FitchRatings

Corporates
Global

Corporates Recovery Ratings and Instrument Ratings Criteria

Sector-Specific

Scope

This report describes Fitch Ratings' criteria for assigning and monitoring Recovery Ratings (RRs) and the notching effect of this approach to derive loan and bond instrument ratings for non-financial corporate issuers globally. The overall risk for a particular instrument comprises two components: the relative probability of issuer default (the Issuer Default Rating, or IDR), and the likely recovery of each instrument given default (the RR).

These criteria are used in conjunction with the *Corporate Rating Criteria*, which describe the analytical process underlying IDRs, and the *Country-Specific Treatment of Recovery Ratings Criteria*, which take into account the creditor-friendliness and enforceability of different jurisdictions. However, the notching approach described in these criteria does not apply to instruments that Fitch classifies as hybrids. Please refer to the *Corporate Hybrids Treatment and Notching Criteria*.

Specific considerations applying to real estate investment trusts (REITs) and regulated utility companies are explained in the appendices to this criteria report.

Key Rating Drivers

These Key Rating Drivers generally have equal importance in Fitch's analysis. Instrument ratings are notched from the IDR of the issuer or guarantor. The direction and number of notches are driven by the recovery prospects (the RR) of the specific instrument.

Fitch employs two distinct approaches to assigning RRs and instrument ratings depending on the IDR, described in greater detail below.

Bespoke Approach: This applies to IDRs of 'B+' and below since recovery prospects are more meaningful to investors. For each instrument, Fitch calculates the estimated recovery upon default and assigns an RR band (graded 'RR1' to 'RR6'). Each RR band has a corresponding instrument notching from the IDR. The *Recovery Ratings Scale with Notching for IDRs of 'B+' and Lower* table on page 11 maps the RR bands to the instrument notches.

Post-Restructuring Enterprise Value: In the Bespoke approach, Fitch estimates the value available to creditors through either a going-concern (GC) or liquidation lens. We describe our approaches in greater detail on page 4.

Collateral and Relative Ranking of Debt Claims: We establish the ranking of the claims based on contractual and structural considerations affecting the issuer or a group of affiliated companies. Fitch's recovery analysis will use the higher of the GC enterprise value (EV) or liquidation value (LV) and this value is distributed to the various creditor classes according to their order of priority. This drives the RR and, in turn, the instrument rating.

RR Caps for Bespoke Ratings: In the Bespoke approach, we apply 'RR2' caps to unsecured and second lien instruments except when issued by structurally senior operating subsidiaries in a multi-tier corporate structure. RRs in the Native American gaming sector are capped at 'RR2'.

Additionally, Fitch applies country caps to RRs driven by the creditor-friendliness (or otherwise) of jurisdictions and the enforceability of security in the event of a default per the *Country-Specific Treatment of Recovery Ratings Criteria*.

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Related Criteria

Corporate Rating Criteria (December 2020)
Country-Specific Treatment of Recovery Ratings Criteria (January 2021)
Third-Party Partial Credit Guarantees Rating Criteria (June 2020)
Corporate Hybrids Treatment and Notching Criteria (November 2020)

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Generic Approach: This applies to IDRs of 'BB-' and above where Fitch uses an approach that reflects generic assumptions about recoveries instead of issuer-specific recoveries. Under this approach, IDRs and unsecured debt instrument ratings are equalised when average recovery prospects are present. RRs and instrument ratings are assigned based on the *Notching for 'BB' Category Issuers (Excluding Uplift Sectors)* table on page 14.

RR Caps for Generic Ratings: In the Generic approach, we cap certain first liens at 'RR2' and all non-first liens at 'RR4'. As with the Bespoke approach, we also apply country caps per the *Country-Specific Treatment of Recovery Ratings Criteria*.

Sector-Specific Uplifts: Regardless of IDR, some sectors may benefit from above-average recovery assumptions upon default and receive an uplift. We refer to these sectors as Uplift sectors in this report and they currently include equity REITs and equivalent property investment companies (PICs), collectively referred to as REITs, and regulated utility companies.

Key Criteria Changes

The following changes apply to issuers with IDRs of 'B+' and below, where the Bespoke approach applies:

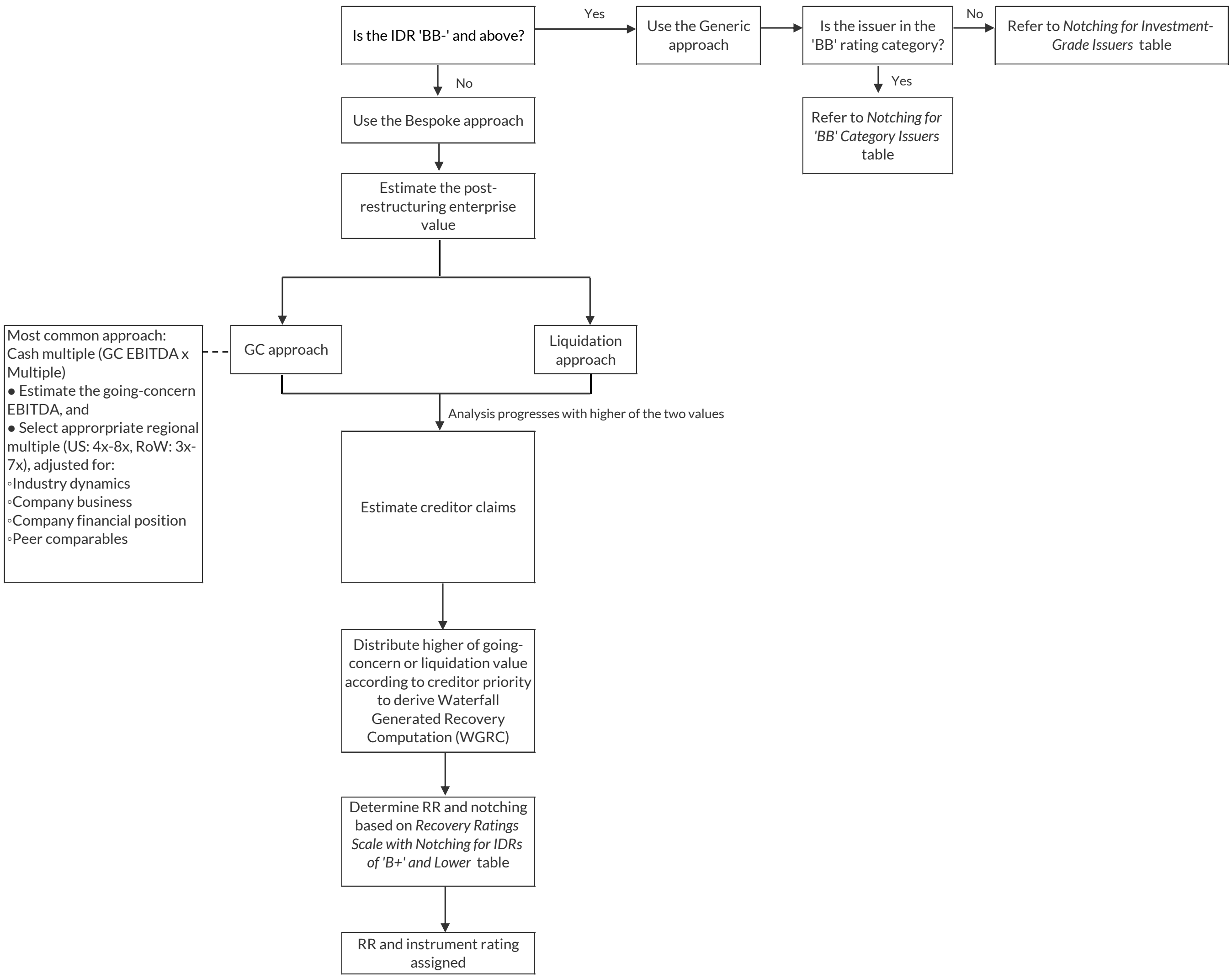
- GC EV multiple ranges based on an assessment of issuer characteristics and the issuer's centre of main business interest. A Multiple Assumption Tool is used to determine if the multiple should be placed at a low, medium or high position around the midpoint of the regional band based on four factors: industry dynamics; company business; company financial; and peer comparable data.
- Clarify how Fitch estimates GC EBITDA for bespoke RR analyses.
- Clarify how Fitch estimates GC EBITDA for commodity-sensitive issuers.
- 'RR2' cap on second lien and unsecured instruments, except where these instruments are issued by structurally senior operating subsidiaries in a multi-tier corporate structure.

The following changes apply to issuers with IDRs in the 'BB' category, where the Generic approach applies:

- Specific guidance on instrument notching and RR for 'BB' category issuers. See notching grid on *Notching for 'BB' Category Issuers (Excluding Uplift Sectors)* table on page 14.
- 'RR2' cap for first lien issues in certain circumstances.
- 'RR4' cap for non-first lien issues.
- For the REITs Uplift sector, a minimum 1.5x unencumbered assets/unsecured debt coverage ratio and a secured debt/total debt ratio of 40% at the 'BB' rating category to qualify for the uplift.

