

#### **DATA REPORT**

3 June 2021

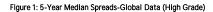
#### **CLIENT SERVICES**

Americas 1-212-553-1653 Asia Pacific 852-3551-3077 Japan 81-3-5408-4100 EMEA 44-20-7772-5454 Cross-Sector

# Market Data Highlights

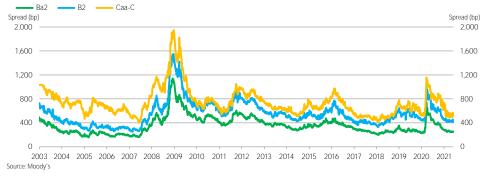
The latest market data from Weekly Market Outlook. Click <u>here</u> for access to the full WMO.

#### **SPREADS**





#### Figure 2: 5-Year Median Spreads-Global Data (High Yield)



Moody's Analytics markets and distributes all Moody's Capital Markets Research, Inc. materials. Moody's Capital Markets Research, Inc. is a subsidiary of Moody's Corporation. Moody's Analytics does not provide investment advisory services or products. For further detail, please see the last page.

## **CDS MOVERS**

Figure 3. CDS Movers - US (May 26, 2021 – June 2, 2021)

| CDS Implied Rating Rises              | CDS Impl | CDS Implied Ratings |                |  |
|---------------------------------------|----------|---------------------|----------------|--|
| Issuer                                | Jun. 2   | May. 26             | Senior Ratings |  |
| AT&T Inc.                             | Baa2     | Baa3                | Baa2           |  |
| McDonald's Corporation                | Aa3      | A1                  | Baa1           |  |
| CVS Health Corporation                | A3       | Baa1                | Baa2           |  |
| Bristol-Myers Squibb Company          | Aa3      | A1                  | A2             |  |
| Occidental Petroleum Corporation      | B1       | B2                  | Ba2            |  |
| Kinder Morgan, Inc.                   | Baa2     | Baa3                | Baa2           |  |
| Tyson Foods, Inc.                     | A3       | Baa1                | Baa2           |  |
| AvalonBay Communities, Inc.           | A3       | Baa1                | A3             |  |
| Apache Corporation                    | Ba3      | B1                  | Ba1            |  |
| American Electric Power Company, Inc. | A1       | A2                  | Baa2           |  |

| CDS Implied Rating Declines        | CDS Impl | CDS Implied Ratings |                |  |
|------------------------------------|----------|---------------------|----------------|--|
| Issuer                             | Jun. 2   | May. 26             | Senior Ratings |  |
| Procter & Gamble Company (The)     | A1       | Aa3                 | Aa3            |  |
| Lumen Technologies, Inc.           | B2       | B1                  | B2             |  |
| Southern Company (The)             | A3       | A2                  | Baa2           |  |
| Univision Communications Inc.      | Caa1     | В3                  | Caa2           |  |
| Welltower Inc.                     | Baa2     | Baa1                | Baa1           |  |
| Archer-Daniels-Midland Company     | A3       | A2                  | A2             |  |
| Dish DBS Corporation               | Caa1     | В3                  | B2             |  |
| Illinois Tool Works Inc.           | A1       | Aa3                 | A2             |  |
| Eversource Energy                  | Baa1     | A3                  | Baa1           |  |
| Ventas Realty, Limited Partnership | Baa3     | Baa2                | Baa1           |  |

| CDS Spread Increases               | _              |        | CDS Spreads |             |
|------------------------------------|----------------|--------|-------------|-------------|
| Issuer                             | Senior Ratings | Jun. 2 | May. 26     | Spread Diff |
| Staples, Inc.                      | Caa1           | 764    | 741         | 23          |
| Talen Energy Supply, LLC           | B3             | 1,105  | 1,093       | 12          |
| Realogy Group LLC                  | B3             | 301    | 291         | 10          |
| United States Cellular Corporation | Ba1            | 152    | 143         | 10          |
| Pactiv Corporation                 | Caa1           | 386    | 380         | 7           |
| Lumen Technologies, Inc.           | B2             | 291    | 287         | 5           |
| Southern Company (The)             | Baa2           | 46     | 41          | 5           |
| Illinois Tool Works Inc.           | A2             | 33     | 28          | 5           |
| Embarq Corporation                 | Ba2            | 305    | 301         | 5           |
| Ashland LLC                        | Ba1            | 105    | 100         | 4           |

