Global
Cross-Sector Criteria

# Recovery Ratings and Notching Criteria for Nonfinancial Corporate Issuers

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**Related Research**

- *Corporate Rating Methodology, Nov.24, 2009*
- *Definition of Ratings and Other Scales, March 3, 2009*
- *Equity Credit for Hybrids and Other Capital Securities, June 25, 2008*
- *Parent and Subsidiary Rating Linkage — Fitch's Approach to Rating Entities Within a Corporate Structure, June 19, 2007*
- *Country-Specific Treatment of Recovery Ratings — Revised, Aug. 21, 2006*

**This Criteria Report Replaces**

- *Issuer Default and Recovery Ratings — Frequently Asked Questions, Sept. 11, 2006*
- *Recovery Ratings — Approach and Process for Corporate Finance, Aug. 9, 2005*
- *Recovery Ratings: Exposing the Components of Credit Risk July 26, 2005*
- *The Role of Recovery Analysis in Ratings — Enhancing Informational Content and Transparency, Feb. 14, 2005*

## Summary

This report updates Fitch's criteria for recovery estimates and recovery ratings (RRs), and reviews the notching effect of this approach on loan and bond instrument ratings for nonfinancial corporate credits. The overall risk for a particular security includes two components: the relative probability of default for the issuer (issuer default rating [IDR]), and the likely recovery of the security class given default.

The rating for an issuer's debt instruments (whether secured, senior unsecured, or subordinated) is notched from the issuer's or guarantor's IDR. Rated entities with IDRs of 'BB–' and above usually have senior unsecured ratings at the same level of the IDR reflecting average (around 40%) rates of recovery across all sectors. For entities rated 'B+' and below — where default is closer, there is more certainty that the capital structure will not change, and recovery prospects are more meaningful to investors — Fitch undertakes a "tailored," or bespoke, analysis of recovery upon default. The resulting debt instrument rating includes a recovery rating, or published 'RR' (gradated from 'RR1' to 'RR6'), and is notched from the IDR accordingly.

Applying these methodologies has presented significant challenges due to the global scope of Fitch's coverage. Varying legal regimes across geographies, as well as differing financing preferences among sectors (e.g. first mortgage bonds in the utility sector), introduce many idiosyncratic factors that do not fit neatly into a "one size fits all" approach. This report focuses on the general approach utilized to estimate the value of collateral that would be available to creditors and others in a default scenario, and prioritize claims to establish the recovery ratings for given liabilities of an issuer or a group of affiliated companies.

Where the circumstances of a particular case require deviations from the general approach, both the deviations and the explanations of them will be fully disclosed and explained in the credit report for that entity or in published research.

Recognizing the complexities involved in actually valuing companies, quantifying the value of varying forms of proceeds a creditor might actually receive, and the uniqueness that could be argued for each given case, Fitch offers a functional perspective on evaluating some of the primary valuation alternatives and what consideration a given liability attracts in a particular hierarchy. It should be emphasized that this evaluation starts from a reference point (in most cases as yet hypothetical) when the company's operating performance, cash-generating ability, and ability to access capital are under extreme stress.

The alternative valuation methods Fitch typically considers would include going-concern (cash flow multiple), traded asset value, or balance sheet liquidation. In all cases, the analyst should assume that if a defaulted company's intrinsic or economic value is greater than its liquidation value, then the company would be expected to attempt to reorganize and continue to operate. Only where a liquidation of the assets results in a demonstrably higher return to creditors would a liquidation value be applied

to corporate entities. This bias toward a going-concern valuation is consistent with insolvency regimes around the globe that broadly favor restructurings of one form or another over liquidation where this demonstrably increases returns to creditors and preserves employment (an important consideration in all jurisdictions).

Fitch incorporates the effect of expenses associated with working through reorganization (in or out of bankruptcy), other priority claims, and concessions that senior creditors often agree to offer junior claimants to reach agreement on a reorganization plan. In general, the valuation that is established is applied on a waterfall basis, according to the claims and the relative priority of each, where Fitch believes such priority will be respected and is enforceable. The descriptions in the periodic sector-specific recovery rating reviews will provide significant detail on the ranges of discount, multiple, administrative expense, and collaborative payment assumptions Fitch has made in this process. Company-specific information provides additional clarity on how instruments and claims rank across affiliates.

Fitch has also provided country caps for recovery ratings to encompass the creditor-friendliness (or otherwise) of jurisdictions and enforceability of security in the event of a default (see the Fitch Criteria Report, "Country-Specific Treatment of Recovery Ratings — Revised," published Aug. 1, 2006 and available at www.fitchratings.com).

While major factors that drive recovery — correlation to an industry cycle and the general economic and credit cycles — are addressed in Fitch's sector-specific focuses, others are not. Chief among these is creditor composition, which lies largely outside the scope of Fitch's ratings. Fitch's recovery analysis does not attempt to capture the full spectrum of possibly conflicting motivations for creditors or the speed with which such motivations can change.

For all factors outside the direct scope of these criteria, analysts have the latitude to increase or reduce the recovery ratings suggested by the valuation and the notching, depending on pending events, contractual terms within specific instruments, or views about the operating environment or a particular company.

Fitch is mindful of the bodies of work done on recovery analysis and the patterns of recovery that differing classes of liabilities historically have garnered. Often these studies, including many from Fitch, are based on quotes of traded instruments 30 days after initial filing. These patterns will be an essential consideration in distinguishing liability classes above the single 'B' category, where the slope of difficulty in providing insight into specific recovery expectations becomes significantly steeper. This stems from two primary factors.

- There tends to be much more uncertainty about future changes in the capital structure, operations, and assets in these higher rating categories, which argues that precise allocation of value has minimal effectiveness.
- Companies in higher rating categories are typically operating at a level so far removed from dire stress or default that creating plausible scenarios is difficult.

