

# Rating Performance of Project Finance – Summary of 2016 and Aggregated Special Report I March 2017

From time to time Midroog publishes special reports related to specific sectors or issuers. The special reports are not rating reports and/or rating methodologies from the aspect of their content or intent and do not intend to change assessment methods described in the methodological reports. In general, special reports are intended to: 1) publish Midroog views on certain issuers specific concerns and developments; 2) to describe macroeconomic or sector trends and to indicate the direction of effect on the ratings (for example: a change in demand in a certain sector, legislative or regulatory changes); 3) to explain a certain rating process in order to help investors understand how the rating was assigned, including how certain trends were taken into account in a rating.

**Contact:**

Avigail Konikov-Livne, Ph.D., Chief Credit Officer  
[avigail.k@midroog.co.il](mailto:avigail.k@midroog.co.il)

---

---

## Rating Performance of Project Finance –

### Summary of 2016 and Aggregated

#### Preface

The objective of this report is to present Midroog's rating performance in 2016 and cumulatively since the beginning of its activity as a rating company. The report includes the rate of transitions (transition matrixes) at the annual basis and cumulative on an annual basis, the change in the distribution of ratings and the rating outlook.

Midroog collects and publishes the rating changes and the accuracy measure in order to create transparency with regard to rating performance. It should be noted that in the years examined there were no default events in project finance, so that no calculation of the accuracy measure is presented.

In this report, project finance debt (hereinafter: "**credit**") is defined as the number of active obligations of the same seniority level<sup>1</sup> that Midroog was rating at the end of the calendar year. The rated credits include both public and private ratings. Debt ratings for infrastructure companies (other than infrastructure projects) are not included in the statistics presented in this report<sup>2</sup>. The rating taken into account for the calculation of ratings distribution is the project rating (in contrast to the project rating for the operating phase only).

#### Ratings Distribution

As of the end of 2016, Midroog rated 49 project finance credits. The median rating of these credits is A1.il.

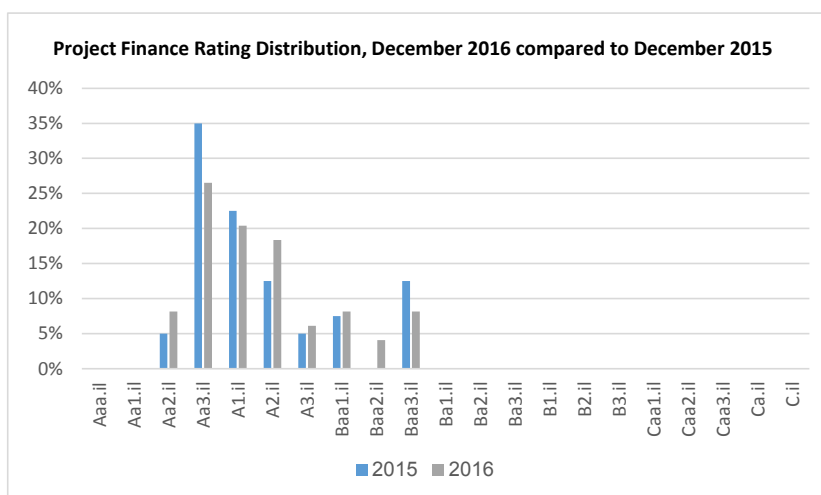
The following chart shows the distribution of project finance ratings for the end of 2016 compared to the end of 2015.

---

<sup>1</sup> Regarding projects for which both senior and subordinate debt was rated, each type of debt is counted separately. If there are multiple series/loans with the same level of seniority, these debts/loans are counted together.

<sup>2</sup> See the Ratings Performance Report, Corporates and Financial Institutions on the Midroog website.

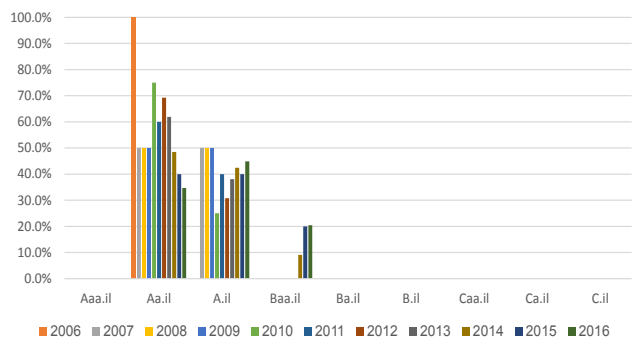
The following chart shows the distribution of project finance ratings for the end of 2016 compared to the end of 2015:



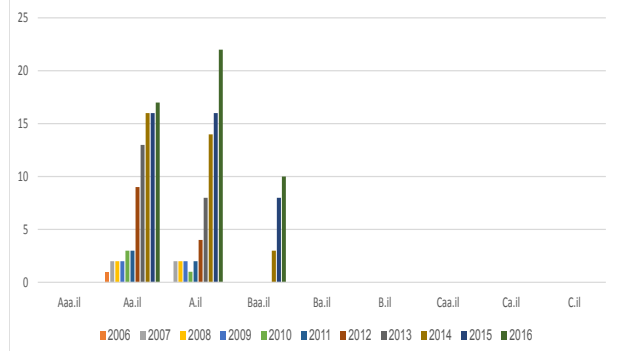
The proportion of credits rated Aa3.il in the project finance fell from about 35% at the end of 2015 to about 27% at the end of 2016, mainly due to the rating of new credits with a lower average rating and an upgrade of one rating to Aa2.il. The increase in the proportion of credits rated A2.il is mostly the result of new ratings. The proportion of Baa3.il ratings decreased due to a single rating upgrade to Baa2.il.

The charts below describe the distribution of ratings divided into broad rating categories and the number of rated credits. The changes in rating distribution are mainly derived from the rating of new projects and not as a result of rating changes. Details of the rating transitions between the categories are presented in Midroog's transition matrix later on in this report.

**Distribution of Ratings in the Project Finance. 2006 – 2016, by Rating Groups**



**Number of Ratings in the Project Finance, 2006 – 2016, by Rating Groups**

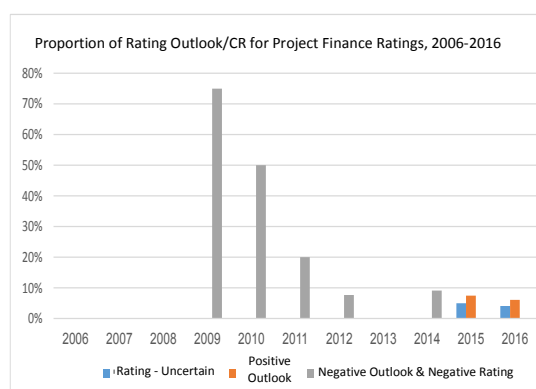


## Distribution of the Rating Outlook and Credit Reviews

Rating outlook is Midroog's assessment of the expected direction of the rating in the medium term. The rating outlook is divided into four categories: positive, stable, negative or developing. Stable outlook reflects low expectation of a rating change in the medium term. A positive, negative or developing outlook reflects higher expectation of change in the medium term. When a rating is placed under Credit Review (**CR**), it means that a possibility of changing the rating in the short term is evaluated. The rating may be placed on review for upgrade, downgrade and in some cases direction uncertain. The conclusion of the rating review may result in rating upgrade, rating downgrade, or confirmation of the rating. Ratings under CR are sometimes referred to as being on a "watch list".

The proportion of the credits places in Credit Review with negative or uncertain implications, as well as the proportion of credits with a positive outlook or a negative outlook in 2006-2016 is shown below. The data are for the end of each of the years.

The chart on the right shows that no project finance credits were placed in Credit Review for between 2006 and 2008. In 2009, a relatively high rate of credits were placed on CR. It should be noted that the total project finance credits for this year were relatively low, so that a small number of credits placed in CR (3 ratings) reflects a relatively high rate of total ratings. As of the end of 2015, three ratings were in positive outlook and two other credits were in CR with direction uncertain. All ratings with direction uncertain that remained unchanged at the end of 2016. Ratings of two credits for which a positive outlook were determined as of the end of 2015; as of the end of 2016, were upgraded and one remained unchanged.



---

## Transition Tables

Midroog collates information on rating changes between the years 2004-2016, based on a database that has been accumulated gradually during its years of operations. Each issuer is included in the database according to the number of years it was rated. For example, an issuer rated from 2004 to 2016 is counted in the database 12 times. The issuer's last rating for each calendar year is included in the database. If the rating has been changed several times over a single year, only the last observation at the end of the calendar year will be added to the database. There are project finance observations of since 2006.

The total number of observations for all the rating groups in project finance, up to the relevant cross section points (for the years 2006-2015) is about 129. Adding rating withdrawals and ratings at the end of 2016, the total number of observations used to calculate the data (including rating withdrawals) for the years 2006-2016 was 194.