| CDS Spread Decreases             |                | CDS Spreads |         |             |
|----------------------------------|----------------|-------------|---------|-------------|
| Issuer                           | Senior Ratings | Jun. 2      | May. 26 | Spread Diff |
| Nabors Industries, Inc.          | Caa2           | 865         | 1,073   | -208        |
| American Airlines Group Inc.     | Caa1           | 628         | 679     | -51         |
| Occidental Petroleum Corporation | Ba2            | 245         | 294     | -50         |
| JetBlue Airways Corp.            | Ba3            | 359         | 407     | -48         |
| Apache Corporation               | Ba1            | 210         | 251     | -41         |
| Royal Caribbean Cruises Ltd.     | B2             | 318         | 351     | -33         |
| Carnival Corporation             | B2             | 295         | 327     | -32         |
| Pitney Bowes Inc.                | B1             | 430         | 460     | -29         |
| K. Hovnanian Enterprises, Inc.   | Caa3           | 623         | 652     | -29         |
| Hasbro, Inc.                     | Baa3           | 109         | 136     | -27         |

Source: Moody's, CMA

Figure 4. CDS Movers - Europe (May 26, 2021 – June 2, 2021)

| CDS Implied Rating Rises | CDS Impl | CDS Implied Ratings |                |  |
|--------------------------|----------|---------------------|----------------|--|
| Issuer                   | Jun. 2   | May. 26             | Senior Ratings |  |
| Barclays Bank PLC        | A3       | Baa1                | A1             |  |
| Barclays PLC             | Baa1     | Baa2                | Baa2           |  |
| HSBC Holdings plc        | A2       | A3                  | A2             |  |
| Credit Agricole S.A.     | Aa3      | A1                  | Aa3            |  |
| ING Bank N.V.            | Aa2      | Aa3                 | Aa3            |  |
| Natixis                  | A1       | A2                  | A1             |  |
| Commerzbank AG           | A2       | A3                  | A1             |  |
| Electricite de France    | A3       | Baa1                | A3             |  |
| Orange                   | A1       | A2                  | Baa1           |  |
| ENGIE SA                 | A1       | A2                  | Baa1           |  |

| CDS Implied Rating Declines      | CDS Impl | CDS Implied Ratings |                |  |
|----------------------------------|----------|---------------------|----------------|--|
| Issuer                           | Jun. 2   | May. 26             | Senior Ratings |  |
| Raiffeisen Bank International AG | A2       | A1                  | А3             |  |
| ASML Holding N.V.                | Baa2     | Baa1                | A3             |  |
| Eksportfinans ASA                | В3       | B2                  | Baa1           |  |
| CMA CGM S.A.                     | Caa1     | В3                  | В3             |  |
| Boparan Finance plc              | С        | Ca                  | Caa1           |  |
| Ineos Group Holdings S.A.        | B1       | Ba3                 | B2             |  |
| Avon Products, Inc.              | B1       | Ba3                 | Ba3            |  |
| Italy, Government of             | Baa3     | Baa3                | Baa3           |  |
| France, Government of            | Aa2      | Aa2                 | Aa2            |  |
| United Kingdom, Government of    | Aaa      | Aaa                 | Aa3            |  |

| CDS Spread Increases             |                | CDS Spreads |         |             |  |
|----------------------------------|----------------|-------------|---------|-------------|--|
| Issuer                           | Senior Ratings | Jun. 2      | May. 26 | Spread Diff |  |
| Vedanta Resources Limited        | Caa1           | 788         | 724     | 63          |  |
| Piraeus Financial Holdings S.A.  | Caa3           | 530         | 521     | 9           |  |
| NXP B.V.                         | Baa3           | 60          | 57      | 3           |  |
| ASML Holding N.V.                | A3             | 56          | 53      | 3           |  |
| Norddeutsche Landesbank GZ       | A3             | 73          | 71      | 2           |  |
| Bayerische Landesbank            | Aa3            | 31          | 31      | 1           |  |
| Dexia Credit Local               | Baa3           | 65          | 64      | 1           |  |
| Telecom Italia S.p.A.            | Ba2            | 164         | 162     | 1           |  |
| Raiffeisen Bank International AG | A3             | 37          | 36      | 1           |  |
| Orsted A/S                       | Baa1           | 34          | 33      | 1           |  |