Rating Approach

RR Assignment and Instrument Notching Approach (Excluding Uplift Sectors)



Note: all Recovery Rating assignments and notching are subject to the *Country-Specific Treatment of Recovery Ratings Criteria*. Native American gaming issuers are subject to an 'RR2' cap.
Source: Fitch Ratings

Recovery Analysis for Issuers Rated 'B+' or Below

For issuers with IDRs of 'B+' or below, Fitch performs a Bespoke recovery analysis for each class of obligations. There are three steps in this approach:

1. Estimate a post-restructuring EV or LV;
2. Estimate creditor claims; and
3. Distribute the greater of the EV or LV according to priority.

These are considered in detail below.

Step 1. Estimate a Post-Restructuring EV or LV

Fitch uses one of two approaches to estimate the distributable value: a GC approach or a liquidation approach.

In deriving a consolidated EV, Fitch may also separate the company's operating units by segment or by region, in order to apply the most relevant valuation method to the various components.

Approach 1: Going Concern

Fitch calculates the GC post-restructuring EV in many ways. The most common approach is the Cash Multiple approach. Alternative methods include Discounted Cash Flow, Traded Asset Valuation, or any other valuation methods as the committee deems appropriate. These are also described below on page 7.

The Cash Multiple approach involves two elements:

1. GC EBITDA Analysis
2. Multiple Selection and Application

GC EBITDA Analysis

This aims to establish the level of post-restructuring cash flow upon which it is most appropriate to base the valuation.

Fitch estimates a GC EBITDA, which assumes both depletion of the current position to reflect an assumed cause of distress that provoked default, and a level of corrective action assumed to occur during restructuring.

GC EBITDA is designed to be a conservative but realistic estimate of the EBITDA which would ultimately be used by creditors and potential buyers to value a company after both a default and a rehabilitation period.

Our GC EBITDA estimate incorporates an understanding of the business risks which could reduce current cash flows, derived from our financial forecasting, and previous performance of the company and peers during a recession or other adverse circumstances. It includes the full-year pro forma cash flow impact of any recently completed acquisitions and divestitures, and may include agreed but not yet completed transactions based on analyst judgment.

In constructing an estimate of an issuer's GC EBITDA, we consider the influence that the potential causes of bankruptcy would have on the business. We provide a reasonable basis for our GC EBITDA assumption which reflects a company's risks. For example, the loss of a major customer, patent or contract; rising raw material costs; lower government reimbursement rates; a cyclical downturn that coincides with a period of capital market turbulence resulting in a liquidity crisis; or long-term secular change in markets or tastes (e.g. printed newspapers).

In scenarios where the likely cause of default is a failed business model, for example where technological or secular changes permanently reduce demand, we would expect GC EBITDA to be well below historical levels (or to lead to a liquidation outcome).

Fitch does not, however, set GC EBITDA based on breakeven coverage levels; a process which does not reflect future cash flows, and which fluctuates based on changes in debt, capex and interest expense. At IDRs of 'B-' and above we would nonetheless typically expect GC EBITDA to be less than LTM EBITDA, and analysts will disclose clearly in our rating action commentaries where this is not the case and why an alternative assumption is more appropriate.

Cyclical industries, with the exception of commodity businesses, reflect our observations of actual defaults by calculating GC EBITDA assuming revenues in line with pricing and production levels somewhat above trough points. In commodity industries, EV tends to be linked to a hypothetical price cycle and generally reflects asset and cash flow quality.

Bankruptcy regime is a further important consideration. In a bankruptcy or similar insolvency scenario, the valuation of a business reflects the GC EBITDA which can be generated from a business after it has restructured. Regimes such as the US's Chapter 11 protect a company from creditor enforcement for a potentially prolonged period, during which time owners can make meaningful changes, subject to court approval – such as rejecting lease portfolios or union bargains – to improve EBITDA post-emergence. In other regimes, insolvency and administration processes can be far less structured, leading to more value erosion as suppliers and others desert businesses and fewer operational restructuring opportunities are available.

Fitch is conscious of the many limitations of EBITDA, not least the lack of a constant accounting definition, and the potential for regional variations, but uses projected EBITDA in EV analysis as the most common metric referenced in external valuations. The EBITDA Fitch uses is typically pro forma for the full-year impact of any acquisitions or divestitures, albeit on a Fitch basis (i.e. omitting many of the add-backs and adjustments seen in much issuer-provided data).

Fitch will disclose the broad rationale for the GC EBITDA assumption in rating action commentaries (see *Transaction-Specific Disclosure* on page 16).

Multiple Selection and Application

We apply a multiple reflecting a company's individual financial and operational characteristics, industry dynamics, and comparable peer data within the regional band.

a. US: 4.0x to 8.0x, with a 6.0x midpoint.

b. Rest of the world: 3.0x to 7.0x, with a 5.0x midpoint.

Use of a multiple above the regional range would constitute a Variation and will be disclosed in Fitch's issuer research (see *Transaction-Specific Disclosure* on page 16).

The differential between regional ranges reflects lower transparency of insolvency valuation outside the US, historical public market trading multiple differentials and a generally less issuer-friendly process where liquidations immediately after default at trough-point valuations are more frequent.

Fitch uses a Multiple Assumption Tool to assume a reasonable GC EBITDA/EV multiple within the relevant regional ranges. The regional midpoint is the starting point.

The Multiple Assumption Tool has four key factors that guide analysts to a multiple assumption at or near the lower bound, midpoint or top of the regional range. The relative influence of each key factor varies based on an issuer's individual characteristics.

The outcome for each key factor is based on an assessment of its respective sub-factors. Analysts assign greater importance to any key factor(s) or sub-factor that have more weight in the overall outcome.

The factors are as follows:

a. Industry Dynamics:

   Sub-factors include whether the sector is in a growth phase or in secular decline, the degree of barriers to entry, the regulatory environment and supply-chain concentration levels.

b. Company Business:

   This includes an issuer's competitive position and operating profile. Sub-factors that determine whether the multiple should be situated low, medium or high in the range include market share, customer churn rates, counterparty risk of customers, intangible value, the elasticity of end-market demand and asset quality.

c. Company Financial Position:

   Sub-factors range from scale, historical and anticipated cash flow trajectory, to certainty of revenues, margins and operating leverage.

d. Peer Comparables:

   This factor evaluates data for multiples applied in RR tools of close peers and for relatively large sectors, the sector mid-point, recent market M&A transaction multiples for comparable companies, public market trading multiples of close peers or historical distressed sales and reorganisations data from bankruptcy studies, to the extent available.

This is an extract of the sub-factors we consider in our Multiple Assumption Tool:

Multiple Assumption Tool Extract

Considerations	Low Multiple	Midpoint Multiple	High Multiple
Industry Dynamics Sub-Factors			
Secular Trends	Secular decline, sunset phase, negative	Modestly positive long-term prospects	Rapid growth anticipated, favourable
Barriers to Entry	Low barriers to entry	Some protection	High barriers to entry
Regulation	Adverse	Neutral	Constructive
Supplier Power	Highly concentrated supplier base that has significant pricing-setting power. High dependence on one or few key suppliers	Some diversity and ability to negotiate prices for inventory and raw materials	Diverse supplier base. Suppliers lack pricing power and can easily be substituted for a lower-cost provider
Company Business Sub-Factors			
Market Share	Relatively small company competing against larger, better-capitalised companies	Medium-size company, niche business with few competitors	Strong, leader or top-tier
Customer Churn	High due to lack of customer contracts or low switching costs	Medium	Low due to customer contracts or high switching costs
Customer Quality	Speculative-grade trade counterparties, key customers operate in mature to declining sectors, material customer concentration, at risk of customer defections	Variable credit quality and business prospects	Investment-grade counterparties, key customers have stable to growing businesses, no significant concentration
Intangibles Value (IP, Brands, Patents)	No real intangible value, easy-to-substitute products/services, commoditised	Modest intangible value	Significant value
Demand	Discretionary, fluctuates widely, subject to changing consumer preferences, i.e. fashion risk	Some volatility	Inelastic demand, stable to growing end-markets, critically needed product or service
Asset Quality	High-cost producer, disadvantaged location of assets, poor operating record	Medium	Low-cost producer, well-located assets, top-quality operator
Company Financial Sub-Factors			
Overall Scale	Small company relative to regional critical mass	Average/medium-sized company relative to regional critical mass	Large player relative to regional critical mass
Revenue and Cash Flow History and Outlook	Declining and expected to continue negative trajectory	Modestly positive	Strong growth history and prospects

Multiple Assumption Tool Extract (Cont.)

