Lease Assumptions (EURm):

- P&L lease operating costs old IFRS: 170 (linear amortisation)
- P&L lease operating costs new IFRS: 190 (non-linear interest drives higher expense)
- Total cash outflow leases: 170 (on a cash basis, total payment does not change under new standard)
- Although cash outflow is lower than P&L, for illustrative purposes, we have assumed cash and P&L rent payments are the same (190)
- In reality, under IFRS 16, lease expense amount is unlikely to be exactly the same as previously due to the effect of linear depreciation and non-linear interest. In this example, old lease expense is 170 but 190 (110+80) under new IFRS
- Cash interest paid for all lease obligations: 80 (classified in cash flow from financing for illustrative purposes)
- Cash repayment of principal for lease obligations: 110

Fitch Adjustments - IFRS

(EURm)	YE18 new IFRS	Fitch lease adjusted	YE18 adjusted	
Revenue	1,000	-	1,000	
COGS	0	-	0	
SG&A	-160	-190	-350	⇩
D&A Leases	-110	110	0	
Other D&A	-260	-	-260	
Total D&A	-370	110	-260	⇧
EBIT	470	-80	390	⇩
Interest expense associated with leases	-80	80	0	
Other interest expense	-90	-	-90	⇩
Total interest expense	-170	80	-90	
EBT	300	-	300	⇔
EBITDA	840	-190	650	⇩
EBITDAR	840	-	840	⇔
Cash flow statement				
EBITDA	840	-190	650	⇩
Cash interest	-90	-	-90	
Cash tax	0	-	0	
Other items	0	-	0	
FFO	750	-190	560	⇩
CWC	10	-	10	
CFO	760	-	570	⇩
Cash flows from investing activities	-325	-	-325	
Principal portion of lease expense	-110	110	0	
Interest portion of lease expense	-80	80	0	
Other cash flows from financing activities	-200	-	-200	
Cash flows from financing activities	-390	-	-200	⇧
Net decrease (-)/increase (+) in cash	45	-	45	⇔

Source: Fitch Ratings

Company B: Adjusting FASB 842 (new US GAAP) to Fitch's Proposed Lease Treatment (P&L & Cash Flow Statement)

In this case, accounting treatment remains the same under FASB 842, and companies continue to maintain separate disclosure in financial statements of operating lease expense and finance capital lease) lease expense. To achieve global comparability in credit metrics, we will adjust to treat finance lease as an operating expense (no longer a split D&A and interest).

Assumptions:

- Operating lease expense: USD40
- Finance lease depreciation & amortisation: USD20
- Finance lease interest: USD15
- Total adjusted rent expense under new lease treatment: USD75
- Finance lease excluded from reported debt in balance sheet

Fitch Adjustments – US GAAP

(USDm)	2019 new US GAAP	Fitch lease adjusted	2019 adjusted	
Revenue	500		500	
COGS	0		0	
SG&A (excluding lease)	-160	-35	-195	⇩
Operating lease expense	-40		-40	
D&A (excluding finance lease)	-80		-80	
D&A finance lease	-20	20	0	⇧
EBIT	200	-15	185	⇩
Interest expense associated with finance lease	-15	15	0	⇧
Other interest expense	-90		-90	
Total interest expense	-105	15	-90	⇧
EBT	95	-	95	⇔
EBITDA	300	-35	265	⇩
EBITDAR	340		340	⇔
Cash flow statement				
EBITDA	300	-35	265	
Cash interest (including finance lease)	-105	15	-90	
Cash tax	-20		-20	
FFO	175		155	⇩
CFO	175	-20	155	
Cash flows from investing activities	-50		-50	
Repayment of finance lease liability	-20	20	-	
Cash flows from financing activities	-20	20	-	⇧
Net decrease (-)/increase (+) in cash	105	-	105	⇔

Source: Fitch Ratings

2. Hybrids

Analytical Approach

For more details, see *Corporates Hybrids Treatment and Notching Criteria*.

The *Corporate Hybrids Treatment and Notching Criteria* are directed at hybrids purchased by unaffiliated investors that are expected to exercise all available remedies. It does not apply to holding-company (HoldCo) payment-in-kind (PIK) notes or shareholder loans that:

- are issued at a HoldCo level outside a restricted group (i.e. where cash flow is controlled within a group of companies) or,
- are held by affiliated investors (e.g. the private equity sponsor in a leveraged buyout, or "LBO", transaction) whose economic and strategic interests are expected to remain aligned with those of common equity holders.

See *HoldCo PIK and Shareholder Loans* on page 31 for the treatment of these instruments.

3. Pensions

Analytical Approach

Defined-benefit (DB) pension scheme deficits are financial obligations, but due to their long-term nature and uncertain timing and amount are not viewed by Fitch as a debt obligation for the purpose of computing its standard leverage metrics. Instead, our focus is on the cash flow implications of pension arrangements.

Where pension schemes are significant to a company, Fitch reflects the impact of such schemes primarily in its cash-flow modelling. If it is determined that a pension scheme could be material to the ratings analysis, analysts investigate the scheme further to ascertain the likely implications of a pension deficit on the cash payments an issuer is scheduled to make into the scheme. Expectations of increasing cash payments are reflected in Fitch's forecasts to gauge the effect on the overall credit profile of the issuer.

Impact on Credit Metrics

Fitch's funds from operations (FFO) and other cash flow measures are stated after recurring pension contributions. Any expectation of a change in pension contributions are factored into Fitch's cash flow forecasts as an adjustment to FFO. The impact of these potential changes is reflected in measures of cash generation and in leverage and coverage ratios.

Where a company makes a large one-off contribution to a pension scheme and this is considered exceptional, it may be shown below FFO. While this will leave some cash flow performance measures unaffected (compared with a case where there is no payment), it would be felt in leverage and coverage metrics through its impact on net, and often gross, debt.

Adjusted leverage metrics based on accounting valuations are calculated but are primarily a guide as to what is a significant pension liability worthy of further investigation. One tool for the initial screening of a pension deficit is pension-adjusted leverage as compared with non-pension-adjusted leverage. This is computed by taking a traditional leverage metric, such as gross adjusted debt: operating EBITDAR, and adding pensions items to the top and bottom line:

$$\frac{\text{Gross debt + Lease Adjustment + Fitch Pension Deficit}}{\text{Operating EBITDA + Rents + Current Service Cost}}$$

For IFRS reporters, for both funded schemes (i.e. when companies are obliged to hold assets to cover eventual pension payments) and non-funded schemes, Fitch includes the full IFRS pension deficit. The measure taken is liabilities less assets as measured at the balance sheet date, stripping out the effect of unrecognised actuarial gains. This is sometimes referred to as the "funded status" of the scheme.

For US GAAP reporters, Fitch includes unfunded pension liabilities, as determined under GAAP.

Where funding valuations show a deficit in jurisdictions we would describe as "funded", action may have to be taken to close this deficit over a reasonable period (often interpreted as approximately 10 years). An increased pension deficit can therefore lead to an immediate cash flow drain. By contrast, in "unfunded" jurisdictions where there is no requirement to fund defined benefit pension obligations, there is often no cash flow impact from changes in the reported deficit.

In order to reflect the wide variations in pension valuations over the economic cycle, Fitch examines the effect of adjusting for pensions over a period of several years. Where pension-adjusted leverage is materially higher than leverage without pension adjustment, Fitch investigates the nature of the pension obligations in more detail to assess whether significant pension-related cash outflows are a possibility within the ratings horizon.

Impact on Recovery Analysis

Bespoke recovery analysis carried out for 'B+' rated and below credits may include a pension deficit, where significant, as a creditor in the capital structure. Pension liability rankings may vary depending on country-specific insolvency frameworks. Accounting estimates can be used unless there is evidence that these differ significantly from the amount that would actually be claimed on a liquidation or restructuring. See Fitch's *Corporates Notching and Recovery Ratings Criteria* for more details.

4. Debt Factoring

The treatment of factoring arrangements may vary by issuer. To ensure peer comparability, we consider the economic substance of the transaction and typically adjust to bring factoring back onto the balance sheet. We view factoring as an alternative to secured debt, regardless of the legal recourse to the originator.

Where factoring has been treated by the issuer as an asset sale (i.e. not treated as debt on the balance sheet), and provided disclosure is both sufficient and reliably consistent Fitch will reverse the accounting treatment and adjust financial statements as set about below for its analytical purpose.

Balance Sheet

- Assets: the relevant section of the balance sheet is increased by the outstanding amount of factored assets at the closing date.
- Liabilities: the section "other debt secured" is increased by the same amount.

Cash Flow Statement

- Working-capital cash movements are decreased (increased) by the year-on-year increase (decrease) in outstanding factoring funding at the closing date.
- Cash flow from financing is increased (decreased) by an identical amount.

Exclusion to Factoring Adjustment

We would treat factoring as a genuine asset sale and not as a super-senior financial debt only in exceptional circumstances:

- The structural features of the receivables factoring demonstrate that risks have been fully transferred to its creditors. A factoring should be ring-fenced (i.e. isolated from the other debt of the group), and its creditors only have recourse to the assets bought, with no recourse to the originator.
- The nature of the assets sold in the factoring programme must be of a non-recurrent operational nature so that the interruption of the factoring would not lead to the assets reconstituting themselves on the balance sheet of the issuer with the concomitant immediate liquidity requirement to fund these newly originated assets.

Given the recurrent nature of the underlying assets, factoring of trade receivables and inventory is unlikely to be treated as an asset sale unless the assets pertain to a business line that has been or will soon be discontinued at the date of the assessment.