While company-specific and historical trading-based recovery data are important, Fitch also recognizes the effect that differing economic, competitive, and credit availability environments can have on ultimate recovery. As such, analysts in each industry sector revisit base assumptions (e.g. cash flow "haircuts," multiples, asset discounts, price decks, and administrative and other payments) across sectors in each committee where RRs are assigned or reviewed. In a recent Fitch Special Report, "Defaults Surge, Recoveries Sink in 2009, Understanding the Fundamental and Cyclical Drivers of Corporate Recovery Rates" published July 6, 2009, Fitch documented the observed empirical relationship between trading prices at default, trading prices at emergence, and actual bankruptcy resolution data at different points in the credit/default cycle.

## Recovery Analysis Methodology — Aggregated Analysis for Investment Grade and High Speculative Grade Issuer Obligations

The process of establishing ratings for the obligations of issuers rated between 'AAA' and 'BB–'refers, for the most part, to aggregate recoveries on the defaulted bond market as a whole and not to issuer-specific analysis. Instruments of a particular priority and security position will be assigned ratings that reflect the average recoveries expected to be received by such an instrument in that sector in the event of a default.

### Average Recovery Assumptions

Recent data on average recoveries in the U.S. are summarized in the Summary Results of Fitch Study of U.S. Bankruptcy Resolutions table below, taken from the Fitch Special Report, "Defaults Surge, Recoveries Sink in 2009," referenced above. While these recovery values are based on bond prices at emergence, there is a strong relationship between recovery outcomes from actual bankruptcy documents and the emergence prices of the same instruments. For example, the median plan recovery rate for senior unsecured bonds was 41% of par, while the median emergence price for the same bonds was 43% of par. Emergence prices are excellent proxies of bankruptcy resolution. In aggregate, the data for the U.S. show median recoveries for unsecured corporate debt of about 40%, with senior secured debt recovering significantly more (84% for loans, 67% for bonds) and subordinated debt significantly less (31%).

**Summary Results of Fitch Study of U.S. Bankruptcy Resolutions 2000–2006**

| Company Characteristics | Average | Median |
|---|---|---|
| Pre-Bankruptcy Total Debt/Total Assets | 0.86 | 0.74 |
| Emergence Firm Value/Pre-Bankruptcy Total Debt | 0.70 | 0.61 |
| Emergence Firm Value /Pre-Bankruptcy Total Assets | 0.53 | 0.50 |
| Pre-Bankruptcy PPE/Total Assets | 0.43 | 0.43 |
| Emergence Total Debt/Pre-Bankruptcy Total Debt | 0.35 | 0.31 |
| Pre-Bankruptcy Capital Structure | | |
| Pre-Bankruptcy Senior Secured Debt/Total Debt | 0.38 | 0.37 |
| Pre-Bankruptcy Senior Unsecured Debt/Total Debt | 0.41 | 0.48 |
| Pre-Bankruptcy Subordinated Debt/Total Debt | 0.21 | 0.00 |
| | | |
| Emergence Firm Value vs. Pre-Bankruptcy Debt Mix and Plan Outcomes | | |
| Emergence Firm Value/Senior Secured Debt | 3.31 | 1.43 |
| Senior Secured Loan Recovery from Plan | 0.93 | 1.00 |
| Senior Secured Bond Recovery from Plan | 0.67 | 0.78 |
| | | |
| (Emergence Firm Value – Senior Secured Debt)/Senior Unsecured | 0.75 | 0.50 |
| Senior Unsecured Loan Recovery from Plan | 0.63 | 0.57 |
| Senior Unsecured Bond Recovery from Plan | 0.44 | 0.41 |
| | | |
| (Emergence Firm Value – Senior Secured – Senior Unsecured)/Subordinated | < 0 | 0.09 |
| Subordinated Recovery from Plan | 0.27 | 0.14 |
| Emergence Prices | | |
| Secured Loan Emergence | 0.84 | 0.95 |
| Secured Bond Emergence | 0.67 | 0.78 |
| Unsecured Loan Emergence | 0.65 | 0.61 |
| Unsecured Bond Emergence | 0.43 | 0.43 |
| Subordinated Bond Emergence | 0.31 | 0.11 |

Source: Fitch July 2009 Study "Defaults Surge, Recoveries Sink in 2009"; SEC filings; Advantage Data; and Markit.

**Sector Approach Recovery Rating Criteria**

- IDRs and Senior Unsecured Ratings for European Property Companies, May 8, 2006.
- EMEA Energy and Utilities — Issuer Default Ratings and Recovery Ratings — Amended, Feb. 16, 2006.
- Issuer Default Ratings and Recovery Ratings in the Power and Gas Sector, Nov. 7, 2005.

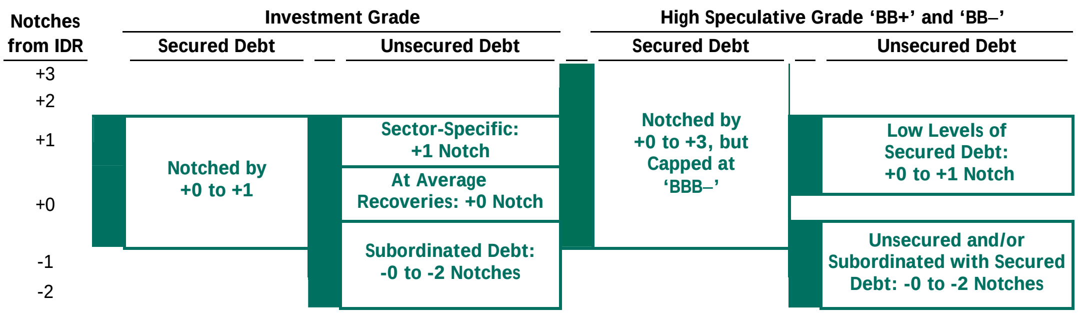
## Sectors with Above-Average Recoveries

In addition to these average recovery expectations across all industry groups, some specific industries have above-average recovery prospects that afford a one-notch uplift to the senior unsecured debt rating. This approach applies to all companies in the applicable sector with an IDR at or above 'BB–'. Where this sector approach is adopted, analytical groups have published criteria for the generic above-average rate of recovery prospects for debt in the sector. To date, the sector approach has been applied to the unsecured debt of utilities and utility-related issuers, and the unsecured debt of property investment companies in Europe, the Middle East, and Africa.