Revenue Certainty	Low, highly variable or uncertain revenue streams	Some visibility	High recurring revenues, consistent, strong
EBITDA Margins	Weak, below peers, inadequate to sustain operations	Middling	Strong and/or consistently exceeds peers
Operating Leverage	High fixed cost structure, little ability to adjust cost structure for demand swings	Moderately flexible cost structure	Flexible cost structure that can be readily adjusted for fluctuation in demand

Peer Sub-Factors			
Peer Trading Multiples	Company or close peers in same business trade at a discount to cross-sector medians	Company or close peer trades in line with cross-sector market	Company or close peers trading consistently rich multiples relative to the cross-sector index
M&A Precedent Transaction Comparables	Company or close peers acquired at low multiple	Company or close peer acquired at multiple close to median for market or relative to large, homogeneous sector peer group	Company or close peers acquired at strong multiple compared with overall market
Bankruptcy Case Study Data	Similar companies reorganised at relative low enterprise values and multiples compared to cross-sector median	Case outcomes close to cross-sector median multiple or there is a lack of comparable case data	Close peers reorganised at relatively high values and multiples compared with the cross-sector outcome

Source: Fitch Ratings

Alternatives to the cash flow multiple approach

Rating committees have the discretion to use analytically appropriate alternative valuation methods that are clearly articulated and supported in RR rationales. We summarise two examples of alternative approaches to GC valuations below:

a. Discounted Cash Flow

Where sufficient information is available to derive a reasonable estimate of future cash flows, Fitch may use conventional discounted cash flow techniques to estimate the EV as the present value of future cash flows in addition to or instead of a multiple of stressed EBITDA. In practice, this is relatively rare, as is the case in actual restructuring resolutions.

b. Traded Asset Valuation

Some industries have sector-specific valuation approaches that reflect a market for assets owned or operated that are either actively traded on exchanges or frequently bought and sold. For example, oil and gas reserves may be valued on expectations of commodity prices, production levels, and development costs. This may be expressed as a total amount or normalised on some definition of reserves. Similarly, a value-per-unit approach may apply to other sectors including power generation (price per kilowatt), oil refining (daily capacity and complexity), or real estate companies (e.g. price per square foot, capitalisation rate).

Approach 2: Liquidation Value

The LV approach usually involves discounting the book value of balance sheet assets and summing the results to estimate the total asset liquidation proceeds in a hypothetical liquidation process. In certain situations, an asset's book value may be lower than its liquidation value (for example, land or a building purchased 50 years ago and fully depreciated).

The following paragraphs detail Fitch's typical approach to common assets:

a. Accounts Receivable: Typically 20%

Fitch generally applies a 20% discount factor for accounts receivable. However, the factor may be adjusted based on a review of the historical performance of the company's receivables portfolio. Performance indicators include the percentage of non-performing receivables and historical charge offs, the credit quality (rating) distribution where information is available (otherwise, assumed), and the portfolio concentration of customers. If a company employs some form of securitisation, Fitch considers the structure and proceeds that such programmes offer while also being sensitive to potential differences in asset quality (see *Corporate Rating Criteria*).

b. Inventory: Typically 50%

The discount to inventory is typically 50% but varies according to the assets' marketability and industry conditions. Larger discounts are appropriate for inventories with short shelf lives (e.g. perishables) or products that are customised or subject to fashion risk. Smaller reductions to book value are appropriate for easily valued, more readily marketable inventories, including commodities such as oil and gas reserves, steel, consumer staples and pharmaceuticals and some categories of retail assets. Consideration is also given to prevailing industry conditions Fitch will disclose the relevant discount rates in rating action commentaries (see *Transaction-Specific Disclosure* on page 16).

Analytical guidance can also be drawn from the history of asset-based loans (ABL) in the sector. If typical advance rates on ABL credit facilities for sector borrowers are 80% on accounts receivables, 70% on finished goods, and 20% on property, plant and equipment, then discounts to these assets of 20%, 30%, and 80%, respectively, are a reasonable proxy for orderly liquidation value.

Fitch also takes into consideration non-core and non-operating assets that could be sold to satisfy claims.

In instances of ABL arrangements or over-collateralised borrowings secured by specific assets, where information is available, Fitch will deduct perfected claims (including the value of assets pledged for such facilities) from the overall valuation so that the remaining creditors' recoveries are assessed more realistically.

Choosing the Higher of Going-Concern Value versus Liquidation Value

Fitch assumes that when an issuer's estimated GC value is greater than its LV, then the company would be expected to attempt to reorganise and continue to operate. We will apply the LV approach only where a liquidation of the assets results in a higher return to creditors.

This bias toward a GC valuation is consistent with insolvency regimes that broadly favour restructurings of one form or another over liquidation where this demonstrably increases recoveries to claimants and preserves employment.

Step 2. Estimating Creditor Claims

To estimate existing claims - those that are typically taken on as credit quality deteriorates, those necessary to the reorganisation process, and those with priority under the relevant bankruptcy code - Fitch's analysis includes the following:

a. Revolving Claims

Fitch assumes that undrawn portions of committed lines of credit (secured or unsecured) of cash flow-based revolving credit facilities, including letter of credit commitments, are fully drawn to the extent permitted.

Any debt (or contingent liability) supported by letter of credit commitments (issued under the revolver) is implicitly included under the assumption of a full draw on the revolver.

Analyst judgment is exercised for facilities which can only be drawn for specific uses, such as those with limited use of proceeds, such as for funding of acquisitions and capital expenditure. Performance guarantee facilities (particularly in the industrials sector) will be assessed on a case-by-case basis to determine the extent to which the facility would likely be drawn in distress.

b. Priority and Administrative Claims

Administrative claims are typically assumed to be 10% of EV. Administrative claims arise in different ways in various bankruptcy regimes, but typically include costs and expenses involved in operating and preserving the estate during the process (such as wages, salaries, taxes, professional fees for lawyers and accountants, rent payments on assumed leases).

In jurisdictions that recognise the debtor-in-possession concept, debt incurred by the company during the post-filing period is entitled to treatment as an administrative claim. This includes unsecured trade debt incurred in the ordinary course of business to suppliers or vendors as well as any new debt (secured or otherwise) incurred post-filing.

c. Lease-Related Claims

Other than where local practices indicate that ongoing costs should be added to senior unsecured claims, Fitch typically treats lease obligations as an element in the ongoing structure of the GC entity, rather than a crystallised obligation added to the creditor mass. While companies may have the ability to rationalise leases relating to non-residential real property in bankruptcy, a certain level must be maintained under the GC approach. A portion of these leases, varying by sector and company, of operating lease obligations (whether classified as operating or capital under accounting treatment) may be assumed to be rejected in a bankruptcy. The value of rejected leases is calculated consistent with the bankruptcy code applicable in each jurisdiction, where such concepts exist.

Capital leases are not usually listed as secured debt claims in the recovery waterfall unless we anticipate surrender of the leased asset. Capital (financing) lease rejection would typically result in surrender of the collateral to the lessor. If Fitch assumes a rejection of the capital lease, we would subtract the estimated collateral value from outstandings due under the crystallised asset's financing and add any unsecured deficiency claim to unsecured liabilities in recovery analysis if amounts due are considered material to the analysis.

In contrast, under the LV approach, 100% of non-residential leases are deemed rejected as the company ceases operations and related lease-rejection claims are added to the unsecured creditor mass.

d. Concession Assumption

The value distributed to relatively senior creditors may be reduced by an amount that is redistributed to more junior claimants to secure their approval of the plan of reorganisation or liquidation. The amount of such settlement payments is highly dependent on circumstances, but in no case are assumed recoveries above those of higher priority creditors as a result of assumed settlement payments. Fitch typically allows up to 5% of the recovery value available to a relatively senior creditor to be allocated to concession payments to a more junior creditor.

e. Pension and Other Post-Employment Benefit Obligations

Under-funded pension plans can be significant claims on the bankruptcy estate although the claims may vary in priority depending on jurisdiction and issuer-specific inter-creditor agreements. Generally, pension plans that are terminated have an unsecured claim and rank equally with unsecured debt. However, in the US the Pension Benefit Guarantee Corporation may exert its considerable bargaining power to improve recoveries to the pension plan at the expense of other unsecured creditors.

Other post-employment benefits (OPEB) claims can be equally as or even more important than pension claims, typically if the company has a unionised labour force or if there is a public interest in protection of retiree benefits (such as healthcare).

In other jurisdictions, such as the UK, the regulatory authorities have wide-ranging powers to protect pension schemes' interests, which could mitigate an otherwise favourable outcome for bondholders. More generally, Fitch includes a pension scheme's claims, where present, relevant and ascertainable, in its recovery analysis at an appropriate level of seniority, which will vary by case. The final amount of such a claim may differ from a company's accounting pension deficit measured under IFRS. While Fitch will use an IFRS valuation as a starting point in its analysis, where there is evidence that this differs significantly from the likely actual amount to be claimed, and this can be estimated with a reasonable degree of certainty, the more accurate measurement may be used.

f. Other Non-Debt and Contingent Claims

Other non-credit obligations such as mass tort or other legal claims resulting from material lawsuits, environmental remediation obligations or personal injury settlement claims and contingent liabilities (and guarantees) that are assumed to come due may be included as necessary in their relative position in the distribution waterfall. Fitch may also elect to include estimates for distributions to claims relating to non-debt liabilities, including trade claims. For claims that Fitch assumes will be paid over time by the reorganised entity, Fitch may reduce the GC EBITDA by the annual payment rather than include the total amount in the distribution waterfall.

Step 3: Distribute the Greater of EV or LV According to Priority

After the valuation is complete, the total estimated amount is allocated to creditors according to the relative seniority of their claims (the "waterfall," with the surplus recovery over the most senior claim, if any, flowing down to the next priority).

The following factors may affect the distribution of value in Fitch's analysis:

a. Structural Subordination

Application of value is not only affected by relative priority of instruments for a particular issuer. Organisation structure can also affect priority in all jurisdictions. In instances where there are multiple operating entities with arguably independent operations, Fitch establishes valuation and claims at the entity level and considers the residual values available for creditors of parent or affiliated entities. In this regard, Fitch also incorporates factors that may partially offset or weaken the effect of structural subordination – such as the presence of upstream guarantees and pari passu inter-company obligations owed by the subsidiary to its parent.

b. Treatment of Cash Balances

The general assumption is that cash and cash equivalents on the balance sheet dissipate prior to bankruptcy or during the process. Fitch would include the value of the cash in estimating recoveries only in very limited circumstances. For example, cash held in a specific escrow account earmarked for debt repayment and ring-fenced from the rest of the cash on the issuer's balance sheet. Alternatively, when Fitch considers a bankruptcy to be imminent, cash balances are material, and Fitch has a high degree of visibility regarding distributable asset value in a liquidation process.