Treatment of Factoring Lines in Liquidity Analysis

Fitch would generally not consider unused amounts in committed factoring facilities as a source of liquidity as these facilities typically include covenants on the seller and eligibility criteria for the receivables which may be more difficult to meet in a stress scenario. This differs from Asset-Backed Loan Revolvers (which may be secured by asset receivables and inventory), which Fitch would consider for liquidity purposes.

However, we would treat the factoring lines as short-term debt for the purposes of liquidity analysis. This reflects the notion that during periods of stress, factoring lines could be withdrawn and an issuer would have to access alternative senior funding to support its working capital cycle.

Impact on Credit Metrics

Where factoring has been treated by the issuer as an asset sale and provided disclosure is both sufficient and reliably consistent Fitch will reverse the accounting treatment and adjust financial statements as set about below for its analytical purpose.

Balance Sheet

- **Assets:** the relevant section of the balance sheet is increased by the outstanding amount of factored assets at the closing date.
- **Liabilities:** the section "other debt secured" is increased by the same amount.

Cash Flow Statement

- Working-capital cash movements are decreased (increased) by the year-on-year increase (decrease) in outstanding factoring funding at the closing date.
- Cash flow from financing is increased (decreased) by an identical amount.

Impact on Recovery Analysis

Whether secured or non-recourse funded, and reconsolidated, the practical importance of this core working-capital funding leads to its treatment as senior-ranking debt. This seniority of ranking features in recovery analysis and facilitates immediate replacement funding. In case the originator benefits from an alternative unsecured credit facility as a backup, receivables factoring will however not be treated as a super-priority claim.

For the purpose of the recovery analysis, "factoring funding" is defined as the highest amount authorised to be drawn in the last 12 months preceding the analysis, or the latest drawn amount, if this is the only information available.

Case 1: Liquidation Approach

If the receivables sold are off balance sheet without recourse to the originator, Fitch assumes that all of the receivables shown on the balance sheet (which exclude the sold receivables) are to be used for the recovery of the on-balance-sheet debt and no adjustment needs to be made to reflect the impact of the factoring programme.

In the less frequent case that the factoring is on balance sheet due to recourse to the originator, Fitch treats the factoring debt as super-senior and includes the impact of over-collateralisation. Fitch seeks details on the maximum over-collateralisation requirements that apply to receivable factoring to protect the factoring's lenders against losses and dilutions (such as credit notes) and to cover funding costs. If no information is available, a standard rate of 125% of the factoring funding can be assumed for formally structured programmes. For non-structured factoring transactions, a 105% over-collateralisation rate can be used instead. Fitch would then determine an appropriate discount given the quality and diversity of the group's customer base and the value already taken out by the factoring creditors. In our worked example it amounts to 50%. The value of the receivables after this haircut is assumed to be the value available at the time these assets are sold.

Liquidation Valuation — Illustrative Asset Recovery, Separating Out a Receivables Factoring

(EURm)		Group	Factoring	Remaining group
Factoring programme amount	(A)	0	50	
Over-collateralisation rate (%)	(B)		125	
Maximum level of receivables pledged	(C)=(A)x(B)		63	
Value of receivables before haircut	(D)	85	63	22
Haircut assumption (%)	(E)			50
Receivable value available for recovery net of haircut assumption	(F)= (D)x(1-(E))	11	0	11
Asset recovery for the group				
Receivables		11	0	11
PP&E		100		
Inventory		25		
Total available for debt recovery		136		

Source: Fitch Ratings

In the table above, we assume that the over-collateralisation of EUR13 million (EUR63 million-50 million) is all absorbed by funding costs and losses at the factoring level.

Case 2: Going-Concern Valuation

In a going-concern scenario, Fitch has to make a decision on the elements listed below.

- Whether the entity and/or its creditors have ensured that the receivables factoring has remained available to the group perhaps by increasing (if possible) or maximising the over-collateralisation, or ensuring that good-quality receivables have been routed through the factoring. This implies that the receivables of the group are, at best, of the same quality. The receivables could be left outside the factoring programme because of concentration reasons, i.e. over "per obligor" limits, beyond which the factoring would give no funding, lower quality (such as receivables in serious arrears), or because of location in jurisdictions where it is difficult to gain security over these assets.
- Whether the receivables factoring is likely to close down. If so, senior debt (likely to be super-senior debt) at the entity level has to be arranged to fund the remaining working-capital liquidity requirements of the group.

For the purpose of Fitch's analysis, unless it is clear from the factoring documentation that the factoring programme will continue to be available, the agency will assume a worst-case scenario, i.e. the factoring programme closes down and has to be replaced by an equivalent super-senior facility.

If the credit profile of the group were to deteriorate, it is likely that the quality and quantity of eligible receivables would start declining and therefore the amount of factoring would decline. Fitch assumes that the reduction in volume of receivables would be of the same proportion as the agency's EBITDA discount applied to calculate the distressed EV.

However, Fitch's analysts continue to have the latitude to present logical recommendations that may increase or reduce the recovery ratings suggested by the valuation and the notching. It depends on views about the OE or a particular company. For instance, if the factoring is exposed to a part of the business which is more seasonal and/or cyclical, or if the company has high operating leverage, meaning that a minimal reduction in sales and receivables would have a very high impact on EBITDA.

Reverse Factoring

This consists in a financial institution paying a supplier of an issuer at or before the maturity of the trade payables. The amount under the trade payable would, as a result, be owed by the issuer to the financial institution with a final maturity often significantly extended as compared to the maturity of the original payable had the reverse factoring arrangement not been in place.

Provided there is sufficient and reliably consistent disclosure, Fitch would adjust the debt for extension in payable days resulting from a reverse factoring transaction if the resulting payable days were materially longer than the normal industry practice. For example, assuming an outstanding amount of confirming of CUR100 million, with an extension of payable days from 60 days to 180 days, Fitch would consider that the 120 days extension is akin to financial debt and would add to financial debt 120/180 of the outstanding amount, i.e. CUR67 million.

Fitch will reverse the accounting treatment and adjust the financial statements as set out below for its analytical purpose:

Balance Sheet

- Liabilities: the relevant section of the balance sheet is decreased by the extension amount of factored liabilities at the closing date.
- Liabilities: the section "other debt secured" is increased by the same amount.

Cash Flow Statement

- Working-capital cash movements are decreased (increased) by the year-on-year increase (decrease) in outstanding factoring funding at the closing date.
- Cash flow from financing is increased (decreased) by an identical amount.

5. Cash Adjustments

Analytical Approach

Readily available cash is used in our net debt metrics (principally in leverage ratios) and in assessing immediate resources for liquidity. The "readily available" component of Fitch's definition of cash points to the timely, unconditional availability of cash to the rated entity and the reasonable certainty that the attributable value at par is available.

Readily available cash may not include, for example, forms of restricted cash, a period-end cash balance that is not sustained throughout the year, operational cash demands, and other types of cash not freely available for debt reduction or where its timeliness for liquidity purposes is questionable.

The concept of cash being "readily available" to the rated entity also, where practicable and disclosed, takes into account where the cash is located within the corporate group or jurisdiction, and if there are material costs (tax in particular), contractual permitted dividend payment mechanisms, or capital controls, affecting its availability to the rated entity.

Discount for Various Types of Instruments

Three- to 12-month cash deposits are normally treated as readily available cash except when Fitch is aware that a corporate is lodging its cash with lower-rated banks, in which case that cash may be excluded. Similarly, money-market funds are typically treated as cash where they are located in developed jurisdictions and used by a corporate whose financial policies Fitch believes to be broadly conservative.

Fitch also haircuts the value of different types of financial instruments classified as marketable securities based on their characteristics such as vulnerability to changes in interest rates and inflation and market liquidity, independent of any ratings the instruments may have as these market-driven characteristics are generally not encompassed in a credit rating.

For equities, a 100% discount is employed except in exceptional circumstances.

Cash and Cash Equivalents, Marketable Securities

Description (% of face value)	Corporate adj. Readily available cash
Cash	100
Cash deposits/bank certificates of deposits	100
Government bond	100
• Irrespective of maturity (6 or >12-month timed deposit), deposits can be treated as readily available cash • Subject to counterparty-risk check (i.e. not all cash lodged in 'CCC' banks) • Where government bonds/treasuries are in the 'B' rating category and below, amounts invested are treated as per equities below	
Fixed-income investment-grade bond funds	70
Diversified high-yield fixed-income bond funds Equity fund, equities	0-40
• Start at 0% of face value unless there are good grounds for a higher percentage treatment, as presented to, and agreed by, the rating committee.	

Source: Fitch Ratings

Working-Capital-Related Adjustments

Intra-Year Variation

If a company's period-end net debt levels are markedly different from the average during the year, Fitch may adjust the period-end cash balance to reflect average net debt levels or intra-year peak to trough changes in working-capital requirements. An example would be a retailer reporting just after the peak festive season, thus showing a flattering picture of high cash and low inventories when compared to its typical quarterly cash and working-capital positions.

Sustainable Negative Working Capital

Where companies have structurally negative working-capital requirements, increasing activity creates a cash inflow. Conversely, a decreasing revenue base equates to a shrinking negative capital position and cash outflows.

If Fitch is concerned that the beneficial negative working-capital position may reverse or prove to be volatile, analysts may increase debt for the lack of cash, or reduce the cash to reflect this potential cash outflow.

Blocked Cash

Fitch excludes blocked cash from the calculation of its financial metrics. Blocked cash is cash that is segregated for a particular purpose, e.g. defeasement of debt or other types of financing, cash set aside for a deferred consideration, litigation or margin calls or if it is located in parts of the group where cash is not accessible due to capital controls or other constraints. Conversely, blocked cash for the purpose of the redemption of a specific debt instrument can be re-classified as readily available cash.