To illustrate, the meaning of the data in the cumulative transitions table is that about 87% of the credits rated A1.il remained unchanged at the end of the following year, the rating of about 13% was withdrawn. The formula for calculating the rate of transitions is presented in Appendix 1 of this report. The table shows that project finance ratings show stability for the years examined. In this context it should be noted that the number of ratings in this area has grown in recent years; the table is therefore based on a relatively small number of observations and years of rating.

### Withdrawn Column (WR)

The WR column represents issuers for which monitoring terminated after their rating. Principal circumstances for termination are: complete repayment of all the rated debt, debt arrangement/bankruptcy of the issuer, insufficiency/deficiency of information that does not allow effective evaluation of the credit worthiness, or a request from the issuer to withdraw the rating of its obligations. It should be noted that the rating sample at the low end of the rating scale is small and primarily reflects the rating transitions of companies in default and have not yet completed the debt settlement, liquidation, etc., so that high rate of rating withdrawals results from the withdraw of rating due to the end of the debt arrangement.

### Default Column

Similar to the estimate of the annual transitions rate, the default column represents the proportion of issuers for which a default event occurred in the relevant estimation period out of the total of issuers at that rating level rated at the end of the previous calendar year, and not necessarily in relation to the last rating prior to the default event.

### Transition Tables, Project Finance, 2004-2016

Annual Aggregated Transition Table, 2004-2016

|         | Aaa.il | Aa1.il | Aa2.il | Aa3.il | A1.il | A2.il | A3.il | Baa1.il | Baa2.il | Baa3.il | Ba1.il | Ba2.il | Ba3.il | B1.il | B2.il | B3.il | Caa1.il | Caa2.il | Caa3.il | Ca.il | C.il | WR  | Default |
|---------|--------|--------|--------|--------|-------|-------|-------|---------|---------|---------|--------|--------|--------|-------|-------|-------|---------|---------|---------|-------|------|-----|---------|
| Aaa.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Aa1.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Aa2.il  | 0%     | 0%     | 100%   | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Aa3.il  | 0%     | 0%     | 2%     | 96%    | 2%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| A1.il   | 0%     | 0%     | 0%     | 0%     | 87%   | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 13% | 0%      |
| A2.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 87%   | 0%    | 0%      | 0%      | 13%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| A3.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 85%   | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 8%      |
| Baa1.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 100%    | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Baa2.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Baa3.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 14%     | 71%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 14%     |
| Ba1.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Ba2.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Ba3.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| B1.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| B2.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| B3.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Caa1.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Caa2.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Caa3.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Ca.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| C.il    | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |

Annual Transition Table, 2016

|         | Aaa.il | Aa1.il | Aa2.il | Aa3.il | A1.il | A2.il | A3.il | Baa1.il | Baa2.il | Baa3.il | Ba1.il | Ba2.il | Ba3.il | B1.il | B2.il | B3.il | Caa1.il | Caa2.il | Caa3.il | Ca.il | C.il | WR  | Default |
|---------|--------|--------|--------|--------|-------|-------|-------|---------|---------|---------|--------|--------|--------|-------|-------|-------|---------|---------|---------|-------|------|-----|---------|
| Aaa.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Aa1.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Aa2.il  | 0%     | 0%     | 100%   | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Aa3.il  | 0%     | 0%     | 7%     | 93%    | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| A1.il   | 0%     | 0%     | 0%     | 0%     | 89%   | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 11% | 0%      |
| A2.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 100%  | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| A3.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 50%   | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 50% | 0%      |
| Baa1.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 100%    | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Baa2.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Baa3.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 20%     | 60%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 20% | 0%      |
| Ba1.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Ba2.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Ba3.il  | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| B1.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| B2.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| B3.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Caa1.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Caa2.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Caa3.il | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| Ca.il   | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |
| C.il    | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%     | 0%     | 0%     | 0%    | 0%    | 0%    | 0%      | 0%      | 0%      | 0%    | 0%   | 0%  | 0%      |

---

## Related Reports

- [For summaries of rating performance for the years 2009-2015, you are invited to view the Midroog website](#)
- [For Midroog's rating scales and definitions, you are invited to view the Midroog website.](#)

The reports are published on the Midroog Website [www.midroog.co.il](http://www.midroog.co.il)