Some sectors, such as airlines and technology, carry large cash balances and could have large cash balances even in bankruptcy. In such industries, a portion of the cash balances may be incorporated into recovery analysis depending on the circumstances of the bankruptcy. Fitch may include a portion of the existing cash balance to the EV where it is in excess of operational cash needs to operate on a going-concern basis.

c. Considerations Primarily for US Issuers

i. Absolute Priority

US bankruptcy courts generally follow the absolute priority distribution rule (namely post-petition secured debt, pre-petition secured debt, unsecured administrative claims, other priority claims, unsecured claims, subordinated claims and equity interests). The one exception to this rule is with respect to "unsecured" administrative claims which must be paid in full before secured claims in order for a Chapter 11 Plan of Reorganisation (or Plan of Liquidation) to be confirmed.

ii. Guarantee Contributions

If debt is guaranteed on a joint and several basis by multiple guarantors, Fitch allocates the guarantee burden proportionally among the guarantors with sufficient liquidity and/or cash flow available to perform under the guarantee (unless contra-indicated by jurisdictional practice or provisions of the guarantee agreement).

iii. Non-Domestic Subsidiaries

Often foreign subsidiaries do not follow the parent or its domestic subsidiaries into a bankruptcy filing. The distribution of the going-concern valuation of such overseas subsidiaries after satisfaction of any local obligations is an important consideration in Fitch's recovery analysis.

Value from foreign subsidiary guarantees of debt or residual equity value available from foreign subsidiaries, where identifiable, is factored into the recovery waterfall at the appropriate relative priority level of the claim.

iv. Treatment of ABL Facilities

In the case of ABL facilities with credit-protective features (such as availability limited by a borrowing base formula, springing cash dominion, and frequent monitoring or reporting of collateral), Fitch assumes that ABL debt is senior in the recovery waterfall to other first-lien debt claims that do not share a first lien on the working capital asset collateral to the extent the value of the specific collateral securing the ABL fully covers the ABL debt.

However, analysts may use their discretion to assume a less than full drawdown of an ABL revolving facility based on factors such as expected borrowing base availability at the point of default, and the operation of the springing cash dominion clause (the right to assume full control of the borrower's cash deposit accounts upon breach of specified event triggers and the application of cash proceeds towards partial repayment of ABL prior to bankruptcy).

Recovery Ratings Scale

Fitch divides the spectrum of recovery percentages from 0% to 100% into six categories or RRs, as shown in the table below.

Fitch would typically expect recovery rates to fall within these bands for a particular RR on a diverse portfolio basis, across multiple cycles, although there could be large deviations on individual issues.

The waterfall analysis generates a Waterfall Generated Recovery Computation (WGRC), which is used to relate issuer- and instrument-specific analysis from the waterfall analysis described above to an RR band.

Recovery Ratings Scale with Notching for IDRs of 'B+' and Lower

RR	Description	WGRC (%)	Notching from the IDR
RR1	Outstanding	91-100	+3 (first-lien debt only)
RR2	Superior	71-90	+2 (second-lien and unsecured are capped at 'RR2' [a])
RR3	Good	51-70	+1
RR4	Average	31-50	+0
RR5	Below average	11-30	-1
RR6	Poor	0-10	-2 to -3[b]

a) Unless the issuer is a structurally senior subsidiary issuer in a multi-level corporate group structure
b) As many junior debt instruments may be rated 'RR6', varied notching enables differentiation in subordination of the debt within this category
Source: Fitch Ratings

Second lien and unsecured debt RRs are capped at 'RR2' with exceptions possible for debt instruments of an issuer that is in a structurally senior position within a multi-level corporate group. In these circumstances, separate valuations and waterfalls are completed for the subsidiary and the parent. For example, the unsecured debt at the structurally senior subsidiary could be rated 'RR1' if subsidiary cash flows and funding plans support this rating.

RRs on subordinated debt that ranks after senior secured debt and senior unsecured debt in the priority of payment would typically be capped at 'RR4'.

Fitch also applies caps in a number of jurisdictions. Please see *Country-Specific Treatment of Recovery Ratings Criteria* for further details. In addition, an 'RR2' cap is applied to the Native American gaming sector in the US given the limited precedent for enforceability of creditor claims in this sector.

Where documentation exclusions have an obvious and clear current impact on the collateral analysis being analysed, they will be taken into account. For example, if brands were explicitly excluded from the security package, Fitch analysts would adjust down the GC EBITDA in the recovery analysis (and/or the distressed EV/EBITDA multiple) to reflect the lack of EBITDA-generating power of a weaker asset base.

More broadly, however, there is no generic impact in the recovery analysis due to the presence or absence of documentation that relates to prevention of event risks. As with issuer ratings, changes in capital structure (including incurring more debt), changes in collateral availability and acquisitions are all choices an issuer can make, which will be reflected on an issuer- and instrument-specific basis at the time the change is anticipated to occur (or where evidence is strong that an event of the nature will occur and the scale can be estimated).

Debt Instrument Mapping

The table below shows the relationship between the IDR, RR, and security-specific instrument rating for issuers with IDRs of 'B+' or lower. For example, subordinated bonds (with an 'RR6' expected recovery) of a 'B-' rated issuer may be rated the same as senior secured bonds (with an 'RR1' expected recovery) of a defaulted issuer.

Debt Instrument Mapping

IDR	B+	B	B–	CCC+	CCC	CCC-	CC	C/RD/D
RR1	BB+	BB	BB–	B+	B	B-	CCC+	CCC
RR2	BB	BB–	B+	B	B–	CCC+	CCC	CCC–
RR3	BB–	B+	B	B-	CCC+	CCC	CCC–	CC
RR4	B+	B	B–	CCC+	CCC	CCC-	CC	C
RR5	B	B–	CCC+	CCC	CCC–	CC	C	C
RR6	B–/CCC+[a]	CCC+/CCC[a]	CCC/CCC–[a]	CCC-/CC	CC/C[a]	C	C	C

[a] Differentiation in notching between two instruments at the 'RR6' level depends on structural and contractual features. Where there is only a single instrument at the 'RR6' level, '-2' notching from the IDR will apply.
Source: Fitch Ratings

The notching for debt instruments at the lowest end of speculative-grade is compressed. The debt instruments assigned to bonds of issuers who have defaulted, or are very close to default, show little distinction between 'RR4' and 'RR6' recoveries. At this point, it is generally useful for the reader to refer to the published RR in addition to the instrument rating, as a defaulted instrument rated 'C' may imply an expected loss anywhere between 50% (if it is rated 'C'/'RR4') and 100% (if it is rated 'C'/'RR6').

Under a scenario where an issuer has announced but not executed a Distressed Debt Exchange (DDE) proposal which targets one or more debt issues within an issuer's multi-tiered capital structure and the IDR is lowered to 'C', the notching for recoveries of unaffected issues may be widened for a limited period of time. Please see *Distressed Debt Exchange* section of the *Corporate Rating Criteria* for further details.

Type of Creditor Distributions

Fitch's RRs do not address the form of creditor distributions in a restructuring process (any combination of cash, new debt, reinstated debt, new common equity or via a borrower's surrender of collateral). While Fitch recognises that the value of non-cash distributions is less certain until monetised and may be less liquid, predicting a form of recovery is well beyond the scope of credit rating analysis. The form of distribution is subject to inter-creditor negotiations and claimholder preferences.

Recovery Analysis for Issuers Rated 'BB-' or Above

Fitch applies a generic approach to rate and assign RRs to instruments for issuers rated 'BB-' or above. The process of establishing ratings for the obligations of issuers rated between 'AAA' and 'BB-' refers, for the most part, to aggregate recoveries in the market as a whole, and not to issuer-specific recovery analysis.

As in the Bespoke territory, Fitch applies caps in a number of jurisdictions. Please see *Country-Specific Treatment of Recovery Ratings Criteria* for further details. Similarly, an 'RR2' cap is applied to the Native American gaming sector in the US given the limited precedent for enforceability of creditor claims in this sector.

Recovery Assumptions Based on Generic Assumptions, Not Bespoke Analysis

For corporate entities rated 'BB-' and above, the rating assigned to a senior unsecured debt instrument assumes an average recovery in the event of bankruptcy, corresponding to the 31%–50% range, 'RR4'. When average recovery prospects are present, IDRs and unsecured debt instrument ratings are thus equal, with no notching.

The US market provides the deepest and most transparent source of historical recovery data available to Fitch, and is used to provide the statistical basis for Fitch's average recovery band and zero notching of the senior unsecured instrument rating from the IDR assumptions, applied to most investment-grade issuer obligations across all jurisdictions (in conjunction with relevant country-specific caps and sector-specific criteria).

Uplift Sectors

In addition to these average recovery expectations across all industry groups, some specific industries referred to as Uplift Sectors have above-average recovery prospects that can afford a one-notch uplift to the debt instrument ratings. Please see *Appendix 1* for a discussion on equity REITs, including property investment companies, and *Appendix 2* for utilities.