| CDS Spread Decreases                  |                |        | CDS Spreads |             |
|---------------------------------------|----------------|--------|-------------|-------------|
| Issuer                                | Senior Ratings | Jun. 2 | May. 26     | Spread Diff |
| Novafives S.A.S.                      | Caa2           | 738    | 819         | -81         |
| TUI AG                                | Caa1           | 675    | 751         | -76         |
| Iceland Bondco plc                    | Caa2           | 415    | 440         | -25         |
| Atlantia S.p.A.                       | Ba3            | 120    | 144         | -24         |
| Deutsche Lufthansa Aktiengesellschaft | Ba2            | 239    | 263         | -24         |
| Rolls-Royce plc                       | Ba3            | 238    | 259         | -20         |
| Stena AB                              | Caa1           | 514    | 533         | -19         |
| Jaguar Land Rover Automotive Plc      | B1             | 333    | 351         | -18         |
| Leonardo S.p.A.                       | Ba1            | 150    | 164         | -14         |
| CMA CGM S.A.                          | B3             | 355    | 369         | -14         |

Source: Moody's, CMA

#### **ISSUANCE**

Figure 5. Market Cumulative Issuance - Corporate & Financial Institutions: USD Denominated

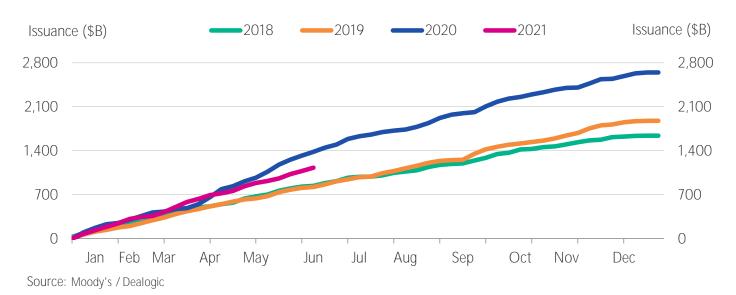


Figure 6. Market Cumulative Issuance - Corporate & Financial Institutions: Euro Denominated

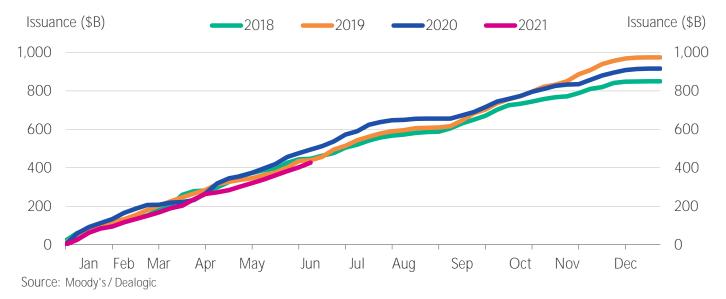


Figure 7. Issuance: Corporate & Financial Institutions

|              |                  | USD Denominated |               |  |  |  |  |
|--------------|------------------|-----------------|---------------|--|--|--|--|
|              | Investment-Grade | High-Yield      | Total*        |  |  |  |  |
|              | Amount<br>\$B    | Amount<br>\$B   | Amount<br>\$B |  |  |  |  |
| Weekly       | 38.660           | 13.130          | 53.920        |  |  |  |  |
| Year-to-Date | 774.818          | 328.469         | 1,130.203     |  |  |  |  |

|              |                  | Euro Denominated |               |  |  |  |
|--------------|------------------|------------------|---------------|--|--|--|
|              | Investment-Grade | High-Yield       | Total*        |  |  |  |
|              | Amount<br>\$B    | Amount<br>\$B    | Amount<br>\$B |  |  |  |
| Weekly       | 19.443           | 3.605            | 23.734        |  |  |  |
| Year-to-Date | 339.327          | 75.714           | 426.359       |  |  |  |