In situations where the cash cannot be freely moved between offshore and onshore entities and/or there is an elevated risk that the foreign operations may be separated from the domestic issuer, Fitch will exclude the foreign cash from its liquidity and net leverage analysis and consider analysing the credit on a geographic deconsolidated basis.

6. Adjusting Consolidated Profiles for Group Structures

Analytical Approach

In the majority of entities rated by Fitch, consolidated financial statements are a reasonable basis for the assessment of the economic ability of a group to make use of the resources available to it to service its debt, and the identification of the true extent or potential extent of its liabilities. This is the case when the consolidated entities operate as one economically integrated group with cash generated in one part of the consolidated group accessible to other parts of the group, most notably the debt-raising entities and the expectation that the obligations issued by one part of the group enjoy a claim upon the operations of other parts of

the consolidated group and this common responsibility informs the group's financial strategy and creditors' recourse.

Even if the consolidated profile is the right basis for the assessment of credit worthiness, it does not however necessarily mean that all entities within a group will be rated at the same level as explained in Fitch's *Parent and Subsidiary Linkage Rating Criteria*.

Factors such as ownership structure, funding arrangements, and location-based restrictions may however be such that the consolidated profile does not provide the most appropriate picture to assess the credit quality of the rated legal entity, typically the top parent company, and there is consequently a need to "redraw the boundaries", in most cases with some form of deconsolidation. The decision to deconsolidate would generally be the result of an assessment of weak linkage between the parent and the subsidiary being considered for deconsolidation based on the assessment of the legal, operational and strategic linkages described in more detail in the above-mentioned criteria.

More rarely, Fitch may also consolidate certain debts which an issuer has been able to deconsolidate, where Fitch believes that debt is likely to be serviced by the issuer, directly or indirectly, for example for strategic reasons. The presence of significant minority interests may also require adjustments to consolidated financial ratios as profits attributable to minority shareholders within the group structure are not available to service debt at the parent level.

Subordination issues, either due to characteristics of the debt instruments or the location of the debt in the group structure are reflected in Recovery Ratings as applied to debt instrument ratings. However, if the degree of subordination or access to cash flow within the group structure changes the default likelihood of an issuing entity, this can also impact the IDR. For example, a rated entity may be more of a holding company (HoldCo) in receipt of contingent dividend income streams rather than a parent with direct access to all consolidated profit streams. Similarly, prior-ranking funding at lower risk subsidiaries may result in the parent only having direct access to riskier activities rather than to the whole group as portrayed in the consolidated accounts.

Financial Adjustments Made

The most common adjustments Fitch makes to consolidated accounts are listed below.

Full Deconsolidation

- Replacement of one segment of the group's EBITDA or FFO contribution to the consolidated whole with the sustainable cash dividend received from that entity. This acknowledges that the inherent profitability conveyed in the EBITDA or FFO is not of equally direct benefit to the rating as the rest of the group's operations – the cash fungibility is less than that for other operations. Usually this reduces that part of the group's contribution; very occasionally dividends and proportionate EBITDA or FFO may be broadly similar.
- Fitch will also typically deduct the debt (and assets) and attributable profits from the consolidated profile as far as this is possible from available data, even if only to calculate key metrics rather than all the financial figures.
- Rating committees look closely at the stability and record of sustainable dividends received when adding them back to the EBITDA or FFO. Fitch excludes dividend flows that have not been stable over the past few years.
- If entities are deconsolidated, "equity value" still remains in theory for the potential benefit of the parent creditors, which can limit loss severity given a default. This makes little difference to investment-grade ratings, where loss severity has a very small role in the rating calculus. Exceptionally, if the equity value were very significant and highly marketable, this may exert a favourable influence on our consideration of the entity's liquidity profile. For the speculative-grade rating universe, where instrument ratings have a greater weight to recovery upon default, this equity stake can be of a greater input to the rating.

Proportional Consolidation

Where information is available, a proportionate consolidation approach may be more appropriate in 50:50, or 60:40 joint ventures where equal partners provide equity support or the joint venture's funding expects support from its owners, and importantly, cash fungibility is stronger given the relatively greater control.

JVs with a significant level of leverage and deemed unlikely to be supported by the parent are however likely to be fully deconsolidated as their cash-flow generation will be primarily used to service debt at their level with sustainable dividends only being included in the analysis of the parent.

Adjustment for Minority Interests

If an entity is consolidated (as if 100% owned) yet significant minorities exist, thus dividends are paid to those minorities, Fitch may:

1. deduct the cash paid minority dividends from FFO and adjust EBITDA-based coverage and leverage metrics for these dividends;
2. choose proportionate consolidation for the less than 100% ownership if the level of minority interest is high (one-third of economic interest or more); or
3. where these adjustments could be distorting (for example when a dividend paid to minorities is significantly lower than their share of net income) net income attributable to minorities may be used to adjust EBITDA-based coverage and leverage metrics as an alternative approach, in which case the adjustment will be disclosed in the rating action commentary.

7. HoldCo PIK and Shareholder Loans

This section applies to shareholder loans or HoldCo PIK loans, notes or other instruments/obligations common in LBO transactions that are:

- are issued at a HoldCo level outside a restricted group (i.e. where cash flow is controlled within a group of companies) or,
- are held by affiliated investors (e.g. the private equity sponsor in an LBO transaction) whose economic and strategic interests are expected to remain aligned with those of common equity holders.

For instruments that do not demonstrate these features, please refer to *Appendix 1: Main Analytical Adjustments; 2. Hybrids* on page 22.

If instruments that come under this adjustment are present in a financing and legal group structure, Fitch will assess if and how they should be taken into consideration in the rating assessment of an entity.

The concept of "rated entity" can apply to both a single legal entity and a group of borrowing entities with cross-guarantees and/or cross-default mechanisms in place such that the IDR reflects the relative default probability of the specified group that will include the rated entity. In groups with heavily engineered capital structures, such as LBOs or high-yield issuers, this specified group of entities is often called a "restricted group".

Fitch considers that the following factors tend to support the treatment of HoldCo PIKs and shareholder loans as non-debt of the rated entity. The test is whether the instrument increases the probability of default of the rated entity's debt.

- Subordination and Lack of Security: structural subordination of the instruments when they are issued by an entity outside the rating perimeter and contractual subordination when issued by the entity that issues the LBO debt via an inter-creditor agreement as well as the absence of security over (and guarantees from) the rated entity. Possession of independent enforcement or acceleration rights would weigh towards debt treatment.
- Non-Cash Interest Payment: the instruments are PIK-for-life (i.e. without cash-pay obligations or options) during the life-time of the transaction.

- Longer-Dated Final Maturity: the instruments' effective final maturities are longer dated than any of the more senior-ranking debt elements in the rated entity's capital structure.

Factors that would, in contrast, favour inclusion of these debt instruments in the rated entity's IDR perimeter include the inverse of the features noted above. They could be complemented by elements such as marketability and transferability of the loan (mostly relevant for shareholder loans), and the large size of the instrument relative to the group's overall capital structure.

Structural Subordination and Ring Fencing

This is key to analysing the impact that a HoldCo PIK or shareholder loan default may have on the rated entity. In theory, if the PIK or shareholder loan issuer is outside the rated entity or group of entities, then effective structural subordination can exist. In addition, if there are provisions in the documentation that in Fitch's view provide sufficient protection against cross-default or cross acceleration, the IDR of the rated entity will not be affected.

Furthermore, if effective ring-fencing exists (i.e. the rated entity and its assets can be legally separated from other related companies and grant enforceable security over their assets in respect of the holders of the senior debt and the junior debt), then the debt outside the rated entity is not legally an obligation of the latter and does not increase its probability of default.

Only an Equity Claim

Structural subordination of the HoldCo PIK or shareholder loan is reinforced if the only assets of the instruments' issuer are shares in the rated entity (rather than an intercompany loan) and proceeds are paid out directly to shareholders as a dividend (most likely in the case of a HoldCo PIK) or used to acquire new shares in the rated entity, as then the HoldCo issuer (and its creditors) has only a residual equity claim on the rated entity.

Intercompany Loan Claim

Provided that intercompany loans granted by the HoldCo are subordinated to all other claims of the rated entity and are effectively deeply subordinated shareholder loans, then these loans could be considered closer to an equity claim than a debt claim. The ultimate decision to treat the instrument as debt or non-debt of the rated entity will depend on other characteristics described in the following sections and decision tree. In the context of an LBO structure with a formal inter-creditor agreement, the terms of the agreement are a crucial determinant in Fitch's ratings analysis. Fitch would review the terms of this document and, where available, the accompanying legal view, to form a view on the enforceability of the inter-creditor terms, especially the subordination arrangements which vary from jurisdiction to jurisdiction.

Security and Guarantees

Any security or guarantees from the rated entity for the benefit of HoldCo PIK or shareholder loan would enable a lender to claim on the rated entity, or to influence insolvency or restructuring proceedings, and could lead to the inclusion of the instrument in the rated perimeter's debt quantum.

Junior-Ranking Security Over Rated Entity Assets

Some HoldCo PIKs or shareholder loans, although issued by a HoldCo, might have the additional benefit of junior-ranking security over assets of the rated entity (e.g. rank third after first-priority senior secured loans and second-priority mezzanine loans). This could effectively bring the instrument within the ring-fencing of the rated entity and potentially affect the rated entity's IDR.