## Impact of Recoveries for Debt of Investment Grade ('BBB–' and Above) and High Speculative Grade ('BB+' to 'BB–' IDRs) Issuers

Recovery analysis plays little role in analyzing investment grade issuers, if only because secured debt is usually immaterial for investment grade issuers. There are exceptions, such as industrial revenue bonds, obligations backed by letters of credit, etc., and these debt instruments will be rated above the IDR as appropriate for the additional security. But generally, investment grade issuers are so far from default and so well collateralized relative to their funded debt and other obligations that in many instances debt will be rated level with the IDR.

**Notching Guidance for 'BB–' and Above Rated Issuers**




Source: Fitch Ratings.

## Impact of Secured Debt on Unsecured Debt

Where secured debt levels are large enough to prejudice recoveries for lower classes of debt, including senior unsecured debt, unsecured debt may be notched down. The degree of notching down from the IDR for the unsecured issue ratings will depend on the amount of secured debt ahead of the unsecured debt, the amount and quality of the collateral available to the secured debt, and overall leverage. These cases are much more likely to arise in the speculative and lowest investment grade ('BBB–') IDR levels, if only because secured debt is generally not material at higher IDRs.

### *Bespoke Versus Generic Approach at High Speculative Grade*

The bespoke analysis for 'B+' and lower IDRs is appropriate since these entities are closer to default than 'BB' category or investment-grade issuers, which have stronger financial profiles, are more distanced from default, and whose likely creditor mass at default is less clear. Thus any assumptions that might be used for the bespoke analysis of a default scenario would be too speculative for assignment of recovery ratings for investment grade and 'BB' category issuers. Instead, Fitch incorporates broad consideration of relative recoveries to notch issue ratings from 'BB' category IDRs.

Secured issues will not always be notched up and unsecured issues will not always be notched down — the move in either direction will depend on the collateral; total leverage; and the proportions of secured, unsecured, and subordinated debt.

## Recovery Analysis Methodology — "Bespoke" Analysis for Low Speculative Grade Issuer Obligations ('B+' and Below)



For issuers with IDRs at 'B+' and below, Fitch performs a tailored analysis for each group of obligations of the issuer. In this bespoke analysis, there are three steps: estimating the enterprise value (EV), estimating the creditor mass, and distribution of value. Step one is a common process across all jurisdictions; step two varies slightly by jurisdiction, although not materially; and step three is subject to material variation between jurisdictions.

### 1. Estimating the Enterprise Value (EV) — Going Concern

This approach dominates the bespoke analysis that Fitch performs in recovery analysis. The approach involves a two-step process.

1. Cash Flow: Establish the level of cash flow upon which it is most appropriate to base the valuation.

2. Multiple Selection and Application: Apply a multiple reflecting a company's relative position within a sector based on actual or expected market and/or distressed multiples.

*Cash Flow*

Fitch believes it is important to consider what it will take for a company to be in the position to seek bankruptcy protection or have creditors elect to enforce their rights. This would occur either through a covenant package that was designed to preserve as much value as possible for the lenders (high debt-service coverage ratio thresholds or very restrictive leverage targets), or at a point where the company can no longer meet its operational and financing commitments due to either liquidity or performance erosion.

Fitch targets a post-restructuring cash flow, which assumes both depletion of the current position to reflect the distress that provoked a default, and a level of corrective action that Fitch assumes either would have occurred during restructuring, or would be priced into a purchase price by potential bidders. Depending on the companies' then-current relative position or rating (for example an IDR of 'CCC' versus 'B+'), the magnitude of discount to current or pro forma cash flow could be substantial.

For companies that generate negative operational cash flow or slightly positive cash flow, but where this is due to excess operating costs that could be shed in bankruptcy or cyclical downturns, sustainable cash flow may be calculated by estimating the cash flow that could be achieved by the entity after reorganization in bankruptcy. For industries that are cyclical but not undergoing secular changes, typically commodity industries, assuming mid-cycle, industry average cash flow margins is a usual starting point. The rationale for assuming an industry average margin is that cost savings and process improvements are achievable in a restructuring, and industries in troughs eventually revert to mean performance, which should enable an issuer to restore cash flow to an industry average level.

For companies that generate negative operational cash flow for acyclical and generally chronic reasons, a liquidation value will most likely be applied if the analyst cannot identify idiosyncratic costs that could be reduced in reorganization sufficiently to restore profitability (e.g. uneconomic wages and benefits, leases, or contracts).

Cash flow is measured by either EBITDA, the most common metric referenced in external valuations, or Fitch's preferred and roughly equivalent measure of funds flow from operations, plus interest, plus tax.

### *Multiple Selection and Application*

Multiples are taken from recent market transactions and/or historical distressed sales where available. Adjustments are often made to these multiples. Where no statistically significant sample of market transactions is available, analysts will seek out near-proxy sectors or make rational assumptions based on general trends for distressed market transactions.

Some sectors have a broad range of observable examples, such as the resolution of current retailer and auto supplier bankruptcies. Disclosure of transaction multiples in markets outside the U.S. is generally more erratic. Assumptions are based on a combination of available data from distressed asset sales, relative equity market valuations, and other analyst assumptions. In all cases, multiples are subject to a "prudence principle" that acts to limit the multiple at the time of peak valuations (e.g. telecommunications assets in 2000) but which reflects the collapse in multiples at troughs (e.g. telecommunications assets in 2002). As part of its policy of "rating through the cycle," Fitch typically uses relatively conservative valuation multiples when market valuations are at historical peaks. Similarly, when markets are so depressed or disrupted that they are essentially illiquid, Fitch recovery multiples may be higher than observed market multiples, if any are available. However, in all cases Fitch aims to be conservative in its assumptions, in keeping with its role as a rater of fixed income credit quality.