<sup>\*</sup> Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

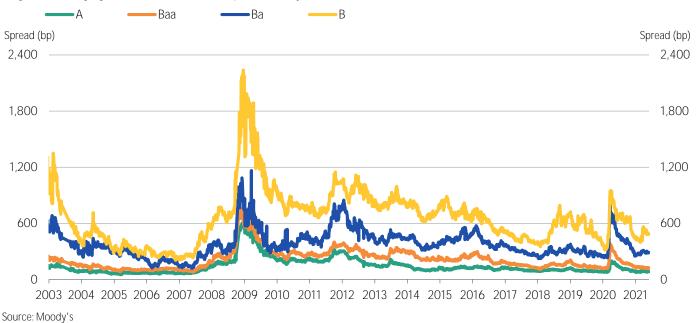
## **EMERGING MARKET CREDIT SPREADS**

Figure 8. Emerging Market Median OAS

| Emerging Market           |     | Median | Spreads |     |     | Bond ( | Counts |    |
|---------------------------|-----|--------|---------|-----|-----|--------|--------|----|
| Duration                  | Α   | Baa    | Ba      | В   | Α   | Baa    | Ba     | В  |
| >=1 and <3                | 58  | 106    | 243     | 379 | 62  | 143    | 45     | 40 |
| >=3 and <5                | 82  | 124    | 289     | 487 | 75  | 116    | 57     | 56 |
| >=5 and <7                | 95  | 155    | 289     | 524 | 42  | 92     | 31     | 23 |
| >=7                       | 110 | 203    | 362     | 562 | 135 | 224    | 57     | 36 |
| Emerging Market Sovereign |     | Median | Spreads |     |     | Bond ( | Counts |    |
| Duration                  | Α   | Baa    | Ba      | В   | Α   | Baa    | Ba     | В  |
| >=1 and <3                | 40  | 52     | 129     | 363 | 17  | 36     | 11     | 19 |
| >=3 and <5                | 51  | 75     | 185     | 464 | 17  | 33     | 23     | 31 |
| >=5 and <7                | 71  | 116    | 266     | 530 | 16  | 34     | 21     | 22 |
| >=7                       | 76  | 192    | 310     | 561 | 87  | 116    | 45     | 35 |
| Emerging Market Corporate |     | Median | Spreads |     |     | Bond ( | Counts |    |
| Duration                  | Α   | Baa    | Ba      | В   | Α   | Baa    | Ba     | В  |
| >=1 and <3                | 64  | 121    | 282     | 414 | 45  | 107    | 34     | 21 |
| >=3 and <5                | 91  | 145    | 325     | 543 | 58  | 83     | 34     | 25 |
| >=5 and <7                | 111 | 194    | 381     | 278 | 26  | 58     | 10     | 1  |
| >=7                       | 143 | 221    | 520     | 613 | 48  | 108    | 12     | 1  |
|                           |     |        |         |     |     |        |        |    |

Source: Moody's

Figure 9: Emerging Markets Median Credit Spreads (3-5 year duration)



#### **MEDIAN CREDIT SPREADS**

Figure 10. Global Financial Institutions Median Credit Spreads

|            |     |     | N   | ledian Spread | ds  |     |     |
|------------|-----|-----|-----|---------------|-----|-----|-----|
| Duration   | Aaa | Aa  | Α   | Baa           | Ba  | В   | Caa |
| >=1 and <3 | 7   | 23  | 39  | 71            | 208 | 442 | 638 |
| >=3 and <5 | 9   | 31  | 55  | 101           | 264 | 567 | 569 |
| >=5 and <7 | 17  | 32  | 68  | 128           | 299 | 369 | 469 |
| >=7        | 20  | 37  | 98  | 148           | 237 | 441 | 342 |
|            |     |     |     | Debt Counts   |     |     |     |
| Duration   | Aaa | Aa  | Α   | Baa           | Ba  | В   | Caa |
| >=1 and <3 | 227 | 274 | 428 | 270           | 71  | 18  | 4   |
| >=3 and <5 | 216 | 207 | 369 | 278           | 64  | 20  | 4   |
| >=5 and <7 | 99  | 123 | 196 | 127           | 15  | 6   | 1   |
| >=7        | 126 | 311 | 398 | 208           | 16  | 1   | 2   |
|            |     |     |     | Issuer Count: | S   |     |     |
| Duration   | Aaa | Aa  | Α   | Baa           | Ba  | В   | Caa |
| >=1 and <3 | 26  | 83  | 165 | 154           | 45  | 16  | 4   |
| >=3 and <5 | 29  | 77  | 159 | 159           | 42  | 18  | 4   |
| >=5 and <7 | 26  | 58  | 93  | 79            | 12  | 6   | 1   |
| >=7        | 31  | 89  | 153 | 109           | 12  | 1   | 1   |
|            |     |     |     |               |     |     |     |