However, if the access to the security package is granted without any independent acceleration or enforcement rights whatsoever, then Fitch would most likely consider that sufficient subordination still exists to protect the senior lenders (provided that the security package and the subordination arrangements are enforceable within the relevant jurisdiction).

Security Granted Over the HoldCo PIK Issuer

In certain cases, the HoldCo PIK or shareholder loan holders may be granted security over shares in the HoldCo issuer itself, which may give the HoldCo PIK or shareholder loan holders additional comfort that they can enforce their rights as shareholders in the HoldCo Issuer. However, in most cases this in itself does not increase the risk of default of the rated entity and therefore will not have an impact on its IDR, unless a change of control clause at the rated entity level can be triggered.

Possible Contagion Through "Change of Control" Clause

If HoldCo PIKs or shareholder loans were somehow to experience a default whilst the rated entity is still performing, then enforcing on the HoldCo issuer share security may constitute a "change of control" at the rated entity level. This could trigger a mandatory prepayment event for the secured debt and a change of control put option for a high-yield instrument thereby increasing the probability of default of the rated entity.

PIK-for-Life or Cash-Pay

PIK-for-Life

If an instrument does not impose any obligation on an issuer to pay cash interest for the life of the instrument (including non-eligibility to pay in cash (toggle)), and the instrument is a bullet repayment instrument, then the risk of a payment default does not materialise until the final maturity date. In this case the HoldCo PIK or shareholder loan instrument does not impose any additional cash obligations on the rated entity or the HoldCo issuer itself until final maturity, so the risk of a rated entity default is not increased, assuming a later final maturity.

Furthermore, given the incurrence-style financial covenants typical of HoldCo PIK deals, and provided that the HoldCo PIK or shareholder loan documentation has been drafted to be no more restrictive than the rated entity's documentation, in theory a non-payment default should also be almost impossible if there is no such default at the rated entity level. Therefore, a HoldCo PIK or shareholder loan default is less likely than a rated entity default, and the overall risk of default for the rated entity is not increased.

Cash-Pay

Although HoldCo PIK notes and shareholder loans are often PIK-for-life, there may be periods of interest in such instruments that become mandatorily or optionally payable in cash which means that they may at some point increase the borrower's cash obligations. In cases where the borrower has the option to pay interest in cash, Fitch believes it to be unlikely that this election will be made, as once the company is in a position to service more cash-pay debt, it should be more economical to refinance the HoldCo PIK notes with senior secured debt or cash-pay high-yield notes at a lower cost of debt.

The source of payment of any cash interest in the case of a HoldCo PIK or shareholder loan switching to cash-pay would be the rated entity when the HoldCo issuer has no operations or cash flow of its own and would be reliant on the upstreaming of dividends or other forms of restricted payment out of the rated entity, as is typically the case in LBO structures.

In practice, the rated entity documentation usually includes limitations on the ability of the rated entities to upstream cash to the detriment of the rated entity lenders or investors (there may be some debt leverage threshold). Depending on the drafting of such limitations, this would either limit or entirely prevent the upstreaming of cash for the purposes of dividends or payment of cash interest on a subordinated instrument such as a HoldCo PIK or shareholder loan.

Should the issuer have to, or elect to, make a cash payment in relation to its PIK or shareholder loan instrument, this, depending on the details of the documentation, may lead to a payment default on this instrument before the final maturity. The level of ring-fencing of the rated entity and existing inter-creditor arrangements would then determine how the instrument lenders would be treated. Assuming that there is adequate ring-fencing, the HoldCo PIK or shareholder loan issuer would be assessed separately on the basis of the cash flow available to it to fund its debt service.

Fitch would however include in its analysis of the rated entity the level of dividend required to service the debt at the HoldCo issuer level. This may result in a change to the IDR, depending on the resulting level of financial flexibility still available to the rated entity. If the ring-fencing is not sufficiently strong, then the HoldCo PIK or shareholder loan would be considered an obligation of the rated entity and the switch to a cash-pay obligation would increase the probability of default accordingly.

Final Maturity

Final Maturity Longer than Restricted Group Debt

If the final maturity of the HoldCo PIK or shareholder loan is beyond that of all rated entity debt, the risk of payment default on the instrument's principal will not affect the probability of default on shorter-dated senior obligations.

Final Maturity Shorter than Rated Entity's Debt

Should the HoldCo PIK or shareholder loan fall due for repayment while other debt obligations are still outstanding, this could increase the risk of the HoldCo defaulting when the instruments at the rated entity level are still outstanding. In practice, if the HoldCo PIK or shareholder loan issuer is ring-fenced, then the options for the group and/or its ultimate shareholders would be as follows:

1. To allow the HoldCo PIK/shareholder loan instrument to default. Assuming that the rated entity is performing adequately, Fitch expects that shareholders will take steps to prevent this occurring. If the rated entity is already performing badly, this is likely to be already reflected in its IDR and the default of a HoldCo PIK/shareholder loan instrument, if structured as a subordinated instrument and provided the rated entity and the security ring-fencing arrangements are effective, would probably not have a further detrimental impact on the IDR.
2. To arrange to refinance the instrument with a similar, longer-dated instrument outside the rated entity. This would be a credit-neutral event for the rated entity and therefore would not affect the IDR.
3. To repay the instrument from equity sources outside the rated entity by either an IPO or a direct equity injection from shareholders.
4. To refinance the instrument by refinancing all of the group's debt, including at the rated entity level.
5. To repay the instrument by selling the group to another owner and prepaying all group debt, including at the rated entity level.

Item (1) above could result in a change of control event at the rated entity level if the HoldCo PIK/shareholder loan investors enforce their security over HoldCo PIK / shareholder loan issuer shares. Items (2) to (5) above constitute event risk for an issuer, which is not generally included in the assessment of an IDR. In cases where event risk is clearly increasing (e.g. as the final maturity date of a short-dated HoldCo PIK instrument approaches), Fitch may decide to apply a Rating Watch where there is some visibility of potential specific events.

Therefore, provided that the other terms of the HoldCo PIK/shareholder loan instrument are sufficient to allow the agency to determine it has no impact on the rated entity's IDR, then a shorter maturity at outset will not change this determination. However, there may be a greater degree of event risk as the final maturity date of the instrument approaches.

Additional Considerations

Transferability of Shareholder Loans

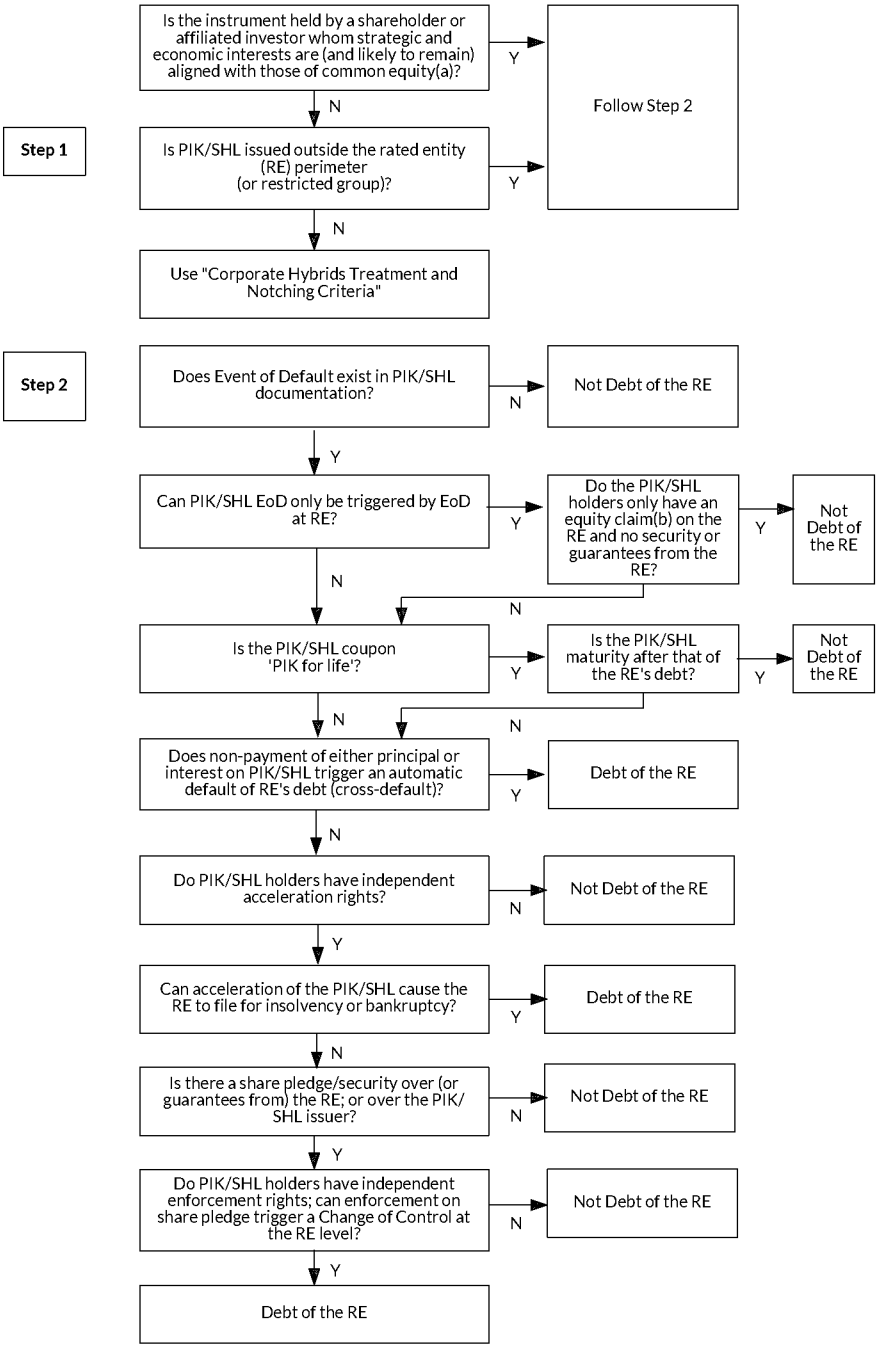
Fitch would expect the shareholder to remain the holder of the instrument and the interests of the shareholder loan holders and those of the common equity holders to be aligned. Otherwise, if the shareholder loan can be transferred to third parties independently of equity interests, creditor composition considerations (voting upon restructuring provisions, ownership of other tranches of debt in order to force certain rights) may distort expected behaviour of the creditor hierarchy tree. This can be aggravated if the shareholder loan represents a material proportion of the capital structure such that its holders could have a potential negotiating stance with other creditors.