Importantly, the discussion of multiples also needs to consider the significant range of companies to which the loan and capital markets have extended credit in recent years. While the going-concern approach is common and appropriate for companies with products, services, facilities or other forms of value that are strongly positioned but either poorly managed or financed, there are some companies with less dominant positions for which reorganization as a going concern may not maximize EV. Where multiples are particularly low, liquidation values may provide the benchmark for the enterprise valuation.

While market valuations are meaningful, they are also volatile and vary widely even within an industry. For example, consider the data in the Median Market Enterprise Value Multiples table, which shows ratios of EV to EBITDA for a broad sample of companies from industry sectors rated by Fitch. Enterprise value is the year-end market value of common equity plus the book value of debt, and EBITDA is annual EBITDA for the year cited. The median multiple in this North American sample fell by two turns of EBITDA from 2007 to 2008, even before annual corporate earnings fell significantly, demonstrating the impact on valuations of the business cycle. The range of market multiples within an industry is also generally significant. For example, 2008 market multiples for supermarkets, a countercyclical industry, ranged from 4.3x to 7.1x around a median of 4.6x. For metals and mining, a cyclical industry, the median was approximately the same at 4.7x, but market multiples ranged from a low of 1.2x to 14.0x.

The variability of market multiples over time and among companies within an industry sector demonstrates that valuation is issuer-specific and choosing a multiple will require significant analyst judgment. Observed market multiples are an input to analyst judgment, not a substitute.

### *Traded Asset Valuation*

Some industry sectors 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, proven oil and gas reserves are valued based upon current and future expectations of pricing for such commodities, and are often quoted as a price per barrel of oil or price per million cubic feet. This approach could also apply to the power sector (price per kilowatt of generation capacity), refiners (price per barrel of daily capacity), or health care companies (price per bed).

### *Present Value of Future Cash Flow*

Where sufficient information is available and future cash flows can be estimated with adequate precision, the analyst may use conventional discounted cash flow techniques to estimate the EV as the present value of future cash flows.

**Median Market Enterprise Value Multiples 2007–2008: 'BB' and 'B' Companies**

| 2007 Enterprise Value/EBITDA (x) | | 2008 Enterprise Value/EBITDA (x) | | 2008 High | 2008 Low |
|---|---|---|---|---|---|
| Aerospace and Defense | 12.78 | Building and Materials | NM | — | — |
| Gaming, Lodging and Restaurants | 11.02 | Paper and Containers | 8.0 | 96.7 | 3.4 |
| Utilities | 10.43 | Food, Beverage and Tobacco | 7.9 | 13.5 | 2.6 |
| Broadcasting and Media | 9.77 | Gaming, Lodging and Restaurants | 6.9 | 23.3 | 3.4 |
| Healthcare and Pharmaceutical | 9.54 | Aerospace and Defense | 6.7 | 9.1 | 4.2 |
| Computers and Electronics | 8.61 | Utilities | 6.7 | 20.2 | 2.3 |
| Cable | 8.58 | Consumer Products | 6.6 | 11.8 | 1.6 |
| Food, Beverage and Tobacco | 8.45 | Healthcare and Pharmaceutical | 6.5 | 15.0 | 3.4 |
| Retail | 8.35 | Cable | 6.3 | 7.3 | 3.1 |
| Industrial / Manufacturing | 8.18 | Retail | 6.3 | 15.9 | 1.6 |
| Textiles and Furniture | 8.09 | Transportation | 6.0 | 17.3 | 3.5 |
| Metals and Mining | 8.07 | Broadcasting and Media | 5.9 | 8.7 | 2.6 |
| Consumer Products | 8.06 | Leisure and Entertainment | 5.9 | 7.1 | 4.9 |
| Chemical | 7.79 | Telecommunication | 5.4 | 15.4 | 3.0 |
| Telecommunication | 7.66 | Chemical | 5.1 | 11.2 | 1.9 |
| Supermarkets and Drug Stores | 7.49 | Industrial / Manufacturing | 4.9 | 11.0 | 2.7 |
| Leisure and Entertainment | 7.40 | Textiles and Furniture | 4.7 | 8.3 | 2.8 |
| Building and Materials | 7.21 | Metals and Mining | 4.7 | 14.0 | 1.2 |
| Paper and Containers | 7.17 | Supermarkets and Drug Stores | 4.6 | 7.1 | 4.3 |
| Energy | 6.97 | Automotive | 4.4 | 25.4 | 3.1 |
| Transportation | 6.54 | Computers and Electronics | 3.9 | 11.4 | 1.0 |
| Automotive | 6.32 | Energy | 3.7 | 11.8 | 0.9 |
| Median | 8.08 | Median | 5.9 | — | — |

Source: Fitch, Bloomberg, SEC filings.

## Balance Sheet Liquidation

The liquidation approach usually involves discounting the book value of balance sheet assets and summing the results. However, alternative approaches such as commodity prices for inventory may be more appropriate (e.g. price per ton of paper). In certain situations, an asset's book value may be lower than the liquidation value (for example, land purchased 50 years ago or a successful brand with no book value). In these instances, Fitch has utilized resources across groups to establish appropriate pricing expectations for particular assets such as real estate.

The discount rate for accounts receivable (A/R) may also be based on a review of the historical performance of the company's receivables portfolio. Performance indicators include the percentage of nonperforming receivables and historical chargeoffs, the credit quality (rating) distribution, and the portfolio concentration of customers. If a company employs some form of securitization, Fitch considers the structure and proceeds such programs offer while also being sensitive to potential differences in asset quality. For details, see the Fitch Criteria Report, "Impact of Receivables Securitization on the Recovery Ratings of LBO Debt Issues," published Aug. 26, 2008 and available at www.fitchratings.com.

The discount to inventory varies according to the inventory's marketability and industry conditions. Larger discounts are appropriate for inventories with short shelf lives (e.g. perishables) or products that are customized or subject to fashion risk (e.g. women's shoes have been discounted as much as 90%). Smaller "haircuts" are appropriate for easily valued, more readily marketable inventories, including commodities such as oil and gas reserves, steel, and pharmaceuticals. Analytical consideration is also given to prevailing industry conditions. For example, at the trough of telecommunications overcapacity, slightly used equipment could be picked up for $0.10 on the dollar, reflective of oversupply. It is up to the analyst (and rating committee) to determine an appropriate discount.