Rating Approach for Debt of Issuers Rated 'BBB-' or Above

Recovery analysis plays little role in analysing investment-grade issuers, if only because secured debt is usually immaterial. There are exceptions, such as industrial revenue bonds and first mortgage bonds, and these instruments may be rated above the IDR as appropriate for the additional security. But investment-grade issuers are so far from default and so well collateralised relative to their funded debt and other obligations that the computation of bespoke recovery is meaningless.

Fitch notches from investment-grade IDRs according to the table below:

Notching for Investment-Grade Issuers (Excluding Uplift Sectors)

Secured	0/+1[a]
Unsecured	0[b]
Subordinated	-1

[a] Zero notching is appropriate where the collateral quality is poor, e.g. through security over only fractional or impaired collateral
[b] Further notching subordination is possible. Please see below.
Source: Fitch Ratings

Analysts can nonetheless denote contractual or structural subordination that is detrimental to even senior unsecured debt by rating it lower than the IDR.

The determination of the notching of unsecured debt from the IDR may be informed by the potential distressed multiple appropriate for the issuer in a given sub-sector, total leverage and prior-ranking level of leverage. In regions or sectors where historical bankruptcy/receivership data is less evident, prior-ranking debt constituting EBITDA of 2.0x-2.5x may indicate a material possibility of subordination and lower recoveries for unsecured debt.

Rating Approach for Debt of Issuers Rated 'BB+' to 'BB-'

Under its Generic approach for rating instruments of companies in the 'BB' rating category, Fitch notches instruments against the IDR and assigns RRs according to the table below.

Differences may arise based on jurisdiction (see *Country-Specific Treatment of Recovery Ratings Criteria* for further information), IDR, and instrument type. The assignment of RRs for issuers in the 'BB' IDR category is optional, but the instrument notching described below will still apply where no RRs are assigned.

The table is designed to manage the transition between the 'B+' and lower IDR rating categories, for which bespoke RR analyses are performed, and the 'BB' category, which assigns RRs based on generic recovery assumptions derived from historical performance data.

Non-first lien debt (second lien, unsecured and subordinated debt) are capped at 'RR4'/+0. For these instruments, analysts will assign an RR according to their relative priority, reflecting each instrument's relative call on EV due to structural or legal subordination, or weaker collateral coverage relative to other non-first lien debt in the capital structure. For example, if there is unsecured debt and subordinated debt in the capital structure, all else being equal, the unsecured debt will receive 'RR4'/+0 and the subordinated debt will receive 'RR5'/-1.

Notching for 'BB' Category Issuers (Excluding Uplift Sectors)

	BB+	BB	BB-
Super senior revolving credit facility	RR1 / +1	RR1 / +2	RR1 / +2
Asset-backed loan facility	RR1 / +1	RR1 / +2	RR1 / +2
Category 1 first lien	RR1 / +1	RR1 / +2	RR1 / +2
Category 2 first lien	RR2 / +1	RR2 / +1	RR2 / +2
Second lien/unsecured	RR4 / +0	RR4 / +0	RR4 / +0
Subordinated	RR5 / -1	RR5 / -1	RR5 / -1
Deeply subordinated	RR6 / -2	RR6 / -2	RR6 / -2

Note: Notching and RR prescribed are subject to the *Country-Specific Treatment of Recovery Ratings Criteria*. Please refer to the FAQ on the relationship between the grid and the country caps.
Source: Fitch Ratings

Category 1 first liens, which are assigned RR1 ratings, are reserved for first liens of US-based borrowers which do not feature any of the limitations in Category 2 on a current or projected basis.

Category 2 first liens include the following:

- First liens ranked contractually, structurally or practically junior to ABL facilities;
- First liens with excessive fully-drawn secured gross leverage, measured as secured gross debt of all liens greater by 50% than the midpoint of 'BB' category leverage expectations for that sector (e.g. the *Generic Navigator* places 3.5x gross debt/EBITDAR as the midpoint for issuers analysed under that template; the relevant secured leverage threshold is 5.25x);
- First liens for enterprises with a projected EV of less than USD250 million using the sector's median multiple (sourced from Fitch's RR tools) for that region;
- First liens secured only by a subsidiary equity pledge and where there is material subsidiary level debt;
- First liens for financial investment vehicles or similar entities where the collateral is composed of minority equity holdings;
- First liens secured on collateral composed of assets with unusually speculative or hard to verify valuations, such as art work, musical performance rights or purchased litigation claims;
- First liens that otherwise exhibit capital structure or EV characteristics detrimental to the first-lien loan recovery prospects sufficient to preclude the likelihood of an ultimate recovery rating better than 'RR2';
- All first-lien instruments issued by non-US-based borrowers, or where the majority of EV is outside the US. First lien instruments issued by non-US based borrowers but secured by assets that are predominantly in the US could still be eligible for Category 1 treatment.

In applying the table above, where the committee determines that multiple levels of debt have relative rankings that do not differ sufficiently to warrant a full RR category of difference, instruments and debt levels may be conflated. Deeply subordinated refers to deeply subordinated instruments in multi-tier capital structures, such as holding company (holdco) level PIK notes. Where any other instrument is, in practical terms, structurally or legally subordinated, relative to its nominal instrument type, or otherwise enjoys lower collateral, analysts may opt to assign a lower RR than that shown in the table to reflect a lower relative call on EV. Where an 'RR3' is appropriate, the instrument will be notched by +1.

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.

Limitations

RRs are not intended to provide precise numerical estimates. Fitch has provided bands of percentage recoveries as an indicator of the typical recovery expectations for instruments rated within those bands, across a diverse portfolio, over multiple cycles. Given the inherent unpredictability of both default scenarios and the restructuring process, there will be potentially large deviations on single issues, and so RR percentage bands should only be used for the analysis of diverse portfolios.

Percentages generated in the analytical process reflect either:

- The WGRC: the output of the waterfall analysis described in our bespoke analysis, or
- Average recovery rates for the specific debt class in the generic approach.

This output in turn informs in which RR band an obligation is ranked as a relative measure.

Many factors will affect the actual percentage recovery, some of which are outside the scope of the rating process. Chief among these is creditor composition. Concentration of claims at a certain level of the capital structure, common ownership of claims at different levels in the capital structure, or even differing entry prices of investors within the same creditor class, can have a profound effect on the actual recovery percentage. Analysis of the creditor mass also requires multiple assumptions around the terms of financing achieved by the issuer, transparency on which may be limited at different points in time, and which may be subject to rapid change.

Other idiosyncratic factors that exert a strong influence on recoveries also remain outside the scope of the rating, and will further limit the utility of RRs as predictors of precise recovery rates. Event risk is present in the capital structure as it is in other elements of an issuer's rating profile, and issuers will change the proportion or collateral of secured obligations within a structure over time, leading to changes in our recovery assumptions and migration of recovery and instrument ratings, both independently of and in correlation to the IDR.

In relation to the utilities sector uplift described in *Appendix* 2, the approach incorporates sparse statistical experience of historical utility defaults and recoveries over the past 20 to 30 years. To the extent that historical examples exist, they are largely concentrated in the US, while many jurisdictions in the world may have few or no relevant precedents.

Rating levels discussed in this report relate to Fitch's international credit rating scale and reflect standalone creditworthiness without considering external credit enhancement or government support. 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.

Data Sources

The key rating assumptions for the criteria are based on analytical conclusions drawn from Fitch's analysis of financial and non-financial information for non-financial corporate issuers and their debt issues. This may include private and public information, such as historical and projected financial reports, transaction documents, restructuring proposals, peer market and transaction multiples, bankruptcy plan valuations in disclosure statements and other documents for industry peers, industry and economic data, discussions with and information received from issuers and other market participants, third-party appraisals, and data included in Fitch bankruptcy case studies.

Rating Assumption Sensitivity

Below is a non-exhaustive list of primary sensitivities that can influence recovery ratings.

- RRs are notched from the IDR of the issuer and are therefore subject to upgrades or downgrades of the underlying entity's rating.
- Enterprise valuations play a key role in the allocation of recoveries across creditor classes. The above methodology often assigns these based on cash flow multiples (for a GC analysis), and advance rates (for a liquidation analysis). The analysis that determines an RR is driven by subjective forecasts by Fitch analysts that include GC EBITDA, assumed exit multiples, and appropriate advance rates, all of which are subject to substantial variability before default and during a restructuring process.
- Changes in issuers' capital structures affect the composition of the creditor mass and the relative ranking of creditor claims such that issue recovery outcomes vary substantially over time as the capital structure evolves.
- Jurisdiction-driven caps on RRs are used to reflect the potential impact of a debtor-friendly bankruptcy regime on expected recoveries for creditors. However, bankruptcy regimes and laws around the world are amended regularly. Fitch revises its RRs based on changes made to country groups under its *Country-Specific Treatment of Recovery Ratings Criteria*.
- Legal decisions, which play a strong role in recoveries, can sharply affect recovery expectations.
- Information flows for companies close to default can become diminished, which may reduce Fitch's visibility on its recovery analysis. When insufficient information is available, Fitch may withdraw the recovery rating.