Such issues may be more acute for private equity owned companies whose shareholders typically have a shorter-term investment horizon than a strategic shareholder with long-term commitment and incentive to support the rated entity. However, to date, evidence is not conclusive that a particular private equity sponsor, or its fund's time-horizon, has consistently treated its investment or the restricted group's senior creditors adversely. In Fitch's experience, each sponsor has reacted to events based on the merits of each transaction.

Decision Tree

The decision tree below summarises Fitch's analytical steps in assessing the features of PIK instruments and shareholder loans that would lead Fitch to treat them as debt of the rated entity. The materiality and transferability considerations described above would not, in isolation, lead Fitch to treat the instruments as debt. They could however feature in addition to other elements of the decision tree leading to a debt treatment. The approach taken by Fitch to assess the debt treatment of SHL and PIK instruments is holistic in nature and cannot be summarised in a decision tree which would be applicable to all cases given the wide variety of characteristics these instruments can exhibit. The decision tree below does not therefore supersede the criteria described in the previous pages but should rather be seen as a tool helping to analyse fairly simple cases.

Decision Tree To Consider Whether the PIK Instrument/Shareholder Loan (SHL) is Debt of the Rated Entity (RE) or Not



[a] Fitch considers interests are aligned if it believes that the holders of the SHL/PIK instrument are unlikely to exercise all available remedies in case of default (i.e. a shareholder action to force an insolvency would be an unlikely scenario). This can be reinforced by the fact the shareholder loan cannot be transferred to third-parties, independently of equity interests.
[b] If the PIK or SHL instrument is lent at the RE level, Fitch does not consider the shareholder loan to have only an equity claim. Further analysis of the characteristics of the instrument are required, following the decision tree.
Source: Fitch Ratings, transaction documents

8. Debt Fair-Value Adjustments

Analytical Approach

Fitch aims to reflect debt in its credit metrics at the amount payable on maturity. This assumes that the issuer will remain a going concern.

Balance-Sheet Impact

- Local-currency debt is analysed on the basis of cash principal due on a going-concern basis. The impact of fair-value adjustments and derivatives is eliminated from debt.
- For foreign-currency debt, the cash principal outstanding will generally be translated at the period-end spot rate. Debt is translated at the contracted rate where a derivative has been used to fix the rate at which the debt is repaid.
- For notes issued at a discount, or with interest paid only at the end of the instrument's life (such as PIK – payment-in-kind - notes) the cash principal taken will be the total amount payable, whether described as principal or interest, at the reporting date.

Operating Profit Impact

Where the movement in fair value is included in operating profit, this is excluded from Fitch's EBITDA and EBITDAR calculations.

These movements, as non-cash, are excluded as a matter of course from the agency's cash flow-based measures such as FFO.

9. Adjustments for Financial Services Activities

Financial services (FS) entities are businesses established to support their parent's activities by providing financing to the group's customers. Sectors where significant FS operations are prevalent include automotive, truck, aerospace and capital goods manufacturers, and consumer goods companies, retailers (credit card operations) and telecom operators (financing plans for handsets).

Financial Services Deconsolidation: Fitch's approach assumes that the debt allocated to the FS operations is repaid using the cash flow of the FS operations. Debt to be repaid by the parent's non-FS cash flow remains in the parent's capital structure.

Where FS activities are consolidated by the rated entity, Fitch assumes a capital structure for FS operations which is strong enough to indicate that FS activities are unlikely to be a cash drain on industrial operations over the rating horizon. The FS entity's target capital structure takes into account the relative quality of FS assets and its funding and liquidity. Then, the FS entity's debt proxy, or its actual debt (if lower), can be deconsolidated.

If the EBITDA generated by the FS division is clearly disclosed and material, it is also deconsolidated from the Industrial EBITDA.

Identifiable, Readily Financeable Receivables: The deconsolidation of FS debt applies to the debt that is funding identifiable financial receivables. A ready market of third-party finance providers must be available for these types of assets.

Internal Divisions or Separate Subsidiaries: FS entities can be divisions within the group, financed by the parent company through intercompany loans, or fully- or majority-owned captive subsidiaries, with or without a bank status, issuing their own debt, supported or not by the parent. The same analytical approach of deconsolidation applies.

Non-Consolidated FS Entities: If the FS entity is not consolidated by its parent company, typically because the FS business is conducted through a joint venture with a third-party bank, Fitch will assess if it may require an equity or liquidity injection. If so, Fitch factors this cash flow impact in its financial forecasts for the rated entity's industrial operations.

FS Debt/Tangible Equity Ratio: To calculate the amount of FS debt that can be deconsolidated relative to its activities' risk profile and implied standalone credit profile, Fitch uses a range of gross debt/tangible equity multiples, up to 7x, for the FS business. The relevant gross debt/tangible equity ratio varies according to the quality of assets and the funding and liquidity structure of the FS operations. In particular, low quality assets may require a more significant equity buffer than a portfolio of greater asset quality.

If the FS operation's actual debt and equity as reported by the company result in a debt/tangible equity leverage lower than the level broadly consistent with investment-grade ratings, as determined by Fitch's criteria, Fitch will not allocate more debt to the FS operations in order to increase leverage to the target ratio.

If Fitch's Financial Institutions group has performed an analysis of the FS operations under the relevant Financial Institutions criteria, the adjustment applied would be based on that analysis rather than on the framework described below. This would typically be the case if Fitch maintains a public rating or has a pre-existing internal view on the FS operations or if the FI operations are regulated financial institutions for which the approach below is not directly applicable.

No FS Standalone Rating: The methodology outlined here is not meant to derive a standalone rating for the FS operations of a corporate entity. This methodology is solely used as a way to allocate debt between the parent and its FS operations in order to provide for analytical comparability between a corporate issuer with FS operations and similar issuers without FS operations. It is also used to ensure that the FS operations' risk is properly reflected in the corporate parent's ratings.

Determining When to Use These Adjustments

Fitch is indifferent to accountants' consolidation treatment of the FS activity. Fitch's main consideration is whether the identifiable assets are readily financeable by third parties, and that the proxy of debt deducted from the group's consolidated profile results in a credit profile for the FS entity that is broadly commensurate with a low investment-grade rating. This is intended to limit the extent to which the FS activities act as a rating constraint on industrial operations.

Even if the funding is non-recourse, particularly a securitisation, Fitch will include that funding in the FS activity's debt.

Selection of the Relevant Debt/Equity Ratio

Fitch selects the FS entity's relevant gross debt/tangible equity ratio relative to its asset quality and its funding and liquidity profile, thereby assuming a hypothetical capital injection resulting in a capital structure for FS operations that is strong enough to indicate that FS activities are unlikely to be a cash drain on industrial operations over the rating horizon.

The simplified grid below is designed to be consistent with Fitch's *Non-Bank Financial Institutions Rating Criteria* but is not a substitute for those criteria, nor would it indicate an FS entity's standalone rating. Fitch is likely to use a more conservative gross debt to tangible equity multiple than indicated by the table when:

- data on the FS entity is limited or of poorer quality;
- a significant portion of the FS entity's financing/lending activities is not related to the parent company's core business, raising questions around the strategic motivation, risk appetite and underwriting standards with respect to such activities;
- there is little record on the underlying asset classes, such as telecom handset receivables. The multiple may be re-assessed as the asset class and its performance characteristics become more established and funding options are further developed.

Relevant Low Investment-Grade Gross Debt/Tangible Equity Ratio for the FS Entity

		Funding and liquidity				
	Captive's gross debt/ tangible equity ratio (x)	Prone to change (b)	Less stable (bb)	Generally stable (bbb)	Stable (a)	Very stable (aa)
Asset quality	Poor quality (b)	1	1	2	3	4
	Below average (bb)	1	2	3	4	5
	Average (bbb)	2	3	4	5	6
	High quality (a)	3	4	5	6	7
	Very high quality (aa)	4	5	6	7	7

Source: Fitch Ratings

FS Asset Quality

In the following summary table, guidance on impairment and non-performance ratio thresholds are provided. The OE refers to the issuer's OE described in *Appendix 6*, but includes the additional consideration of the regulatory framework as per the *Non-Bank Financial Institutions Rating Criteria*.