Analytical guidance can also be drawn from the history of asset-based loans in the sector. If typical advance rates on asset-based credit facilities in the sector are 80% on A/R, 60% on finished goods, and 20% on property, plant and equipment, then discounts to these assets of 20%, 40%, and 80%, respectively, are a reasonable proxy for orderly liquidation value.

### *Treatment of Cash Balances*

In limited circumstances Fitch will also include the value of cash on the balance sheet in estimating recoveries. The general assumption is that cash on the balance sheet dissipates during or before the bankruptcy, to be replaced by debtor-in-possession financing or other lending facilities. However, some industries, such as airlines and technology, carry large cash balances and could have large cash balances even in bankruptcy. In such industries, some part of cash balances may be incorporated into recovery analysis depending on the circumstances of the bankruptcy. For example, some part of cash could be added to the EV in an industry which requires large minimum cash balances to operate or could be used to pay claims (credit or non-credit) in other industries.

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

Finally, in deriving a consolidated EV, Fitch may also separate the company's operating units, by segment or by geography, in order to apply the most relevant valuation method to the various components. For example, numerous auto supplier companies domiciled in the U.S. have filed for bankruptcy protection for their U.S. operating entities (for which Fitch may apply a liquidation valuation), while international operations remain outside of the filing (for which Fitch would apply a going-concern valuation).

## 2. Estimating the Creditor Mass

In an effort to estimate existing claims — those that are typically taken on as a company's fortunes deteriorate, those that are necessary to the reorganization process, and those that have priority in the relevant bankruptcy code — Fitch's analysis includes the following.

- Fitch assumes that unused portions of committed lines of credit (secured or unsecured), are fully drawn to the extent permitted.
- A portion, varying by sector, of lease obligations that could be rejected in a bankruptcy is added to unsecured claims (e.g. 50% of retail lease obligations).

- Priority administrative claims are assumed to be 10% of enterprise valuation.
- Concession assumption: The value distributed to the senior unsecured creditors may be reduced by an amount that is redistributed to junior unsecured claimants to secure their approval of the plan of reorganization or liquidation. The amount of such concession payments is highly dependent on circumstances, but still results in recoveries in the 'RR6' range, and in no case are recoveries above those of the senior unsecured creditors. Fitch typically allows up to 5% of the recovery value available to senior unsecured creditors to be allocated to concession payments.
- Pensions (underfunded pension plans have claims that vary in priority depending on jurisdiction), post-retirement benefits other than pensions, and other non-credit obligations such as environmental remediation obligations or personal injury settlement claims (e.g. asbestos claims in the U.S.) may also be included as necessary.

In distressed companies, the claims of other creditors such as suppliers and trade creditors may be significant. Fitch believes it has captured these claims through a combination of drawing down committed bank credit, which would be used to replace evaporating trade credit, as well as a portion of the administrative claims assumption. If revolver capacity is considered insufficient to replace trade payables, the administrative claims assumption could be increased as an offset.

Similarly, if the issuer is subject to material lawsuits or has other types of large nondebt claims, the analyst includes estimates of these amounts in their relative position in the distribution waterfall. In instances of asset-based or over-collateralized borrowings Fitch will deduct perfected claims (including the amount of pledged assets) from the overall valuation so that the remaining creditors' recoveries are assessed with a more realistic base of the potential consideration to which they ultimately may be entitled.

Underfunded pension plans can be significant claims on the bankruptcy estate. Generally, pension plans that are terminated have an unsecured claim and rank equally with unsecured debt. However, in the U.S. the Pension Benefit Guarantee Corporation may exert its considerable bargaining power to improve recoveries to the pension plan at the expense of unsecured creditors.

Other post-employment benefits (OPEB) claims can be equally or even more important than pension claims, typically if the company has a unionized labor force or if there is a public interest in protection of retiree benefits (such as healthcare). U.S. bankruptcy courts are willing to approve negotiated reorganizations which depart from strict adherence to normal priorities of secured creditor claims and unsecured OPEB claims.

The treatment of pension obligations on an insolvency or restructuring varies across Europe. While, as in the U.S., claims are typically unsecured, structural factors often mean that they rank senior to unsecured creditors at a holding company level. The presence of what is often a large creditor with different interests to bondholders can hamper restructuring efforts and recoveries for other classes of creditor. In some jurisdictions, such as the UK, the regulatory authorities have wide-ranging powers to protect pension schemes' interests, which could mitigate an otherwise favorable outcome for bondholders. For Europe, Fitch includes a pension scheme's claims on a company in its bespoke recovery analysis, at an appropriate level of seniority. 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 is used. For details on European pensions, see the Fitch Criteria Report, “European Pensions — Impact on Corporate Recovery Ratings,” published Feb. 12, 2007 and available at www.fitchratings.com.

### 3. Distribution of Value

After the enterprise and liquidation valuation processes are complete, the resulting value is allocated to creditors according to jurisdictional practice for distributing value among claimants according to the seniority of their claims (the “waterfall,” with the surplus recovery over the most senior claim flowing down to the next priority).

In a number of international jurisdictions outside the U.S., a waterfall approach is applied but is subject to country caps, as described in the Fitch Criteria Report, “Country-Specific Treatment of Recovery Ratings — Revised,” dated Aug. 21 2006. The approach places a cap on the RRs reflecting creditor friendliness of certain jurisdictions and enforceability of security in the event of a default. This cap limits upward notching of debt instruments’ secured or enhanced obligations. Instrument ratings for a given jurisdiction are subject to these “soft caps,” according to the country groupings listed in the criteria report, and reflect an a priori assumption that average recoveries are likely to be lower in regimes that are debtor-friendly and/or have weak enforceability, and higher in regimes that are creditor-friendly and/or have strong enforceability. These country caps limit the assignment of the highest recovery ratings for obligations of issuers whose assets and/or cash flow are largely located in less favorable jurisdictions.