Source: Moody's

Figure 11. Global Corporate Median Credit Spreads

|               |     |     | N    | ledian Spread | ds  |     |     |
|---------------|-----|-----|------|---------------|-----|-----|-----|
| Duration      | Aaa | Aa  | Α    | Baa           | Ba  | В   | Caa |
| >=1 and <3    | 10  | 24  | 34   | 54            | 245 | 417 | 571 |
| >=3 and <5    | 17  | 35  | 45   | 73            | 282 | 417 | 557 |
| >=5 and <7    | 22  | 45  | 64   | 99            | 293 | 368 | 573 |
| >=7           | 55  | 98  | 112  | 148           | 298 | 386 | 537 |
|               |     |     |      | Debt Counts   |     |     |     |
| Duration      | Aaa | Aa  | Α    | Baa           | Ba  | В   | Caa |
| >=1 and <3    | 34  | 129 | 480  | 827           | 285 | 208 | 46  |
| >=3 and <5    | 39  | 129 | 500  | 986           | 296 | 237 | 74  |
| >=5 and <7    | 21  | 87  | 381  | 777           | 203 | 121 | 28  |
| >=7           | 58  | 281 | 1428 | 1993          | 219 | 54  | 6   |
|               |     |     |      | Issuer Counts | 8   |     |     |
| Duration      | Aaa | Aa  | Α    | Baa           | Ba  | В   | Caa |
| >=1 and <3    | 10  | 55  | 249  | 504           | 213 | 167 | 41  |
| >=3 and <5    | 9   | 55  | 270  | 559           | 193 | 194 | 67  |
| >=5 and <7    | 10  | 40  | 222  | 470           | 146 | 105 | 25  |
| >=7           | 8   | 54  | 349  | 613           | 105 | 33  | 5   |
| ırce: Moody's |     |     |      |               |     |     |     |

#### **MEDIAN 5-YEAR CDS SPREADS**

Figure 12. Global Median CDS Spreads By Rating Category

## Global Median Spreads by Fine Rating Category

|  | <b>Aa1</b><br>17 |  |  |    | _ |
|--|------------------|--|--|----|---|
|  | Baa3             |  |  | B3 | _ |

## Global Median Spreads by Broad Rating Category

| Aaa | Aa | Α  | Baa | Ba  | В   | Caa |
|-----|----|----|-----|-----|-----|-----|
| 24  | 38 | 41 | 56  | 167 | 297 | 415 |

#### Global Issuer Counts by Broad Rating Category

| Aaa | Aa | Α   | Baa | Ba  | В  | Caa |
|-----|----|-----|-----|-----|----|-----|
| 9   | 53 | 166 | 345 | 100 | 45 | 31  |

Source: Moody's, CMA

Figure 13. Median CDS Spreads By Region

# Median CDS Spreads

| Region                  | Aaa | Aa | Α  | Baa | Ba  | В   | Caa |
|-------------------------|-----|----|----|-----|-----|-----|-----|
| North America           | 24  | 37 | 40 | 61  | 167 | 287 | 386 |
| Europe                  | 8   | 28 | 37 | 53  | 128 | 234 | 522 |
| Asia Pacific (ex.Japan) | 16  | 23 | 41 | 66  | 106 | 318 | -   |
| Japan                   | -   | -  | 23 | 28  | 49  | 65  | -   |