Asset Quality Benchmarks: Impaired and Nonperforming Ratios

		Asset quality factor				
	Impaired loans/gross loans[a]	b	bb	bbb	a	aa
Op. environment						
	aa and above	>14	6 to 14	3 to 6	1 to 3	<=1.00
	a	>12	5 to 12	2 to 5	0.25 to 2	<=0.25
	bbb	>10	4 to 10	0.5 to 4	< 0.5	--
	bb	>5	5 to 0.75	<0.75	--	--
	b	>1	<1			

[a] For countries and asset classes where the impaired and non-performing framework is not used, delinquency ratios (typically 30 days) may be used as a substitute
Source: Fitch Ratings

Asset Quality

Asset quality	Credit profile	Description
Very high quality	aa	A very high degree of stability as reflected in low levels of impaired assets and/or low losses over multiple economic and/or interest rate cycles. Asset-quality measures are better than comparable institutions.
		Targeted borrowers are of high prime quality. Receivables portfolio is highly granular and geographically diverse.
High quality	a	A high degree of stability as may be reflected in modest levels of impaired assets and/or losses. Asset quality is moderately variable over economic or interest rate cycles. Asset-quality measures are likely to be modestly better than at peer institutions or less vulnerable to economic and/or interest rate cycles.
		Targeted borrowers are of prime quality. Receivables portfolio is highly granular and geographically diverse.

Asset Quality (Cont.)

Asset quality	Credit profile	Description
Average	bbb	A degree of stability, as may be reflected in average levels of impaired assets and/or losses. Asset quality measures are likely to fluctuate over economic and/or interest rate cycles.
		Targeted borrowers are of average quality. Receivables portfolio has average granularity and geographic diversification.
Below average	bb	Above average levels of impaired assets and losses. Asset quality measures are likely to be more volatile in the face of changes in economic and/or interest rate cycles and generally worse or more vulnerable than broad industry averages.
		Targeted borrowers are of below average quality. Receivables portfolio has below average granularity and geographic diversification.
Poor quality	b	Highly variable or poor asset quality, impaired assets and losses. Asset quality measures are likely to be very volatile based on changes in economic and/or interest rate cycles and generally significantly worse or more vulnerable than broad industry averages.
		Targeted borrowers are of below average quality. Receivables portfolio has poor granularity and geographic diversification.

Source: Fitch Ratings

FS Funding and Liquidity

The factors from the following summary table refer to the FS entity's type of funding, access to central bank liquidity (if any), reliance upon short-term commercial paper (CP) markets with or without appropriate CP back-up lines, any funding facilities standalone (borrower) or shared (co-borrower) with the parent, funding duration mismatch while taking into account representative asset churn for the type of receivables, and its unencumbered pool of assets to enable timely access to secured debt in an emergency. When the FS activity almost entirely relies on the parent for its funding, the funding and liquidity "score" would be assessed as equal to the rating of the parent as these funding requirements would have been included in the parent company's rating.

Funding and Liquidity

Funding and liquidity	Credit profile	Description
Very stable	aa	Minimal reliance on short-term funding. Wholesale funding is predominantly long-term with established investor appetite. Funding is relatively less confidence sensitive. Funding sources are very diverse. Funding duration exceeds average maturity of portfolio assets. Funding is predominantly unsecured, supported by a very robust pool of unencumbered assets. Unsecured debt / Total Debt is greater than 90%. Very robust contingency funding plans are in place.
Stable	a	Wholesale funding is predominantly long-term. Funding may be modestly confidence sensitive. Funding sources are relatively diverse. Funding duration is commensurate with average maturity of portfolio assets. Funding is largely unsecured, supported by a robust pool of unencumbered assets. Unsecured debt / Total Debt is between 50% and 90%. Robust contingency funding plans are in place.
Generally stable	bbb	Generally stable, although there may be moderate funding concentrations. Reliance on less stable wholesale funding sources. Funding is confidence sensitive. Funding duration is commensurate with average maturity of portfolio assets. Meaningful unsecured funding component, supported by a modest pool of unencumbered assets. Unsecured debt / Total Debt is between 35% and 50%. Reasonable contingency funding plans are in place.

Funding and Liquidity

Funding and liquidity	Credit profile	Description
Less stable	bb	Less stable, although there may be funding concentrations. Meaningful reliance on less-stable wholesale sources of funding. Access to funding may be uncertain during periods of market stress. Funding duration may not be commensurate with average maturity of portfolio assets. Meaningful secured funding, with some encumbrance of balance sheet assets. Unsecured debt / Total Debt is less than 35%. Contingency funding plans may not be sufficient
Less stable and prone to change	b	Less stable and may be prone to sudden changes in creditor sentiment. Access to funding during periods of market stress is very uncertain. Funding duration is not commensurate with average maturity of portfolio assets. Fully secured funding, with meaningful encumbrance of balance sheet assets. Contingent funding plans may not be well developed.

Source: Fitch Ratings

Calculating the Gross debt/Tangible Equity Ratio Applicable to the FS Entity

Where financial statements for the captive finance entity exist, Fitch compares the reported gross debt/tangible equity ratio of the FS operations with that of the relevant gross debt/tangible equity ratio to present a standalone FS credit profile.

If the relevant gross debt/tangible equity ratio (for example 7x) is lower than the FS entity's actual reported gross debt/tangible equity ratio (for example 10x), Fitch considers a hypothetical equity capital injection from the rated entity to the FS entity to reduce its gross debt and increase its equity to attain this template capital structure. Fitch assumes that the hypothetical capital infusion is financed by the rated entity's industrial operations.

The example below represents a summary of a representative car manufacturer's financial statements with its FS entity which has an actual gross debt/tangible equity ratio of 8.3x. In order to achieve a gross debt/equity ratio of 7.0x, we adjust the FS entity's reported equity by CUR1,300 million, financed by a CUR1,300 million increase in the gross debt or reduce cash of the rated entity's industrial operations.

Adjustment Computation Example

				FS adjustments		Adjusted profile	
(CURm)	Consolidated group	"Core" industrial	FS entity	"Core" industrial	FS entity	"Core" industrial	FS entity
Sales	102,000	94,000	8,000			94,000	8,000
EBIT	4,300	1,900	2,400			1,900	2,400
EBIT margin (%)	4.20	2.00	30.00			2.00	30.00
Readily available cash and securities	33,000	27,500	5,500			27,500	5,500
Receivables	69,000	3,500	65,500			3,500	65,500
Other assets	118,000	109,000	9,000			109,000	9,000
Total assets	**220,000**	**140,000**	**80,000**			**140,000**	**80,000**
Equity	69,200	61,400	7,800	-1,300	1,300	60,100	9,100
Adjusted financial debt	95,000	30,000	65,000	1,300	-1,300	31,300	63,700
Other liabilities	55,800	48,600	7,200			48,600	7,200
Total liabilities (reported)	**220,000**	**140,000**	**80,000**			**140,000**	**80,000**

Adjustment Computation Example (Cont.)

				FS adjustments		Adjusted profile	
(CURm)	Consolidated group	"Core" industrial	FS entity	"Core" industrial	FS entity	"Core" industrial	FS entity
Debt/tangible equity			8.3				7
Adj. debt/EBITDA		3.3				3.5	
Adj. net debt/EBITDA		0.3				0.4	
Cost of debt (%)		4.50	3.70			4.50	

Source: Fitch Ratings

Even if the company does not report a specific allocation of debt and equity to its FS division, Fitch allocates proxy debt and equity to produce the above financial adjustments.

The gross debt/tangible equity ratio only applies to the debt and equity funding identifiable, readily financeable receivables and net "other assets" ("other assets" minus "other liabilities") which Fitch believes can be included as quasi-receivables (for example relevant residual values).

Appendix 2: Approaching Distress in the Lowest Rating Categories

Speculative and Distressed Rating Scale

The default curve for rating experience is not linear, and ratings in the lowest category – the 'CCC','CC' and 'C' range – face extremely high default risk. Similarly, at the threshold of 'B' and 'CCC' categories, our ratings definitions become more direct. See Fitch's *Rating Definitions* at www.fitchratings.com.

Factors Differentiating Highly Speculative and Distressed Ratings

Broad sector traits are useful in understanding relative sector risk, but the differentiation between 'B' and 'CCC' category credits is significantly affected by company-specific factors relative to market sector peers. In addition to credit metrics, we typically assess a corporate's business model and operating profile, effectiveness and appropriateness of management strategy, sustainability of the capital structure (including the cost, likelihood and need to refinance), and liquidity risk. For more detail see the tables *Key Rating Considerations for Highly Speculative Credits* and *Key Rating Considerations for Distressed Credits.*

These factors help differentiate ratings within the 'B' category but should not be considered in isolation. For example, the fact that an issuer consistently generates positive free cash flow (FCF) may seem (in isolation) a characteristic of an investment-grade rating profile. However, if two comparable issuers are constrained at the 'B' category because of their limited scale, lack of diversification or modest competitive position, consistently positive FCF through the cycle would be a differentiating factor and the issuer with this cash-flow profile would be a stronger candidate for a 'B+' than a 'B' rating. Similarly, assuming two companies have equally aggressive financial metrics, a more robust business model would support a 'B+' IDR rather than 'B' as cash-flow generation through the cycle mitigates refinancing risk and limits erosion of the respective liquidity position.

Factors Have Relative Weights

The considerations described in the tables *Key Rating Considerations for Highly Speculative Credits* and *Key Rating Considerations for Distressed Credits* do not all have the same weight in the overall rating assessment. Often, some factors completely override others, drive the rating discussion into a 'B+' versus 'B', a 'B' versus 'B−' or a 'B−' versus 'CCC+' debate and strongly influence the final rating outcome. The table below shows which factors Fitch attaches greater weight to, depending on rating levels. As a general guideline, where one factor is significantly weaker than other factors, this weakest element tends to attract a greater weight in the analysis.