The cap also permits the compression of senior and junior obligation ratings where jurisdictional or other structural features indicate this is warranted. Thus a senior secured and senior unsecured obligation may be rated the same and/or be capped at ‘RR4’ in certain jurisdictions.

Application of value is not only affected by relative priority of instruments for a particular issuer. Organization 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 cases where a holding company has significant ownership and control, and Fitch considers the operations across the entities to be integrated, and where the local jurisdiction may consider a consolidation upon bankruptcy (as in the U.S.), a consolidated valuation would be considered and prioritization of claims focused on absolute priority.

Fitch divides the spectrum of recovery percentages from 0% to 100% into six categories or RRs, as shown in the Recovery Ratings Scale table at right, in order to define an ordinal recovery rating scale for the purpose of notching individual issues up, at, or down from the issuer IDR. For example, ‘RR1’ would correspond to recovery of 91%–100% of par value. This would be a typical recovery for a senior secured bank loan with a blanket lien on all assets, and where the secured bank loan was a small portion of the capital structure. However, the fact that the scale is divided at specific percentages should not be interpreted as an assertion that recoveries can be estimated with great precision.

**Recovery Ratings Scale**

| RR | Recovery (%) | Notching from the IDR |
|---|---|---|
| RR1 | 91-100 | +3 (Secured Debt Only) |
| RR2 | 71-90 | +2 (Maximum for Unsecured Debt) |
| RR3 | 51-70 | +1 |
| RR4 | 31-50 | +0 |
| RR5 | 11-30 | -1 |
| RR6 | 0-10 | -2 to -3 |

Source: Fitch Ratings.

The reason for assigning a RR, rather than simply reporting the recovery percentages, is so that the IDR can be combined with the RR to produce an overall risk assessment for a particular security ("notching" from the IDR). This allows investors to compare the risk of individual securities across the spectrum from performing to defaulted issuers.

The Debt Instrument Mappings table below shows the relationship between IDR, RR, and security-specific issue rating for speculative grade issuers with IDRs of 'B+' or lower. For example, subordinated bonds ('RR5') of a 'B–' issuer may be riskier overall (rated 'CCC') than senior secured bonds of a defaulted issuer which expect full recovery ('RR1'), which would be rated 'B–' (an IDR of 'D' and 'RR1' maps to a 'B–' bond rating).

However, it is important to note that 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').

**'B+' and Below IDR/Debt Instrument Mapping**

| | | | | Distressed and Defaulted Bonds | | | | |
|---|---|---|---|---|---|---|---|---|
| **IDR** | **B+** | **B** | **B–** | **CCC** | **CC** | **C** | **RD** | **D** |
| RR1 | BB+ | BB | BB– | B+ | B | B– | B– | B– |
| RR2 | BB | BB– | B+ | B | B– | CCC | CCC | CCC |
| RR3 | BB– | B+ | B | B– | CCC | CC | CC | CC |
| RR4 | B+ | B | B– | CCC | CC | C | C | C |
| RR5 | B | B– | CCC | CC | C | C | C | C |
| RR6 | B–/CCC | CCC/CC | CC/C | C | C | C | C | C |

Source: Fitch Ratings.

## Examples, Sources, and Updates

The appendices beginning on page 13 contain stylized examples of bespoke recovery analysis for a typical low speculative grade credit. Appendix 1A on page 13 shows a going-concern recovery and Appendix 1B on page 14 shows a liquidation recovery. In each example, each of the steps taken to derive the RRs is clearly shown:

- Estimation of value as the higher of going-concern value derived from projected EBITDA and a valuation multiple or liquidation value.
- Subtraction of administrative costs and potential concession payments to get the adjusted value distributable to creditors.
- Allocation of the adjusted value to creditors according to the waterfall relevant for the jurisdiction.
- Allocation of concession payments if appropriate (unallocated concession payments go to more senior creditors).
- Notching of ratings from the IDR.

The summary is intended to be sufficiently transparent at each step so that the investor can insert alternative assumptions to test Fitch's conclusions.

The latest recovery analysis for each issuer with an IDR of 'B+' or lower will be found in the Research section of the Fitch Web site. Recovery ratings are an essential part of the ratings process for low speculative credits, are monitored continuously along with the IDR, and are updated as necessary.

At least annually, and more often if circumstances dictate, each Fitch industry sector team will publish a special report describing the expectations for recoveries in their industry, particularly the transaction multiples and traded asset values they expect would be achieved in reorganizations.

## Caveats and Limitations

### Limitations on Recovery Ratings

- The percentage bands described in the definitions are provided for convenience only. They do not represent an expected recovery in percentage or absolute terms.
- Information flows for companies close to default can become erratic, which may reduce Fitch's visibility on its recovery analysis.
- Enterprise valuations play a key role in the allocation of recoveries across creditor classes. The above methodology assigns these based on cash flow multiples (for a going-concern analysis), and advance rates (for a liquidation analysis). The analysis that determines an RR therefore is driven by heavily subjective forecasts by Fitch analysts of post-restructuring cash flow, achievable exit multiples, and appropriate advance rates, all of which are subject to substantial volatility before and during a restructuring process.
- Legal decisions, which play a strong role in recoveries, can sharply affect recovery expectations.
- Out-of-court settlements are not contemplated in this methodology, other than in broad concession payments for some classes of junior-ranking bonds, in some specific scenarios. In reality, out-of-court settlements will be influenced heavily by creditor composition and local political and economic imperatives, which are subject to volatility.
- Neither IDRs nor RRs address creditor composition, as this is a constantly changing component that is impossible for Fitch to effectively monitor. Creditor composition is nonetheless a major factor in the resolution of many administration, bankruptcy, insolvency, and restructuring scenarios.