**Report Date: 30.03.2017**



---

## Appendix 1 –Calculating Transition Matrixes

Midroog groups the issuers to rating groups according to their rating and the relevant time period (T).<sup>3</sup> The marginal transition rate is the probability that the issuer “who survived” at a certain rating level up to the T period will change to another rating (upgrade or downgrade) by the end of that period. The cumulative transition rate is the probability of a transition between the rating level at the time the group was formed up to the end of period T. From the mathematical aspect, the marginal transition rate of period T for a rating group that was created at time y in rating Z is defined as the proportion between the number of companies x(t) that transitioned from a particular group to another group during the time range T divided by the total of issuers in that rating group at the beginning of the time period n(t).

$$\text{Marginal migration rate from z (t)} = \frac{Xy(t)}{ny(t)}$$

---

<sup>3</sup> The relevant time period is a year as published in this report.

---

## Appendix 2 – Calculating the Accuracy Measure

### Average Position (AP)

The position of a rating (that defaulted or did not) in a rating group<sup>4</sup>, is as a percentage of the ratings in the rating group with ratings higher than it, plus half of the area in the rating category where it is located.

For example – If 5% of the ratings were rated Aaa.il, 6% were rated Aa1.il and 7% were rated Aa2.il, then:

1. The rating Aaa.il has the position of  $5\%/2=2.5$ .
2. The rating Aa1.il has the position of  $5\%+(6\%/2)=8\%$ .
3. The rating Aa2.il has the position of  $5\%+6\%+(7\%/2)=14.5\%$ .

The average position is the calculation of the average position of ratings that have experienced default/impairment for a given point of time before default/ impairment (12 months before default/ impairment, as the case may be).

A strong rating system will present an AP of close to 100%, which means that the rating in which a default event was recorded have all been rated at the bottom percentile of the ratings distribution at least 12 months before default date, indicating a very strong correlation between the rating and the default. A random rating system will show an AP in the area of 50% and a rating system with a strong negative correlation will show an AP close to 0%. It should be noted that an AP of 100% or of 0% cannot be obtained, due to their share (distribution area) of the default events in the distribution so that the AP must be standardized for them. For example, suppose that D – represents the rate of ratings that experienced a default event in distribution.

- The maximum AP possible is  $100\% - D / 2$ , which will be achieved when all ratings with a default are rated the same and all ratings in which no default event has been recorded are rated above this rating.

---

<sup>4</sup> In accordance with the definition for calculation purposes: issuer, series, etc.

- 
- In a similar manner, the minimum AP possible is  $D/2$ , where all the ratings in which a default event has been recorded are the same and that it is higher than all the ratings that did not experience a default.

In order to standardize the AP, we define AP\* adjusted (above and below: "Accuracy Measure" or "Average Position-AP") as follows:  $AP^* = (AP - 50\%) / (100\% - D) + 50\%$

This adjustment allows AP\* to achieve values of 0% or 100%.

In addition, it should be noted that the information provided can be embodied in a positive/negative outlook and credit reviews for upgrade/downgrade and we present an adjusted AP measure for them. It is important to note that the AP measure or any other single measure alone does not explain the accuracy embodied in different rating systems at a given cutoff point. In addition, a small number of defaults and/or a low number of observations in a particular rating group may skew the results.

**Copyright © All rights reserved to Midroog Ltd. (hereinafter: "Midroog").**

This document, including this paragraph, is copyrighted by Midroog, and are protected by copyright and by intellectual property law. This document may not be copied, scanned or photocopied, amended, distributed, duplicated, translated or displayed for any purpose whatsoever, commercial or otherwise, without advance written consent from Midroog.

Caveat regarding the limitations of a rating and the risks of relying on a rating, and caveats and reservations in respect to the activity of Midroog Ltd. and the information appearing on its website

Ratings and/or publications by Midroog are subjective opinions about future relative credit risks of entities relative to their credit obligations, debts and/or debt-like financial instruments that apply on the date of their publication, and as long as Midroog has not changed the rating or has withdrawn from it. Midroog's publications may contain assessments based on quantitative models of credit risks, as well as related opinions that served it in the rating process. Ratings and publications by Midroog do not constitute a statement about the accuracy of the facts at the time of the publication or in general. Midroog makes use of rating scales to issue relative prognoses of credit risks and/or entities risks and/or the risks of financial assets according to definitions detailed in the scale itself. The choice of a symbol to reflect credit risk reflects solely a relative assessment of that risk. Midroog defines credit risk as the risk that an entity may fail to meet its contractual financial obligations on schedule and estimated financial loss given default. Midroog's ratings do not address any other risk, such as risks relating to liquidity, market value, change in interest rates, and fluctuation in prices or any other element that influences the capital market.