Relative Importance of Factors in Determining Ratings

Higher ◉ **Moderate** ◯ **Lower** ◯

	B+ vs. B	B vs. B–	B– vs. CCC+	CCC+ vs. CCC-
Business model	◉	◯	◯	◯
Strategy	◉	◯	◯	◯
Cash flow	◉	◉	◯	◯
Leverage profile	◯	◉	◉	◯
Governance and financial policy	◯	◯	◯	◯
Refinancing risk	◯	◯	◉	◉
Liquidity	◉	◯	◉	◉

Source: Fitch Ratings

For example, high refinancing risk and weak liquidity would inevitably shift the rating discussion towards 'B–' versus 'CCC+' considerations regardless of any strength in the business model or strategy. In a 'CCC+'/'CCC' debate, the absence of adequate liquidity buffers and vulnerability to unfavourable capital market conditions at refinancing would typically drive a 'CCC+' rating, while our view that default is a real possibility over the rating horizon would push a rating to 'CCC' or lower.

Conversely, when liquidity and debt maturity profiles are adequate, the debate would most likely revolve around 'B+' versus 'B' and concentrate on the relative strengths of the business model, the management strategy and the quality of cash flow.

The principal qualitative factors distinguishing 'B+' and 'B' ratings from 'B–' are confidence in the business model and the resilience of cash flow, and the ability and willingness to deleverage at a satisfactory pace given an initially aggressive capital structure and near-term maturity profile. A 'B+' rating, particularly for LBOs, generally signals more robust business models, limited execution risks and consistently positive FCF generation that support faster deleveraging so that refinancing risk remains a minimal concern, even in weak capital market conditions. An IDR would not be constrained merely due to private equity ownership.

Generally, modelling a moderate stress case leads to a debate or negative rating guidance that reflects 'CCC' category considerations (i.e. a potentially unsustainable business model, capital structure and liquidity position), it is likely the rating would be closer to 'B-' than to 'B'. In particular, this may apply where qualitative factors such as technological substitution, regulatory threats, chronically weak demand, excess capacity or lack of scale to protect margins are primary issues, especially as debt maturities approach or liquidity deteriorates.

Complementing Sector Navigators

Navigators have limitations as a tool for peer comparison when all of the business and financial characteristics of an issuer are within (or close to) the 'B' category.

Key Rating Considerations for Highly Speculative Credits

Factor	B+	B	B-
Business model	**Robust** Business model and sector show resilience to more pronounced or prolonged downturns. Stressed economic conditions or entrance of competitors do not affect operating margins and cash flow. However, the business profile retains characteristics that prevent the IDR from reaching the 'BB' category, such as limited scale and diversification relative to larger companies. Such elements may threaten the resilience of the business profile over the long term.	**Sustainable** Business profile remains intact if subjected to reasonably foreseeable stresses (e.g. cyclical downturn, technological or regulatory disruption, secular operational risks). The business will have some key operating strengths (e.g. diversification of products or end-markets, clear market positioning/share, recognised brand, moderate exposure to discretionary spending, cost leadership, partly flexible cost base, high barriers to entry or specialist products leading to margins above the average for peers) that enable the company to have some earnings/margin resilience through the cycle.	**Intact** Business profile is intact but if subjected to reasonably foreseeable stresses it begins to show characteristics more in line with a 'CCC' "broken" business model. Key weaknesses may include small size, exposure to discretionary products, low barriers to entry/high substitution risk, and product or geographical concentration. Performance can be volatile in challenging economic conditions (e.g. negative like-for-like sales, margin pressure, and technological transition) but there is some certainty that the business could perform when those turn more benign.
Execution risk in strategy	**Limited** Management has a record of generally implementing a coherent and successful strategy. Any restructuring/cost-savings initiative or expansion plan has a clear, predictable outcome and carries limited operational risk. Management has the flexibility to slightly delay such plans without compromising the business model and the overall performance of the company.	**Moderate** Company has sufficient financial flexibility to allow it to compete with larger/better capitalised peers on product investment or brand expansion, or overcome foreseeable challenges to its plans.	**Meaningful** Company has limited capacity to mitigate execution risks while still deleveraging. Management may have embarked on reorganisation plans that could prove successful, but which carry costly and meaningful execution risk. Failure of strategy or restructuring could compromise the deleveraging profile but should not lead to sustained cash burn.
Cash flow profile	**Consistently positive** Company can generate positive pre-dividend FCF (even if in the low single digits of sales) through the cycle, including during more pronounced/prolonged downturns or under "stress" rating scenarios. This can be supported by a recurring revenue stream, high operating margins, an asset-light business model with healthy cash conversion or ability to conservatively preserve cash in periods of stress.	**Neutral to positive** Company can maintain neutral to positive pre-dividend FCF even in periods of moderate economic stress, often indicated by having done so in the past. Supporting factors include the ability to actively manage working capital, a proven record of cost-cutting, the ability to cut discretionary or expansion capex (e.g. store roll-outs), high margins and low operational gearing.	**Volatile** Company is a price taker with limited ability to pass on lower market prices to suppliers or higher input costs to customers. It may suffer from high operational gearing or have high capital commitments and face difficulties in managing working capital under economic stress. Consistent FCF generation proves difficult through the cycle.
Leverage profile	**Clear deleveraging path** High leverage is mitigated by a clear deleveraging plan that Fitch believes is credible and/or predictable. Alternatively, the company has moderate financial leverage relative to other 'B' issuers in the sector. If an LBO, the level of leverage may become consistent with a 'BB' category over the rating horizon.	**Deleveraging capacity** Current leverage is high but likely to remain consistent with a 'B' rating through the cycle. It has proven deleveraging capacity under current (and perhaps previous) capital structure.	**High but sustainable** Leverage metrics are weak among sector and rated peers and could quickly appear vulnerable to deteriorating capital market conditions. Under benign economic conditions leverage decreases – albeit slowly. Under stress, high leverage would leave limited margin of safety to prevent an increasing risk of default.
Governance/ financial policy	**Committed** Management and shareholders have explicitly stated a commitment to reduce debt over time and/or not receive dividends, and we believe such plans are credible given their record and feasibility due to some specific creditor protections in the documentation (e.g. covenants, cash sweep). Governance practices, for example a lack of independent directors on the board, prevent the company from reaching the 'BB' category.	**Some commitment to deleveraging** Clear link exists between management and ownership objectives. Ownership willing to suffer equity dilution as a deleveraging tactic. If a recycled LBO, it has a record of voluntary debt prepayments under previous LBO structures. There is a sponsor strategy to fund M&A or expansion plans via internal cash rather than releveraging through new debt. However, despite an intention to generally reduce debt over time, management/sponsors remain opportunistic about part debt-financing acquisitions or paying dividends as authorised by loan and bond indentures.	**Aggressive** There is evidence of aggressive financial strategy and an intention to maintain high financial leverage, e.g. entirely debt-funded M&A or expansion plans, regular or special debt-funded dividend payments and other forms of shareholder cash distributions even if implemented within the restrictions of loan and bond documentation.

Key Rating Considerations for Highly Speculative Credits (Cont.)

Factor	B+	B	B-
Refinancing risk	**Limited** Company can reduce leverage to market tolerance levels for a given sector, and in a timely manner (i.e. before debt maturities), including during adverse capital markets conditions. A materially higher cost of debt would not prevent positive FCF generation. For an LBO, the company may have a leverage profile at "exit" that enables sponsors to reasonably contemplate an IPO.	**Manageable** Company can further deleverage towards more conservative assumptions and refinance in less favourable capital market conditions by the time maturities fall due. It should be able to refinance even at higher cost and maintain positive FCF.	**High** Deleveraging will be slow under our rating case. Company relies on credit market conditions to be highly favourable when maturities fall due. Higher cost of debt could be detrimental to FCF generation but should not lead to sustained periods of cash burn.
Liquidity	**Comfortable** Cash on balance sheet is comfortable and in excess of minimum operational cash requirements. Adverse operating (or funding) conditions do not prevent the company from conducting business and meeting short-term obligations from available cash or internal cash flow without requiring the sale of assets or debt drawdowns. Undrawn committed credit lines remain available due to ample covenant headroom, and access to additional sources of funding is possible.	**Satisfactory** Some liquidity buffers are available in case of financial stress (e.g. revolving credit facility, or "RCF", availability, asset disposal). Sufficient availability exists under committed credit lines and headroom under covenants to temporarily cover short-term liquidity requirements.	**Limited** Deteriorating economic or business conditions could put liquidity under pressure, and the company has limited alternative sources of capital (lack of valuable assets, support from shareholder unlikely). Availability under committed credit lines could be limited while remaining in compliance with covenants.

Source: Fitch Ratings

Key Rating Considerations for Distressed Credits

Factor	CCC+	CCC	CCC-	CC
Business model	**Redeemable** Clear evidence of deterioration but cyclical trends or restructuring initiatives implies that the business is redeemable. The core operating assets, brand and market position are expected to survive a restructuring. Performance exhibits stable core operations or encouraging signs of a successful turnaround. Turnaround prospects may be supported by sector consolidation.	**Compromised** Serious deficiencies evident in an uncompetitive product offering, a weakening market position, and an eroding customer base; Operational reorganisation until now has been either ineffective or insufficient to offset the decline in operating performance. This business is not positioned for recovery.	**Disrupted** May no longer be viable. Severe market share or customer losses require immediate corrective actions. There is a limited window where a shift to a new business model is possible.	**Irredeemable** The company has a limited ability to operate on a day to day basis. Product obsolescence, regulatory constraints, adverse litigation or brand destruction confirm the business model is not viable.
Execution risk in strategy	**Challenging yet achievable** Restructuring is possible only with skilled management team with a record of previous successful turnarounds and relevant sector experience. Fitch believes the management has identified the flaws and has a reasonable chance of success to fix them. Restructuring can be funded with the resources available to the company.	**Uncertain** Partial execution or delays are expected. Ability of the management team is questionable and / or the team's incentives are not aligned with shareholders or lender. For example, the management team has been recent replaced, there may be a history of previously failed turnarounds by the same sponsor and/or management team, or the business may be underinvested for its sector and strategy.	**Highly speculative** The strategy is excessively ambitious or is otherwise unachievable. Management lacks the necessary sector experience, industry networks or workout experience to execute the proposed turnaround plan or no plan has been proposed.	**Not credible** The management has abandoned a failed strategy, has no new strategy or the new strategy is incoherent. The board of directors may have removed the management team and key leaders or other key stakeholders in the business may have departed.