## Appendix 1A: Going Concern

### Recovery Analysis — Going Concern Example

($ Mil., As of June 30, 2009)

**Enterprise Value**

| | |
|---|---|
| LTM EBITDA | 200.0 |
| EBITDA Discount (%) | 25.0 |
| Distressed EBITDA | 150.0 |
| Market Multiple | 4.0 |
| Enterprise Value | 600.0 |
| | |
| Interest Expense | 125.0 |
| Maintenance Capital Expenditures | 25.0 |

**Distribution of Value by Priority**

| | |
|---|---|
| Greater of Enterprise or Liquidation Value | 600.0 |
| Less Administrative Claims | 60.0 |
| Adjusted Value | 540.0 |

**Liquidation Value**

| | Balance as of June 30, 2009 | Recovery Rates (%) | Available to Creditor |
|---|---|---|---|
| Cash | 250.0 | 0 | — |
| Accounts Receivable | 200.0 | 80 | 160.0 |
| Inventory | 250.0 | 55 | 137.5 |
| PP&E, Net | 25.0 | 50 | 12.5 |
| **Total** | **725.0** | — | **310.0** |

| | Amount Outstanding and Available R/C | Value Recovered | Recovery Rate (%) | 'RR' Rating | Notching | Credit Ratings |
|---|---|---|---|---|---|---|
| Issuer Default Rating | — | — | — | — | | B– |
| First Priority Secured | 140.8 | 140.8 | 100 | RR1 | 3 | BB– |
| Second Priority Secured | 160.0 | 160.0 | 100 | RR1 | 3 | BB– |
| Senior Unsecured | 1,435.4 | 239.2 | 17 | RR5 | -1 | CCC |
| Senior Subordinated | 103.1 | 0.0 | 0 | RR6 | -2 | CC |
| Preferred Stock | 0.0 | 0.0 | 0 | NR | — | NR |

Note: Included in Senior Unsecured Notes are the following Contingent Liabilities:

| | |
|---|---|
| Surety Bonds (@50% of Outstanding) | 135.0 |
| Guarantees of Joint Venture Debt | 30.0 |

No concession payments are made due to the low recovery on unsecured debt.
Source: Fitch, company accounts.

## Appendix 1B: Liquidation

### Recovery Analysis — Liquidation Example

($ Mil., as of June 30, 2009)

| Enterprise Value | |
|---|---|
| LTM EBITDA | 125.0 |
| EBITDA Discount (%) | 25.0 |
| Distressed EBITDA | 93.8 |
| Market Multiple | 4.0 |
| Enterprise Value | 375.0 |
| | |
| Interest Expense | 100.0 |
| Maintenance Capital Expenditures | 25.0 |

**Liquidation Value**

| | Balance as of June 30, 2009 | Recovery Rates (%) | Available to Creditor |
|---|---|---|---|
| Cash | 250.0 | 0 | — |
| Accounts Receivable | 500.0 | 80 | 400.0 |
| Inventory | 250.0 | 55 | 137.5 |
| PP&E, Net | 25.0 | 50 | 12.5 |
| **Total** | **1,025.0** | — | **550.0** |

| Distribution of Value by Priority | |
|---|---|
| Greater of Enterprise or Liquidation Value | 550.0 |
| Less Administrative Claims | 55.0 |
| Adjusted Value | 495.0 |

| | Amount Outstanding and Available R/C | Value Recovered | Recovery Rate (%) | 'RR' Rating | Notching | Credit Ratings |
|---|---|---|---|---|---|---|
| Issuer Default Rating | — | — | — | — | — | B– |
| First Priority Secured | 140.8 | 140.8 | 100 | RR1 | 3 | BB– |
| Second Priority Secured | 160.0 | 160.0 | 100 | RR1 | 3 | BB– |
| Senior Unsecured | 1,435.4 | 194.2 | 14 | RR5 | -1 | CCC |
| Senior Subordinated | 103.1 | 0.0 | 0 | RR6 | -2 | CC |
| Preferred Stock | 0.0 | 0.0 | 0 | NR | — | NR |

Note: Included in Senior Unsecured Notes are the following Contingent Liabilities:

| | |
|---|---|
| Surety Bonds (@50% of Outstanding) | 135.0 |
| Guarantees of Joint Venture Debt | 30.0 |

No concession payments are made due to the low recovery on unsecured debt.
Source: Fitch, company reports.

## Appendix 2: Summary of Frequently Asked Questions

### IDRs

*The default of which obligations drives the IDR?*

Entities do not always have a unique probability of default on all obligations. For corporate sector entities, specific tranches of very subordinated debt may have been constructed specifically not to provoke an entity-wide default, to insulate more senior obligations from financial stress. Each Fitch analytical group has determined a point that measures the default that drives the group entities' IDRs. The threshold default risk is generally that of the obligations whose nonpayment would best reflect the uncured failure of that entity.

### RRs

*How precise are the percentage bands of recovery?*

Recovery ratings are not intended to provide cardinal estimates. Fitch has provided bands of percentage recoveries as an indicator first of the aggregate average recovery expectation for all obligations, and second of the proportional degree by which the analysis suggests recovery on any particular obligation would exceed or lag this average. The midpoints of the recovery bands are used for illustrative purposes.

Many factors will affect the actual "cents-on-the-dollar" recovery, some of which are outside the scope of the rating process. While a number of major factors that drive recovery — correlation to an industry cycle, and correlation to the general economic and credit cycles — are addressed in Fitch's sector-specific focus, others are not. Chief among these is creditor composition, which Fitch believes is outside the scope of its ratings. 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 cents-on-the-dollar recovery. 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 cardinal recovery rates.

*Is Fitch saying that the holder of an 'RR4' rated bond will only get 31% to 50% of principal back at maturity?*

No. As long as the obligation performs, Fitch expects 100% recovery of principal at maturity expected payments. Recovery ratings relate to recovery only in the event of a default.

*Will RRs also apply to short-term ratings of obligations?*

Short-term program and obligation ratings will continue to 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.

*Will Fitch measure recoveries on an ultimate recovery or present value basis?*

Fitch will generally measure recoveries on an ultimate recovery basis for corporate finance obligations. Where recoveries may occur over a very long period, the agency will nevertheless make adjustments. For corporate finance, this will involve the use of a conservative multiple in the bespoke recovery analysis.