#### **Issuer Counts**

| Region                  | Aaa | Aa | Α  | Baa | Ba | В  | Caa |
|-------------------------|-----|----|----|-----|----|----|-----|
| North America           | 3   | 20 | 83 | 209 | 61 | 32 | 15  |
| Europe                  | 6   | 33 | 79 | 124 | 28 | 10 | 14  |
| Asia Pacific (ex.Japan) | 3   | 18 | 32 | 35  | 5  | 2  | -   |
| Japan                   | -   | -  | 32 | 15  | 3  | 1  | -   |

Source: Moody's, CMA

Figure 14. Global Median CDS Spreads by Sector

# Median CDS Spreads

| Sector     | Aaa | Aa | Α  | Baa | Ba  | В   | Caa |
|------------|-----|----|----|-----|-----|-----|-----|
| Corporates | 24  | 33 | 35 | 57  | 153 | 253 | 554 |
| Financials | 9   | 28 | 40 | 59  | 152 | 360 | 286 |
| Sovereigns | 9   | 11 | 40 | 52  | 101 | 360 | -   |
| Banks      | -   | 29 | 42 | 62  | 179 | -   | 191 |

## **Issuer Counts**

| Sector     | Aaa | Aa | Α   | Baa | Ba | В  | Caa |
|------------|-----|----|-----|-----|----|----|-----|
| Corporates | 4   | 24 | 145 | 329 | 89 | 47 | 25  |
| Financials | 8   | 47 | 85  | 66  | 19 | 1  | 6   |
| Banks      | -   | 35 | 54  | 28  | 11 | -  | 5   |
| Sovereigns | 8   | 6  | 4   | 6   | 3  | 1  | -   |

Source: Moody's, CMA

Figure 15. Global Financial Institutions Median CDS Spreads by Region

# Median CDS Spreads

| Region                  | Aaa | Aa | Α  | Baa | Ba  | В   | Caa |
|-------------------------|-----|----|----|-----|-----|-----|-----|
| North America           | 9   | 44 | 46 | 64  | 167 | -   | 518 |
| Europe                  | 7   | 28 | 42 | 59  | 118 | -   | 191 |
| Asia Pacific (ex.Japan) | 15  | 22 | 44 | 66  | 101 | 360 | -   |
| Japan                   | -   | -  | 26 | 43  | -   | -   | -   |

#### **Issuer Counts**

| Region                  | Aaa | Aa | Α  | Baa | Ba | В | Caa |
|-------------------------|-----|----|----|-----|----|---|-----|
| North America           | 1   | 8  | 22 | 24  | 7  | - | 1   |
| Europe                  | 5   | 26 | 38 | 26  | 6  | - | 5   |
| Asia Pacific (ex.Japan) | 2   | 13 | 14 | 12  | 3  | 1 | -   |
| Japan                   | -   | -  | 11 | 2   | -  | - | -   |

Source: Moody's, CMA

Figure 16. Global Corporates Median CDS Spreads by Region

# Median CDS Spreads

| Region                  | Aaa | Aa | Α  | Baa | Ba  | В   | Caa |
|-------------------------|-----|----|----|-----|-----|-----|-----|
| North America           | 24  | 35 | 38 | 60  | 163 | 287 | 374 |
| Europe                  | 9   | 23 | 34 | 49  | 128 | 234 | 606 |
| Asia Pacific (ex.Japan) | 32  | 23 | 41 | 66  | 133 | 276 | -   |
| Japan                   | -   | -  | 22 | 28  | 49  | 65  | -   |

## **Issuer Counts**

| Region                  | Aaa | Aa | Α  | Baa | Ba | В  | Caa |
|-------------------------|-----|----|----|-----|----|----|-----|
| North America           | 2   | 12 | 61 | 185 | 54 | 32 | 14  |
| Europe                  | 1   | 7  | 41 | 98  | 22 | 10 | 9   |
| Asia Pacific (ex.Japan) | 1   | 5  | 18 | 23  | 2  | 1  | -   |
| Japan                   | -   | -  | 21 | 13  | 3  | 1  | -   |

Source: Moody's, CMA

© 2021 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING. OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING. ASSESSMENT. OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <a href="https://www.moodys.com">www.moodys.com</a> under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER

1288512

#### **CLIENT SERVICES**

Americas 1-212-553-1653
Asia Pacific 852-3551-3077
Japan 81-3-5408-4100
EMEA 44-20-7772-5454

