Moody’s Investors Service

MIR® (Market Implied Ratings)

Moody’s MIR® enables quick and easy comparisons between Moody’s ratings and ratings implied from the bond, equity, and credit default swap markets, or from accounting ratios. These comparisons help credit professionals anticipate ratings changes, identify default candidates, and detect relative value trading opportunities.

Market Implied Ratings are available on both an issuer-level and security-level basis, and can be accessed from both Moodys.com and Moody’s Ratings Interactive. Or download the MIR® database to generate custom queries, map MIR® data to other Moody’s products, or link MIR® data to internal systems using CUSIP/ISIN.

The complete MIR® database encompasses:

All Rating Categories for:
- Corporates
- Banks and non-bank financial institutions
- Sovereigns

All Major Geographies
- Americas
- Europe, Middle East, and Africa
- Asia
- Emerging Markets (Latin America and Eastern Europe)

Years of Historical Data
- Monthly data since January 1999
- Daily data since August 1, 2003

Use Moody’s MIR® data and analytics platform to identify differences in opinion about a company’s credit risk and relative value.

Make credit and investment decisions with the advantage of:
- A platform that incorporates signals from the credit and equity markets, financial statement analysis, and Moody’s ratings – all on the same scale
- A dedicated analytic staff to research new applications for MIR® and help you integrate MIR® data into your investment and risk management processes
- Comprehensive data on approximately 4,000 Moody’s rated firms and 11,000 securities globally
- Convenient access to the MIR® database and research, including automatic updates of underlying pricing
- A cost-effective alternative to in-house solutions
Pre-Built Analytic Tools

Search historic MIR® data, conduct scenario analysis, and monitor your portfolio:
- Search for rich/cheap investment opportunities
- Screen for potential ratings changes
- Monitor credit limits
- Conduct scenario analysis
- Perform peer group analysis of specific issuers
- Manage counter-party risk

MDP Scenario Tool

Create implied-ratings for unrated non-financial issuers and stress test current MDP-Implied ratings using Moody’s Default Predictor (MDP) model:
- Model designed to predict default based on Moody’s definition
- Ratio inputs taken directly from issuers’ quarterly or annual statements
- No market information used in calculations — reflection of purely fundamental financial credit factors
- Only for non-financial companies
Moody’s Credit Strategy Group

- Confirm your analysis with our team of analysts:
  - All MIR® clients have access to our analysts via one-on-one meetings, briefings, weekly email updates, and monthly newsletters.

Current publications:
- Newsflash - timely commentary about names in the news
- Outlook - a monthly publication that uses MIR® to observe 10 key sectors, spotlighting one
- CDS Indices - a monthly publication that applies the MIR® analytical framework to the CDX and iTraxx families of CDS indices
- Regional Markets - a monthly publication that applies the MIR® analytical framework to emerging markets
- ViewPoints - a periodic publication that features in-depth discussion of recent MIR® research

Set customized e-mail alerts to notify you of major portfolio movements
Choose your own notification criteria to alert you whenever an entity’s Moody’s and market implied ratings differ by one or more notches, or when rating differentials shift dramatically from one period to the next.
How Credit Professionals Use MIR®

Application 1: Minimizing Default Loss

<table>
<thead>
<tr>
<th>Rating</th>
<th>Default Rate (All Issuers)</th>
<th>Default Rates Conditioned on Ratings Gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baa1</td>
<td>0.17%</td>
<td>0.13% 0.27% 0.27% 0.17% 0.69% 0.52% 0.89%</td>
</tr>
<tr>
<td>Baa2</td>
<td>0.12%</td>
<td>0.00% 0.00% 0.34% 0.08% 0.00% 0.31% 0.80%</td>
</tr>
<tr>
<td>Baa3</td>
<td>0.41%</td>
<td>0.00% 0.09% 0.05% 0.14% 0.75% 0.72% 1.55%</td>
</tr>
<tr>
<td>Ba1</td>
<td>0.66%</td>
<td>0.00% 0.00% 0.11% 0.22% 0.11% 0.98% 1.26%</td>
</tr>
<tr>
<td>Ba2</td>
<td>0.62%</td>
<td>0.00% 0.00% 0.24% 0.48% 0.65% 0.87% 4.00%</td>
</tr>
<tr>
<td>Ba3</td>
<td>2.23%</td>
<td>0.00% 0.00% 0.09% 0.90% 1.36% 1.00% 3.44%</td>
</tr>
<tr>
<td>B1</td>
<td>3.03%</td>
<td>0.52% 0.20% 0.28% 0.73% 2.76% 8.68% 10.92%</td>
</tr>
<tr>
<td>B2</td>
<td>5.93%</td>
<td>0.20% 0.59% 0.99% 3.61% 7.86% 17.42% 31.37%</td>
</tr>
<tr>
<td>B3</td>
<td>10.77%</td>
<td>1.21% 2.27% 1.71% 6.04% 13.66% 28.55% 43.04%</td>
</tr>
<tr>
<td>Caa1-C</td>
<td>22.24%</td>
<td>7.99% 14.66% 15.65% 20.95% 30.89% 41.43% 37.50%</td>
</tr>
</tbody>
</table>

Default rates are significantly higher for issuers with negative ratings gaps.

Application 2: Screening for Potential Ratings Changes

<table>
<thead>
<tr>
<th>Ratings After 1 Year</th>
<th>All Baa3 Rated Issuers</th>
<th>Baa3 Rated Issuers - Differentiated by Ratings Gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up</td>
<td>12%</td>
<td>38% 35% 25% 20% 15% 8% 7% 6% 6% 6% 9%</td>
</tr>
<tr>
<td>Unchanged</td>
<td>70%</td>
<td>57% 60% 72% 75% 77% 81% 77% 71% 65% 58% 45%</td>
</tr>
<tr>
<td>Down</td>
<td>12%</td>
<td>3% 3% 3% 4% 7% 10% 15% 21% 26% 34% 44%</td>
</tr>
<tr>
<td>WD/Defaulted</td>
<td>6%</td>
<td>2% 2% 1% 1% 1% 1% 2% 2% 4% 3% 3%</td>
</tr>
</tbody>
</table>

Our research shows that over a one year horizon, issuers with a positive ratings gap have historically been upgraded more frequently than issuers with negative ratings gaps. Similarly, issuers with negative ratings gaps were downgraded by Moody's more frequently than issuers with positive ratings gaps.

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