*Why doesn't Fitch's recovery analysis explicitly factor in the length of time taken to realize recovery proceeds for corporate obligations?*

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 remain independent of the jurisdiction, the nature of the asset class, the position of the creditor within the capital structure, and the solidity of the local legal system. As a result, the length of time is generally difficult to predict with accuracy, even at the point of default. Additionally, in the majority of jurisdictions, this length of time, while variable, will generally fall between one and two years.

### *Can secured and unsecured debt ever be rated the same?*

Yes. Although the recovery methodology is designed to give greater weight to differentiating issues by their recovery prospects, there will still be compression of different debt classes in certain circumstances.

As detailed in the Fitch Criteria Report, "Country-Specific Treatment of Recovery Ratings — Revised," published Aug. 21, 2006, in some jurisdictions there is limited actual priority accorded to secured creditors relative to unsecured creditors in the event of enforcement. In such a case, both debt classes may be assigned the same RR and receive the same issue rating due to the country cap.

Issuers may have secured debt tranches with differing terms but sufficiently similar overall recovery prospects to rate the issues at the same level. This same compression may lead to secured and unsecured debt being rated at the same level in a limited number of scenarios. Remember that the focus within speculative grade is the nature and relative position of the debt class, rather than the technical nomenclature, so this could equally affect more senior or more junior obligations.

One example would be a speculative grade company in the very rare case where a recovery analysis showed that recoveries for both secured and unsecured obligations were sufficiently elevated that both merited a high RR. (Since unsecured debt RRs are capped at 'RR2' for issuers rated 'B+' and below, the recovery ratings would only be the same if the country cap was at 'RR2'.) A slightly more common case may occur where a second secured or junior secured instrument and unsecured debt were equally poorly collateralized and both merited an 'RR6'.

### *Is there a direct impact on the RR driven by documentation (e.g. strong negative pledge, put option on change of control)?*

Limited comfort is gained from the presence of standard covenants. For example, documentation that imposes limitations on disposals, or more obviously, which contains a put option upon change of control, is more likely to lead to that instrument being paid out in full upon a leveraged buyout. However, RRs relate to a recovery only in the scenario of a default, rather than in the scenario of any other form of full repayment not involving a default. These clauses will generally not create any explicit preference at default, as all bonds will effectively be "put" to the obligor. Prior to a default, such clauses may modestly reduce the likelihood of default on an individual instrument in the case of a very specific event risk occurring (a credit-negative takeover), as a presumably solvent acquirer may be incentivized to repurchase them, but, further to our exclusion of creditor composition and many forms of event risk from most rating decisions, this would generally not be factored into instrument or issuer ratings.

Likewise, effective "negative pledges" — limitations on the raising of additional secured or prior-ranking debt — may (somewhat) reduce the likelihood of the relative recovery given default of other classes of debt changing over time, but in doing so typically address the potential volatility of the RR, rather than its absolute level at any given time.

Concerning covenants, in the report, "Fitch's Approach to Rating Covenant-Light Loans and CLOs," published Oct. 3, 2007, Fitch explained that "covenant-light" structures could potentially influence the point at which a deteriorating financial performance has to be addressed, thus affecting recoveries. The previous existence of the industry's maintenance covenants allowed lenders, in theory, to influence management or shareholders in order to address a deteriorating financial performance more rapidly, which could conceivably protect the lenders from undue erosion of EV. Conversely, the absence of maintenance covenants allows management, which remains at the direction of shareholders, to continue along a potentially value-eroding strategy for a longer period, or simply not to address the problems as swiftly. Depending on the circumstances of the individual credit, the existence of a covenant-light structure could therefore affect the assumed level of discounted EBITDA and/or the distressed EV/EBITDA multiple assumed for an individual credit. However, it is important to note that the analysis is always approached on a case-by-case basis.

*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 in low speculative grade. 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 IDR Outlook may imply wider notching for weaker-placed instruments in the capital structure.

*Will Fitch cease publication of RRs on the obligation ratings of an issuer whose IDR is upgraded to 'BB–' or above?*

Yes, although recovery given default will still be considered on an internal basis, using the notching outlined in this report. The rating action commentary announcing the upgrade of an IDR above 'B+' will also withdraw the RRs.

*Are RRs maintained for some but not all rated issues made by 'B+' and below issuers?*

No. If Fitch assigns an obligation rating to an issue of an issuer rated 'B+' or below, that issue will carry a recovery rating

*Do RRs have Rating Outlooks? Can they be placed on Rating Watch?*

No. Rating Outlooks apply only 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 issues may be placed on Rating Watch based solely upon a heightened probability of a change in the RR.

## Defaults

*Is it true that a bankrupt issuer could have an issue rated 'B–', 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 nonperforming. This underlines the importance for users of reviewing IDR, RR, and instrument rating as a combined opinion. See the Instrument Mapping table on page 11 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, and will additionally be putting in place central mechanisms for tracking the pricing and eventual recovery performance of defaulted bonds.

*Will RRs be monitored and updated post-default?*

No. Recovery ratings will in most cases be withdrawn within 30 days of the default of an issuer or an instrument.

*Does this criteria apply to debtor-in-possession loans (DIP facilities)?*

No. The criteria Fitch uses for rating DIP facilities is “Rating Criteria for U.S. Debtor-in-Possession Loan Facilities,” published Sept. 7, 2006.

## Country Overlay

*Are the RR scales applicable in all countries?*

Yes, Fitch has applied the RR approach in all countries where it maintains international foreign currency or local currency ratings.

In some jurisdictions, creditors may face institutional obstacles to achieving recoveries in line with the global average. Perfection or enforcement of security interests may be weak, little differentiation may be made between senior and junior creditors, or the resolution process may be egregiously lengthy or arbitrary. In such cases, RRs may be subject to a country cap, even where bespoke numerical analysis suggests a stronger recovery for that issue.

For example, jurisdictions that Fitch has reviewed and found to be “debtor-friendly” may be subject to a cap for rated obligations at ‘RR2’. Lower caps also apply in certain emerging markets. Details can be found in the Fitch Criteria Report, “Country-Specific Treatment of Recovery Ratings — Revised,” published Aug. 21, 2006.

*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” report referenced above.