Transaction-Specific Disclosure

In its initial rating reports and rating action commentaries, Fitch will disclose, as applicable, the rationale for the assumptions it has made on:

- GC EBITDA assumption in a going-concern scenario; and details of the basis for this cash flow assumption.
- Cash flow multiple in a going-concern scenario; and the basis for the choice of multiple based on the Multiple Assumption Tool factor outcomes.
- Asset valuation assumptions in a liquidation scenario.
- Additional EV from any affiliate or minority interests.
- Any alternative valuation method other than the Cash Multiple approach.
- The size of creditor claims listed in the *Estimating Creditor Claims* section on page 8.
- Any variations from the criteria.

In many cases, Fitch uses the assumptions that it derived in its initial rating analysis in its subsequent review analyses. Fitch will comment on whether the initial assumptions have changed and, when applicable, disclose the rationale for these changes.

Appendix 1: Notching and RR Criteria for REITs

Scope

This appendix outlines Fitch's criteria for the sector recovery uplift, details on bespoke RR assumptions, and the notching effect of these approaches on the secured debt, unsecured bond, bank debt and preferred stock instrument ratings for REITs and PICs (collectively REITs), globally.

The criteria apply to new and ongoing rating reviews.

Key Rating Drivers

Uplift Applicability: The sector recovery one-notch uplift to the instrument ratings can apply to multi-asset REITs with issuer IDRs of 'BB-' and above where the majority of assets (i) are investment properties (not speculative development), (ii) are identifiable, standalone assets, (iii) have regularly updated independent valuations, and (iv) are located in established property investment markets with depth, transparency and liquidity even in poor market conditions.

Limiting Factors: This uplift mainly pertains to REITs operating in sufficiently creditor-friendly countries in Groups A, B and C, according to Fitch's *Country-Specific Treatment of Recovery Ratings Criteria*. In addition, issuers that have utilised, or Fitch believes may utilise, their unencumbered pools as a source of contingent liquidity to avoid default would not typically be afforded the sector recovery uplift. Debt covenants and an issuer's financial policies should also be consistent with a minimum 2x unencumbered assets/unsecured debt coverage ratio and low levels of secured debt.

Benefit to IDR or Recovery: US, APAC and LatAm REITs tend to have senior unsecured ratings at the same level as the IDR given the record of encumbering assets to manage liquidity issues and lower default risk, which could reduce unsecured recoveries. Some REITs in relevant investment markets in EMEA have unsecured ratings rated one notch above the IDR, since the practice of encumbering assets is not viewed in the same manner but is used for recovery upon default.

Senior Secured Instrument Ratings: In certain instances, Fitch may rate senior secured obligations a single notch above the senior unsecured instrument ratings when the issuing vehicle is not bankruptcy-remote and secured bond investors have recourse to both the collateral pledged and a senior unsecured claim upon the parent REIT (amongst other factors).

REIT Sector Recovery Uplift ('BB-' IDR and Above)

Fitch believes that in certain developed investment property markets in creditor-friendly countries (as detailed above), unsecured REITs' debt can, upon default, realise a higher level of recovery than the average 31%-50% range assumed for the bulk of investment-grade corporates.

Reflecting this, the REIT sector recovery uplift of one notch above the entity's IDR can apply to multi-asset REITs(whether a REIT or a real estate operating company) with a diverse tenant base, where the majority of its assets have the following characteristics:

- Stable commercial property investment (as opposed to speculative development);
- Identifiable, distinct and standalone assets;
- Regularly updated, independent "Red Book" (or equivalent national standard) valuations supported by long-term rental income; and
- Located in an established property investment market with a record of liquidity even in poor market conditions.

In addition, the company covenants, or its financial policy are consistent with:

- A minimum 2.0x unencumbered assets/unsecured debt coverage ratio and a maximum secured debt/total debt (adjusted on a regional basis) ratio of 20% for investment-grade ratings.

- A minimum of 1.5x unencumbered assets/unsecured debt coverage ratio and a maximum secured debt/total debt (adjusted on a regional basis) ratio of 40% at the 'BB' rating category.

The 2.0x unencumbered assets/unsecured debt coverage ratio is a significant ratio, since using a basic calculation of historical peak-to-trough valuation decline of 50% (see table below for the actual figures) would result in an 80%-90% recovery after administrative cost deductions, which is well above the average corporate recovery range of 31%-50%.

UK Peak-to-Trough in Valuation Movement

	Largest decline period	Decline (%)	Second-largest decline period	Decline (%)
Office	July 2007 – July 2009	44.7	1989-1992	40.2
Industrial	June 2007 – July 2009	40.8	1989-1992	17.8
Retail	May 2007 – June 2009	45.7	1989-1992	19.9

Source: Fitch Ratings, IPD

REIT Bespoke RRs ('B+' IDR and Below)

While real estate values increase and decrease over time, commercial real estate is a capital-intensive investment and real estate values are a function of replacement cost, as well as a claim on future cash flows generated by the investment over time.

Given the cyclical nature of real estate fundamentals, Fitch considers (when determining net recoverable value) a stressed range of real estate values based on historical peak-to-trough changes in value, as well as expectations for future results.

Fitch's data on US property values goes back to the early 1980s, which captures the full peak-to-trough period of two major industry downturns (the early 1990s and 2007-2009). Fitch's UK data is based on Investment Property Databank (IPD) data which go back to 1985. Data for other countries go back fewer years. For markets and regions where historical data is insufficient or unavailable, Fitch utilises the most stringent assumptions, globally.

Fitch may choose to assess the EV of the issuer based on a GC EBITDA if it believes the issuer will be reorganised. If higher proceeds are expected from the sale of properties the LV approach is used.

Recoveries of Operating Real Estate Portfolio

The method for determining the recovery value of the operating real estate portfolio depends on the valuation method by which assets are accounted for (book or market valuation) by the REIT.

APAC & EMEA REITs: Open-Market Value Basis

In EMEA and APAC, REIT's financial statements that use valuations based on the RICS Red Book (or market equivalent) are based on fair market value: the market value determined by a professionally qualified external valuer.

Similar to the approach used for US REITs, Fitch would adjust this balance sheet valuation for any changes in market conditions since the last valuation. Similarly, Fitch applies discount rates to the book value of non-stabilised real estate assets such as land and development in process (and other balance sheet assets), to determine the residual value of these assets.

US REITs: Net Operating Income Capitalisation Basis

For US REITs that prepare their financial statements based on historical cost accounting, Fitch establishes a net operating income (NOI) estimate by targeting a post-restructuring cash flow to establish the level of cash flow upon which it is most appropriate to base the valuation.

Once the NOI from stabilised real estate is established, Fitch applies a capitalisation rate to determine a GC valuation. Fitch reviews a variety of sources to determine the capitalisation rates, beginning with rates utilised by Fitch's US CMBS group. The CMBS capitalisation rate ranges are listed in the table below:

US CMBS Cap Rate Ranges Based on Property Type

Property type	Range
Multi-family	8.00-9.50
Office	8.00-10.0
Industrial	8.25-9.75
Retail	8.25-11.50

Source: Fitch Ratings

These rates are meant to reflect rates historically seen during stressed market environments. Using these ranges as guidelines, Fitch applies a capitalisation rate (based on Fitch' view on asset quality and current market conditions) to determine the recoveries of the operating portfolio. Fitch performs a sensitivity analysis illustrating the outcome of cap rates above and below the target cap rate.

Recovery Estimate Adjustments to a REIT's Other Assets

Fitch applies discount rates to the book value of non-stabilised real estate assets such as land and development in process (and other balance sheet assets), to determine the residual value of these assets.

In very limited circumstances, where there is some certainty and specificity as to the use of cash (completion of property or refurbishment, or the amount is ring-fenced for debt reduction), rating committees may include the value of this cash in estimating recoveries. Fitch generally applies a 50%-75% discount to other balance sheet assets depending on the asset's marketability and industry conditions.

The expected value of the real estate and the value of other non-stabilised assets are aggregated to determine the gross recoverable value (GRV) of a REIT's assets.

Rating Senior Secured Bonds

Fitch does not currently rate any US REIT secured property-level mortgage debt due to the typical borrower structure (bankruptcy-remote special purpose entity) and the lack of implied corporate support demonstrated by REITs transferring properties to lenders through deed-in-lieu-of-foreclosure transactions.

In certain instances, Fitch rates senior secured obligations when the issuing vehicles are subsidiaries of the parent REIT, which means these are not bankruptcy-remote vehicles. These secured investors thus have recourse both to the specific collateral pledged and a general senior unsecured claim upon the parent REIT.

The senior secured ratings could attract an additional single notch above an issuer's senior unsecured ratings and the issuer's IDR. This reflects protective features usually seen in secured bonds such as security over, and control of, the assets' realisation process, minimum asset cover of secured debt and other covenants.

The ratings for these secured bonds will be derived from the REIT existing issuer IDR and senior unsecured rating. Typically, secured bonds allow substitution of value-like-for-like property. However, Fitch may decrease the one-notch uplift if adverse selection takes place, particularly if the secured pool is no longer representative of the wider property company's portfolio. Consistent with considering these bonds as a staple form of financing for the company, rather than securing its assets ahead of distress, Fitch expects the parent REIT's IDR to remain unchanged having issued the secured bond.

To obtain the additional notching for senior secured bonds, Fitch expects the bond to have a regularly reported minimum asset cover of secured debt covenant of at least 1.5x and a satisfactory rental-derived interest cover of at least 1.5x. If required or if the issuer is exposed to currency or interest-rate risk, Fitch expects the issuer will use hedges or other mechanisms to reduce exposure. In line with Fitch's REIT-specific credit factors post-issuance of the secured bond, Fitch would expect an investment-grade REIT to have unsecured asset cover of at least 2.0x and minimum unencumbered assets of EUR500 million.