Key Rating Considerations for Distressed Credits (Cont.)

Factor	CCC+	CCC	CCC-	CC
Cash flow profile	**Mostly negative** The company has unpredictable and mostly negative cash flow with little leeway to mitigate market or operational risks. There is low visibility on customer and/or supplier behaviour which distorts operating cash flow. The company has some discretion on spending to reduce the pace of cash burn.	**Constantly negative** FCF is consistently negative due to excessive cash interest payments, permanently adverse working-capital dynamics, inability to reduce capex and/or restructuring costs.	**Accelerating cash outflow** Exceptional items and poor operating performance led to increasingly uncertain and negative FCF. Other factors such as contingent liabilities, regulatory fines, and volatile working capital may increase both the pace and magnitude of cash outflows. A reduction in discretionary spending such as growth capex is unlikely to arrest the negative impact on liquidity.	**Irreversible outflow** The magnitude of mandatory expenditures such as payments to suppliers, tax authorities, regulators or other parties far exceeds the ability of the firm to generate cash.
Leverage profile	**Significant outlier** The leverage profile is considered excessive against sector and rated peers with unclear prospects of deleveraging under the rating case. Under stable business, economic and financing conditions the business may support the over-levered balance sheet for several years, or until debt maturity, without incurring a payment default.	**Unsustainable** Capital structure is unsustainable and exceeds the cash generative properties of the business. Leverage does not reduce or even increases due to payment in-kind debt component, a continuous reliance on additional debt to close liquidity gaps or deteriorating cash flow under the rating case. Payment default under financial obligations is a real possibility in the next 24 to 36 months, even under stable business, economic and financing conditions.	**Disproportionate and increasing** Disproportionate financial leverage, which consistently increases regardless of the underlying trading and economic environment. Payment default under financial obligations is a real possibility in the next 12 to 24 months unless restructured.	**Unrecoverable** A persistent decline in operating performance combined with onerous debt terms including increasing PIK interest, accrued preferred dividends, and the termination of uncommitted facilities leave no possibility of repayment. Principal default is expected within 12 months.
Governance/ financial policy	**Ineffective** Management plans lack sufficient detail to preserve cash or to rationalise the capital structure. Equity injection from existing shareholders may provide a temporary financial cure upon distress. However, it is not sufficient in the medium term to protect creditors' position. Equity investors are supportive of the turnaround plan but the extent of that support may be uncertain.	**Uncommitted** Conflict between business management and owners exposes absence of commitment on the equity side. The perception may be that the owners have "walked away". Limited ability or willingness of the shareholders to cure financial distress due to the magnitude of the addressable economic or financial losses or a low strategic importance of the company to the business owners.	**Hostile** The relationship between business management and owners is detrimental to executing on financial policy. There are no realistic prospects of securing new equity from existing or new investors to cure financial distress. Multiple stakeholders may be simultaneously pursuing divergent and contradictory courses of action. A fragmented investor base may make any agreement highly unlikely.	**Inevitable balance sheet restructuring** The company has hired debt restructuring advisors to facilitate negotiations with its lenders or it is likely to file for court protection in the next twelve months. The company may have entered pre insolvency procedures, entered into a standstill agreement prior to payment default, or announced plans to write down debt.
Refinancing risk	**Off market options** A timely refinancing is a possibility supported by some operational stabilisation and on terms at a premium to those prevailing in the market. Refinancing options may include amend and extend transactions. Capital markets remain receptive to the issuer, supported by sector traits and/or investors' understanding of the business model and its behaviour through the cycle. High enterprise values (EVs) in the sector suggest strategic asset value for a potential trade buyer or monetisation of assets.	**Excessive** Timely refinancing looking less likely though possible at above-market rates implied by secondary market prices. Additional financial metrics beyond leverage and interest coverage constrain the ability to refinance such as net debt to EBITDA less capex. Investors may avoid the issuer for idiosyncratic factors or the sector due to uncertain return expectations.	**Unavailable** Refinancing is considered unlikely with leverage at its current level, though needed within the next 12 to 24 months. Regardless of the capital market conditions prevailing at that time; investors are withdrawing from the sector, or unlikely to commit additional funds due to issuer's idiosyncratic credit issues. Secondary market implies unserviceable interest payments. There is no observable liquidity and arm's length financing is not available, however there remains the possibility that third parties, such as strategic investors, may provide support. Such support may take the form of equity	**Imminent** In combination with the distress inherent in a CCC-credit characteristics maturities in excess of available liquidity will occur in the next 12 months. In addition, there is no credible third party support.

Key Rating Considerations for Distressed Credits (Cont.)

Factor	CCC+	CCC	CCC-	CC
			cures, high cost subordinated debt or asset sales. The company has negative equity value or the leverage multiple is greater than the EV multiple	
Liquidity	**Minimal headroom** Projected liquidity reserves are sufficient for making interest payments and covering essential maintenance investments. Any shortfall in performance against the business plan may exhaust the remaining headroom. Due to impaired internal liquidity generation there are insufficient resources to meet near term principal payments or to fund material additional exceptional expenses. Prospects for securing additional sources of liquidity remain remote. Committed facilities may already be partially drawn and repayment appears unlikely.	**Poor/partly funded** Total available funding (including internal cash, all committed debt and drawn uncommitted debt) sufficient only to postpone, but not to avoid a liquidity crisis. Asset sale to secure additional liquidity represents high execution risk due to current unfavourable asset price due to such factors as overcapacity, cyclical downturn and/or depressed current commodity prices. The issuer is making use of one time liquidity sources such as fully drawing on the RCF or other committed or uncommitted lines or selling assets.	**Unfunded** A liquidity crisis is perceived as unavoidable in the next 12 to 24 months unless a fundamental change takes place, such as fresh third-party support. Alternative liquidity sources have been explored and found to be ineffective or unavailable. The debtor has started taking value-diminishing or possibly hostile actions towards creditor interests.	**De facto insolvent** The financial statements contain a qualified opinion or the auditors express uncertainty regarding the ability of the company to continue as a going concern. Less than 12 months of liquidity remain and all avenues for additional funds have been exhausted. Only an extraordinary intervention from a third party can avoid a liquidity crisis.

Source: Fitch Ratings

Appendix 3: Distressed Debt Exchange

This section describes our criteria for the rating of issuers and any specific instruments that are affected by Distressed Debt Exchanges (DDE). Application is restricted to issuers that have instruments and other financial obligations owned by third-party investors who would usually be expected to exercise all remedies available to them.

When considering whether a debt restructuring should be classified as a DDE, Fitch expects both of the following to apply:

- the restructuring imposes a material reduction in terms compared with the original contractual terms; and
- the restructuring or exchange is conducted to avoid bankruptcy, similar insolvency or intervention proceedings, or a traditional payment default.

When an exchange or tender offer that Fitch considers to be distressed is announced, the IDR will typically will be downgraded to 'C'. Completion of the DDE typically results in an IDR being downgraded to 'RD' (Restricted Default). Affected instrument ratings will be changed accordingly. Shortly after the DDE is completed, an IDR will be re-rated and raised to a performing level, usually still low speculative-grade.

The most common application of these criteria is to bond and bank loan DDEs, but this does not preclude the criteria's application to other classes of obligation, such as leases or other major contracts. However, in many of these cases, the difference between a DDE and a robust non-public bilateral negotiation occurring in the normal course of business may be slight. In these circumstances, a DDE will only be called when there is compelling evidence of its existence.

DDE Criteria for Bonds

Material Reduction in Terms

A material reduction in terms could feature any one or a combination of the following:

- Reduction in principal;
- Reduction in interest or fees;
- Extension of maturity date;
- Change from a cash pay basis to PIK, discount basis or other form of non-cash payment;
- Swapping of debt for equity, hybrids or other instruments;
- Cash tender for less than par if acceptance is conditional on a minimum aggregate amount being tendered, or if combined with a consent solicitation to amend restrictive covenants. If either of these conditions is not evident, then cash tender offers for less than par will not be DDEs, unless other circumstances indicate that failure of a large percentage of creditors to participate in the tender would likely contribute to the entity defaulting; and/or
- Exchange offers or cash tenders that are accepted only if the tendering bondholder also consents to indenture amendments that materially impair the position of holders that do not tender.

Fitch will review the circumstances of any exchange offer and consider the impact of each of these factors.

The purpose of this test is to exclude situations where an investor is being fairly compensated for accepting an offer, and is at least indifferent about what is being offered and the original contractual terms. In practice, however, this judgment can be highly subjective and dependent on factors, such as an investor's/market's perception of, and appetite for the issuer's credit risk, or the value attributable to the granting of additional security.

Our presumption when any of the above is present is, therefore, that there has been a material reduction in terms, unless it can be clearly shown that creditors would likely be indifferent between the old and new terms. The likelihood of this is more remote for a distressed issuer.