The ratings and/or publications issued by Midroog do not constitute a recommendation to buy, hold, and/or sell bonds and/or other financial instruments and/or make any other investment and/or forgo any of these actions.

Nor do the ratings and/or publications issued by Midroog constitute investment advice or financial advice, nor do they address the appropriateness of any given investment for any specific investor, or constitute a recommendation for investment of any type whatsoever relying on the rating. Midroog issues ratings on the assumption that anybody making use of the information therein and of the ratings will exercise due caution and conduct the appropriate tests required himself and/or through authorized professionals, in order to personally assess the merit of any investment in a financial asset that he is thinking of buying, holding or selling. Every investor should obtain professional advice in respect to his investments, to the applicable law, and/or to any other professional issue. Any rating or other opinion that Midroog issues should be considered as just one component in any investment decision by the user of information contained in this document or by anybody on his behalf, and accordingly, any user of information contained in Midroog ratings and/or publications and/or in this document must study and reach an assessment of the merit of investment on his behalf regarding any issuer, guarantor, bond or other financial instrument he intends to hold, buy or sell. "Investor" – an investor in a financial asset that has been rated, or in a financial asset of a rated corporation.

All the information contained in Midroog ratings and/or publications, and on which it relied (hereinafter: "the Information") was delivered to Midroog by sources that it considers credible, *inter alia* the rated entity. Midroog is not responsible for the accuracy of the Information and presents it as provided by the sources. Midroog exercises all reasonable means, to the best of its understanding, to assure that the Information is of quality and of adequate extent and that it originates from sources Midroog considers to be credible, including when relying on information received from independent third parties, if and when appropriate. However, Midroog does not carry out audits and cannot therefore verify or certify the Information.

General reviews that Midroog publishes are not intended for use in assessing investments of any kind, but to provide general information and/or data in Midroog's possession, under the limitations set forth above in respect to the Information that served in their preparation. The provisions of these reviews do not constitute part of any methodology by which Midroog works. Midroog may deviate from anything said in a general review and change its position regarding its provisions at any time. Nothing said in any general review shall be viewed, treated or relied on as an opinion or advice in any way. A general review does not constitute part of Midroog's professional methodology. It reflects the personal opinion of the author of the document, and does not necessarily reflect Midroog's opinion.

Subject to the Law, Midroog, its directors, its officers, its employees and/or anybody on its behalf involved in the rating shall not be held responsible under law, for any damage and/or loss, financial or other, direct, indirect, special, consequential, associated or related, incurred in any way or in connection with the Information or a rating or a rating process, including not issuing a rating, including if they were advised in advance of the possibility of damage or a loss as said above, including but not confined to (a) any loss of profit in present or future, including the loss of other investments opportunities; (b) any loss or damage caused consequential to holding, acquisition and/or selling of a financial instrument, whether it is a subject of a rating issued by Midroog or not; (c) any loss or damage caused consequential to the relevant financial asset, that was caused, *inter alia* and not exclusively, as a result of or in respect to negligence (except for fraud, a malicious action or any other action for which the law does not permit exemption from responsibility) by directors, officers, employees and/or anybody acting on Midroog's behalf, whether by action or omission.

Midroog hereby declares that most of the issuers of financial assets that it rates, or entities for whose issue a rating was conducted, undertook to pay Midroog for the rating prior to the rating process. Midroog maintains policy and procedures in respect to the independence of the rating and the rating processes.

Midroog is a subsidiary of Moody's (hereinafter: "Moody's"), which owns 51% of Midroog's shares. However, Midroog's rating processes are independent and separate from Moody's and are not subject to approval by Moody's. Midroog has its own policies and procedures and its rating committee is independent in its discretion and decisions.

Millenium Tower, 17 Ha'Arba'a St.  
Tel Aviv, Israel 6473917  
Tel +972-3-6844700, Fax +972-3-6855002  
[www.midroog.co.il](http://www.midroog.co.il)



---

A rating issued by Midroog may change as a result of changes in the information on which it was based and/or as a result of new information and/or for any other reason. Updates and/or changes in ratings are presented on Midroog's website at [www.midroog.co.il](http://www.midroog.co.il), which also has additional information on Midroog's Policies and/or the operation of its rating committee.