The additional notching for recovery will also be dependent on the nature and quality of the properties and their underlying property market. In terms of quality, the pledged properties should be representative of the wider group portfolio and not specialised assets. With investment-grade issuers, these are usually located in investment markets with a strong transaction track record which affords liquidity at all points of the cycle, and a reliable, transparent, independent valuation methodology.

Influence of Secured Financings on Recoveries

Where secured financings exist within the rated group and they are sufficiently ring-fenced so that upon default of the wider group these prior-ranking creditors are not contractually forced to subsequently realise their collateral, there could be some delay in post-secured debt residual value or post-senior debt service excess cash flow flowing to the unsecured pool. As a result, Fitch's calculation of the unencumbered pool may not include the immediate benefit of that surplus value or cash flow.

Potential Notching Down of Senior Unsecured

In an environment where secured assets are financed with non-recourse to the rest of the structure, Fitch sees limited risks that could drive unsecured creditors' recovery expectation low enough (recovery below 31%) to require a notch-down. Fitch would nevertheless emphasise liquidity of relevant investment markets or potential adverse selection of assets when unencumbered asset cover decrease below 1.0x. When secured debt holders benefit from both security on defined assets and recourse to the rest of the structure effectively impacting recovery expectation of senior unsecured holders, Fitch estimates that up to 30% of secured debt to total investment properties is unlikely to lead to lower-than-average recovery expectation.

Appendix 2: Notching and RR Criteria for Utilities

Scope

This Appendix outlines Fitch's criteria for the sector recovery uplift applied to debt instrument ratings for utilities, power and gas (UPG) corporates globally. It also includes bespoke recovery analysis details specific for the UPG sector.

UPG spans economic-regulated (also known as rate-regulated or regulated networks) and integrated utilities, parent holdcos, affiliated or independent generation companies, competitive energy retailers, and pipeline midstream energy companies providing electric power, natural gas, and water services. The sector one-notch recovery uplift for senior unsecured debt is primarily applied to entities with significant, identifiable economic-regulated assets in sufficiently creditor-friendly countries in Groups A, B and C, according to Fitch's *Country-Specific Treatment of Recovery Ratings Criteria.*

Key Rating Drivers

Recovery Uplift for Debt Instruments: For certain utilities rated 'BB-' and above, Fitch applies a standard, one-notch uplift to the ratings of senior unsecured debt instruments relative to the IDR, representing expected above-average recoveries upon default. Secured debt instruments can attract wider notching. A bespoke approach is used for companies with IDRs of 'B+' and below.

Utilities' Unique Features

Fitch considers economic-regulated utilities that provide an essential service to customers to possess some financing features and analytical considerations that are unique in corporate finance and affect the assignment of RR and the notching of instruments relative to the IDR.

Rationale for Sector Recovery Uplift

The recovery uplift for economic-regulated utilities reflects the fact that in a sufficiently robust regulatory framework, valuations of regulated utility companies, or of their underlying assets, vary less over the course of the business cycle than is typical of other corporate business sectors. The higher expected recovery values for economic-regulated utilities are based on observations of actual defaults and bankruptcies in this sector and their outcomes, though relatively sparse, as well as the common economic characteristics of regulated utility services in many parts of the world.

These characteristics include natural-monopoly-style asset bases and franchises with formidable cost, planning, and investment barriers to entry for competitors (where competition is permitted); regulated tariffs and customers' high dependence on the services; the essential nature of services; little or no exposure to commodity price and volume risks; only modest cash flow and capital structure changes over the course of a business cycle; a deep pool of potential bidders on distressed assets; and stronger asset values that are more easily determined. These same attributes also support utilities' low default experience.

Utility Holding Companies

Fitch analysts assess utility holdcos and integrated parent utilities on the basis of their overall earnings stream and their business portfolio of economic-regulated utility and other activities. Holdcos may be passive investors (with or without an additional significant layer of debt) or operationally integrated with their operating subsidiaries (which may or may not issue significant external debt), providing centralised treasury activities and operational or administrative services.

Fitch's notching of utility holdco and integrated parent debt considers the capital structure, the legal, regulatory and bankruptcy framework applicable in the jurisdiction, including whether the business and financial affairs of utility parent companies are subject to regulatory supervision, ring-fencing or charter limitations, and the possibility of bankruptcy consolidation of the debts of the regulated utility subsidiary (opco), if any, and its parent holdco.

Holdcos that operate higher risk, mostly nonregulated businesses or contain a material amount of incremental leverage (and/or have intermediate holding subsidiaries with additional leverage) usually have financial and business risk profiles inconsistent with those typically associated with economic-regulated utilities, and would not be considered for the sector recovery uplift.

In considering whether the sector recovery uplift should apply to an integrated parent utility, especially where external debt is almost exclusively issued by the parent with a mixture of economic-regulated and other activities, Fitch pays particular attention to the proportion and quality of regulated cash flows and non-regulated cash flows, the relative robustness of earnings streams and how that affects recovery prospects.

The one-notch uplift from the IDR may be given to the unsecured debt of a structurally unsubordinated integrated utility parent with a dominant portion of regulated cash flows, i.e. around 50% or more of total EBITDA, including a maximum 5%-10% contribution from qualifying quasi-regulated businesses, with the remainder from regulated network businesses subject to limited or no volume and price risk.

Qualifying quasi-regulated businesses may include long-term power purchase agreements (PPA)-based power sales, power sales from renewable generation capacities supported by feed-in tariffs (or a similar support mechanism with limited price risk) in robust regulatory frameworks or regulated heat sales. All would be after an appropriate discount reflecting the individual historical volatility of such earnings, PPA-nature (fixed capacity and/or price) and quality of counterparties, and other factors that may affect valuation multiples.

When Sector Recovery Uplift Is Not Applicable

Entities without economic-regulation in the electricity generation or natural gas sectors have demonstrated variance in asset valuation or corporate valuation over the business cycle or commodity cycle, and are considered to have average recovery prospects at the unsecured debt level. Included in this average recovery group are utility holdcos with material unregulated subsidiaries or a significant amount of incremental leverage; diversified energy companies; independent and merchant power providers; pipelines (other than those subject to the same regulation and regulatory authority as utilities); midstream gathering and storage assets, oil, and gas exploration and production, marketing and trading; and companies with unusual asset concentrations resulting in potentially greater than average volatility in valuations.

Utility holdcos and integrated utility parent companies with only limited regulated cash flow or utilities in less robust regulatory frameworks are more akin to other industrial companies or diversified energy companies integrated across the value chain for which Fitch does not apply any recovery uplift. This remains the case where the utility group as a whole is nominally subjected to a regulatory framework but where only a minority of cash flows are ultimately subject to the terms of formal economic regulation of specific revenues.

For entities which are not subject to formal economic regulation, default may be provoked by a wide range of reasons, including investment risk in competitive generation, operational risk on large-site generation complexes, fuel mix and process, trading mismatches, trading counterparty risk and changing environmental priorities and taxation policies.

Debt of utilities subject to formal economic regulation may be subordinated to, for example, sizeable and very long-dated super-senior derivative liabilities. In such cases, Fitch may not apply a sector recovery uplift as debt recovery is unlikely to be above-average.

Within the above groupings, senior unsecured debt rating is generally the same as the IDR.

Instrument Ratings

Utility Secured and Unsecured Obligations

Secured obligations are rarely issued by highly rated investment-grade companies in the corporate portfolio and are not a customary funding tool for utilities in most parts of the world. By contrast, electric and gas utilities in the US frequently issue secured obligations, particularly first mortgage bonds or secured general and refunding bonds with a spreading lien on nearly all hard assets that may represent a significant component of the debt structure. There are also a number of regulated utilities in EMEA issuing secured debt with additional covenanted features. These regulated utilities typically have two classes of debt – a senior tranche and a subordinated tranche – with both secured on shares. In cases where sizeable super-senior derivative liabilities substantially increase subordination of the secured debt issued by these EMEA regulated utilities, Fitch does not apply sector recovery uplift as the recovery of these instruments is unlikely to be above-average.

Instruments of economic-regulated utilities with IDRs in the 'BB' category to which this sector recovery uplift applies are capped at 'BBB'. This is one notch above Fitch's general corporate policy of capping ratings of secured instruments issued by entities with IDRs below investment grade at no higher than 'BBB-'.

Bespoke Recovery Analysis for UPG

Fitch performs a bespoke recovery analysis for issuers with IDRs of 'B+' and below to arrive at an RR following the standard methodology. Fitch analyses the cash flow generation prospects of generation companies or midstream gas companies under alternative price scenarios and performs individual enterprise or asset valuations of these issuers. This analysis is supported by standardised valuation measures and data from recent sales of individual assets or asset portfolios.

UPG companies' EBITDA varies due to weather and catastrophic outages but estimated recovery valuations assume normal weather and operating conditions if the catastrophic outages are considered temporary or reparable.

As is the case in Fitch's general corporate analysis, RRs are based on the greater valuation from either a GC recovery approach or liquidation. However, in the utilities sector, issuers are expected to reorganise, based on the critical nature of the services provided and embedded value of the franchise or business lines.

In this sector, the discounted present value of projected future net cash flow can be employed in addition to, or instead of, multiple of stressed EBITDA, especially for power generation portfolios or other types of infrastructure assets. For energy retailers, price per customer is a customary valuation method.

Appendix 3: Frequently Asked Questions

What the RR Scale Means

Is Fitch Saying that the Holder of an 'RR4' Rated Bond Will Only Get 31%-50% of Principal Back at Maturity?

No. As long as the obligation performs, Fitch expects 100% recovery of principal at maturity expected payments. RRs relate to an ordinal, relative measure of recovery prospects only in the event of a default.

Why Does Fitch's Recovery Analysis Explicitly Not Factor in the Length of Time Taken to Realise Recovery Proceeds for Corporate Obligations?

Our ratings target ultimate recovery. Our report *Comparing Recovery Rate Measures* (April 2018) examines this in the context of the three main measures for RRs.

While the recovery analysis process is designed to generate relative recovery expectations that are intellectually robust and transparent, it does not pretend to accurately predict a cents-on-the-dollar recovery rate. The length of the process can depend of the jurisdiction, the nature of the asset class, the position of the creditor within the capital structure and the complexity of inter-creditor relationships and negotiations.

As a result, the length of time is generally difficult to predict with accuracy, even at the point of default.

To What Degree Do RRs Move Independently of IDRs?

The two scales measure different things: vulnerability to default and relative recovery prospects given a default. But the analysis of necessity looks at the same factors (cash flow generating capacity, brand and market strength, franchise, operational execution and financial structure), one through a default lens and the other through a recovery lens. Our focus on a fundamentals-based analysis, that reviews individual issuers and their instruments, will lead to some correlation as EVs or capital structures change.

Based on our experience, shifts in EV or LV within two years of bankruptcy are the primary driver of RR migrations. By contrast, changes in capital structure drive RR migrations at the higher IDR levels. This would seem to fit an intuitive pattern for evolutions within the life of an active corporate. At higher levels, voluntary leverage changes will be easier for the company to undertake, and feature more often. At levels closer to distress, the performance of the company may be affected by withdrawal from marketplaces, abrupt strategic changes and other corporate actions.

Migration rates for RRs are nonetheless comparable to other ratings assigned at the same category of IDR, acknowledging that speculative-grade ratings transition more frequently than investment-grade ratings.

Do RRs Also Apply to Short-Term Ratings of Obligations?

No. Short-term programme and obligation ratings address exclusively an issuer's ability to meet financial commitments in a timely manner and do not incorporate any consideration of recovery in the event of default. In reality, most short-term obligations are retired well in advance of insolvency, as the short-term investor base is particularly risk-averse.

How RRs Are Assigned

Does Your Default Scenario Stress the Issuer to Below Break-Even on its Debt Service?

No. Our analysis relies on either a post-restructuring GC or liquidation analysis, as described above. Stressing to break-even overstates the level of value erosion, especially for senior creditors, in the majority of restructurings. It also has an inbuilt bias to stress more levered companies by a lesser degree.

Is There a Uniform Default Scenario Applied to Issuers?

No. All defaulted issuers differ, just as all performing issuers differ, and our GC EBITDA and multiples analysis reflect this. Many elements of a corporate survive the financial default of the issuer. Looking at the considerations associated with IDRs in our 'B'/'CCC' table, an issuer at

'B-' will likely have fundamental features that would also support a weaker recovery in the event of default. Our defaulted company assumptions, using a fundamentals-based analysis, consider the wider range of attributes distinguishing companies across a range of management, franchise and sector trajectory positions.

Does Fitch Treat Covenant-Lite and Covenanted Loans Differently in Distressed Enterprise Valuation and RR Analyses?

No, except in the case of REITs (see above), for the reasons noted in the main criteria text relating to event risk. Fitch's assumptions for a reorganisation multiple, sustainable GC EBITDA, or liquidations values are not changed based on the presence or absence of financial maintenance covenants.

Does Fitch Include Undrawn Facilities in its Estimate of Creditor Claims?

The terms of any undrawn facilities would be reviewed and decisions would be made on a case by case basis. In general, if a new facility is allowed but not yet committed, such as permitted incremental debt, it is unlikely that Fitch would include the amounts in the creditor mass. If the facilities are committed but undrawn, such as a delayed-draw term loan, and access is not considered onerous, Fitch may include the undrawn amounts in the creditor mass when calculating recoveries. In this case, the analyst would also consider a post-restructuring EV that captures the effect of the funds being drawn if specifically for an expansionary or acquisition plan.

Does Fitch Do Bespoke Recovery Analysis for All Entities?

Entities in the 'BB' IDR category or higher are too far from default for a credible default scenario analysis to be generated, and would likely generate RRs that are too high across all instruments. For these entities in the 'BB' category, in those cases where RRs are assigned, we use a generic ruleset which reflects the relative instrument rankings and recoveries, but which also reflects the higher EV of 'BB' ratings in a generic sense for the most senior instruments.

What Determines Whether 'RR6' Obligations Are Notched by the Greater or Lesser Number of Notches?

'RR6' issues typically are notched down from the IDR by two to three notches for 'B+' and below ratings. Where there are multiple 'RR6' issues, individual instrument features and differences in willingness rather than ability to pay are reflected in deciding the scale of the notching. For example, while some instruments with differing terms may theoretically both receive nothing in a stress recovery analysis (junior secured and deeply subordinated debt, for example), contractual features of the obligations can support differentiation at the 'RR6' level. A continuing Negative Outlook may imply wider notching for weaker-placed instruments in the capital structure.

Where there is a single 'RR6' instrument, the instrument will be notched down from the IDR by two notches.

If a Recovery Estimate of 'RR1' Is Capped by the Country-Specific Criteria, What RR Does Fitch Assign?

Fitch will quote the highest RR allowed under the country-specific criteria. A 75% WGRC for an instrument in a Group C country will be 'RR3' (which maps to the band 50%-70%). Similarly, a 95% WGRC for an instrument in a Group C country will also be 'RR3' (50%-70%).

Applying this to the *Notching for 'BB' Category Issuers (Excluding Uplift Sectors)* table, instruments can receive the highest possible notching and RR prescribed in the grid subject to the recovery and instrument rating caps specified in the *Country-Specific Treatment of Recovery Ratings Criteria*.

- A Category 2 first lien in a Group C country will be capped at 'RR3' and hence notched by +1.
- A Category 2 first lien in a Group D country will aligned to the IDR since the *Country-Specific Treatment of Recovery Ratings Criteria* prevents upnotching. The instrument will be capped at 'RR4'.
- A super senior RCF for a 'BB-' rated issuer:

- If it is in a Group B country, the RR will be capped at ‘RR2’ and the instrument notched by +2.
- If it is in a Group C country, the RR will be capped at ‘RR3’ and the instrument notched by +1.

Technical Matters

Are RRs Maintained for All Rated Issues Made by Speculative-Grade Issuers?

No. RRs are optionally assigned for instruments of issuers with ‘BB’ category IDRs, based on market demand. For all other speculative-grade IDR categories, all corporate instruments will typically be assigned an RR if instrument ratings are assigned.

Do RRs Have Rating Outlooks? Can They Be Placed on Rating Watch?

No. Rating Outlooks apply mainly to the IDR of a corporate entity. Rating Watches may be applied to a wider variety of ratings than Outlooks, but will also not apply to RRs. That said, based on the notching relationship between RRs and obligation ratings, individual issue ratings on the ‘AAA’ scale may be placed on Rating Watch based solely upon a heightened probability of a change in the RR.

Defaults

Can a Bankrupt Issuer Have an Issue Rated ‘C’, at the Same Level as the Obligation of a Performing Issuer?

Yes, and this reflects that, under an “expected loss” oriented approach, the risk is considered similar between a non-performing security with very strong expected recoveries, and a performing security with high default risk and low expected recoveries.

For corporate issuers, defaults on instruments are derived from IDRs of ‘RD’ or ‘D’, which will signal to users when an issue of a given entity may be non-performing. This underlines the importance for users of reviewing IDR, RR, and instrument rating as a combined opinion. See the *Debt Instrument Mapping* on page 12 for complete details of notching of issue ratings from ‘RD’ and ‘D’ IDRs.

When Will Fitch Withdraw Defaulted Security Issue Ratings?

Fitch expects the majority of defaulted corporate and sovereign issue ratings to be withdrawn after 30 days. The agency will, however, retain the right to maintain coverage of defaulted securities for a longer period, depending on market interest and data availability. Point-in-time ratings for debtor-in-possession facilities are not assigned RRs.

Country Overlay

Are the RR Scales Applicable in all Countries?

Yes. Fitch applies the RR approach in all countries where it maintains international foreign-currency or local-currency ratings.

Details can be found in the *Country-Specific Treatment of Recovery Ratings Criteria*.

Are Foreign-Currency Debt Obligations Capped at the Country Ceiling?

No. The country ceiling is a purely default-related concept. Theoretically, foreign-currency obligations may therefore be rated above the country ceiling, even for issuers whose IDRs are constrained by the country ceiling. In practice, there is a large overlap between those countries where country ceilings commonly constrain IDRs, and those countries where country caps on RRs would apply and limit any upward notching to instrument ratings. For full details on the applicable criteria, please consult the *Country-Specific Treatment of Recovery Ratings Criteria.*