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Rating Performance of Project Finance -

Summary of 2017 and Aggregated

Special Report | March 2018

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Rating Performance of Project Finance – Summary of 2017 and Aggregated

Preface

The objective of this report is to present the performance of Midroog's ratings in project finance in 2017 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 rating outlook.

Midroog collects and publishes the rating changes and the accuracy measure in order to create transparency with regard to rating performance. The following data relate to debt ratings in the category of project finance. Note that in the years examined, there were no default events among the debts rated by Midroog in project finance, based on Midroog's definition of default, so no calculation for accuracy measure is presented.

In this report, project finance debt (hereinafter: "**credit**") is defined as the number of active obligations of the same seniority level¹ that Midroog was rating at the end of the calendar year.

The rated series include both public and private ratings. Corporate debt ratings for infrastructure companies (other than infrastructure projects) are not included in the statistics presented in this report². 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).³

Ratings Distribution

As of the end of 2017, Midroog rated about 57 project finance credits. The median rating of these credits is A1.il.

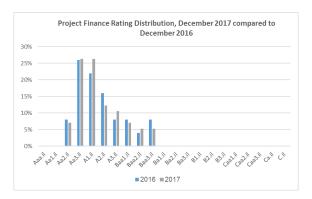
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¹ Regarding projects for which both senior and subordinate debt was issued, each type of debt is counted separately. If there are multiple series/loans with the same level of seniority, these debts/loans are counted together.

² See the Ratings Performance Report, Corporates and Financial Institutions on the Midroog website.

³ There were two updates to the database relating to year-end 2016: 1) Two ratings that had not been factored in at year-end 2016 but were active at year-end 2016 were updated, 2) one rating that had been factored in as active in 2016 was removed. The removed rating was for the operating period, in contrast to the project rating. The reason why the rating for the operating period was factored into 2016 is that in 2016, the project as a whole had no rating. In 2017 the rating for the operating period was deducted from the 2016 data.

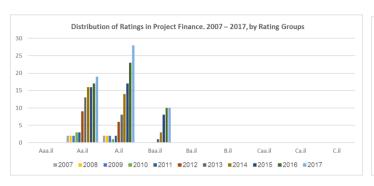
The following chart shows the distribution of project finance ratings for year-end 2017 compared to the end of 2016.

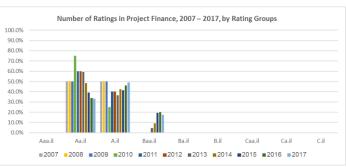


The following describes the changes in the proportion of rated credits by rating level:

- The proportion of credits rated Aa2.il dropped slightly, due to change in the distribution of
 credits among the rating levels without change in the rating level of the rated credits in that
 group or the addition/subtraction of credits from the rating level, but an increase in the
 number of ratings at other rating levels consequent to new ratings.
- The proportion of credits rated Aa3.il increased slightly, due to one rating upgrade to from A1.il and one new rating.
- The proportion of credits rated A1.il rose from about 22% at year-end 2016 to about 26% at year-end 2017, due to one rating upgrade from A2.il and new ratings.
- The proportion of credits rated A2.il fell from about 16% at year-end 2016 to about 12% at year-end 2017, mainly due to one rating upgrade to A1.il.
- The proportion of credits rated A3.il rose from about 8% at year-end 2016 to about 11% at year-end 2017, mainly due to new ratings added to this rating level.
- The proportion of credits rated Baa1.il dropped slightly, as one new rating was added to the
 rating level but on the other hand, one rating was upgraded to A3.il. The change stemmed
 mainly from change in the distribution of credits over the rating levels, due to an increase in
 the number of ratings at other rating levels because of new ratings.
- The proportion of credits rated Baa2.il increased from about 4% at year-end 2016 to about 5% at year-end 2017, as a result of one new rating.
- The proportion of credits rated Baa3.il fell from about 6% at year-end 2016 to about 5% at year-end 2017, as a result of one rating withdrawal.

The charts below show the distribution of ratings divided into broad rating categories and the number of rated credits. Details of the rating transitions between the categories are presented in Midroog's transition matrix below in this report.





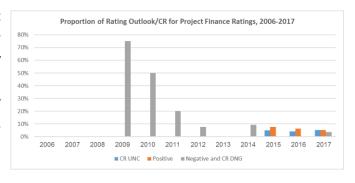
Distribution of Rating Outlooks and Credit Reviews

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 - in which case the CR shall be said to have positive implications, for downgrade - in which case the CR shall be said to have negative implications, and in some cases the direction of the CR may be uncertain – CR with uncertain direction. The rating review may result in rating upgrade, rating downgrade, or reconfirmation of the rating.

The proportion of the credits placed in Credit Review with negative or uncertain implications, as well as the proportion of credits with a positive outlook or a negative outlook in 2006-2017 is shown below. The data are for the end of each of the years.

The chart on the right shows that no project finance bond series were placed in Credit Review between 2006 and 2008. In 2009-2011, relatively many credits were placed on CR. Note that total project finance credits for this year was relatively low, thus a small number of credits placed in CR reflects a relatively high proportion out of total ratings. As of the end of 2016, three credits had a positive outlook and two had been placed in CR with direction uncertain. All ratings with uncertain direction. All the credit ratings with positive outlook had risen by the end of 2017. The ratings of credits placed in CR with uncertain



direction remained unchanged as of the end of 2017.

Transition Tables⁴

Midroog collates information on rating changes between the years 2004-2017, based on a database that accumulated gradually during its years of operation. Each debt in the database is included according to the number of years it has been rated. For example, a debt rated from 2004 to 2017 is counted in the database 13 times. For each calendar year, the database includes the debt's last rating. If the rating changed several times over a single year, only the last observation at the end of the calendar year will be added to the database. In project finance, observations exist from 2006.

The total number of observations for all the rating groups in project finance, up to the relevant cross section points (for the years 2006-2016) is about 184. Adding rating withdrawals and ratings at the end of 2017, the total number of observations used to calculate the data (including rating withdrawals) for the years 2006-2017 was about 258.

To illustrate, the meaning of the data in the cumulative transitions table is that about 89% of the credits rated A1.il remained unchanged at the end of the following year, the rating of about 9% was withdrawn for some reason, and the ratings of about 3% were upgraded to Aa3.il. 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 creditworthiness, or a request from the issuer to withdraw the rating of its obligations.

When calculating the marginal transitions rate in the transitions matrix adjusted for rating withdrawals (WR), ratings in which withdrawal occurred are not factored in at all, but only the last rating before the rating withdrawal. The cross-section periods for the purposes of calculating the transitions are the

⁴ The following updates were made when calculating the transition matrix compared with the calculation in previous years: updates to the database, as elaborated in the section on the ratings distribution.

end of the calendar year. Therefore, the last rating factored in for an issuer whose rating has terminated will be the rating at the end of the calendar year prior to the rating termination. The formula for calculating the adjustment appears in Appendix 1 of this report. Appendix 3 shows the transition tables adjusted for WR.

Default Column

Similarly to the estimation 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 debt at the given rating level at the end of the previous calendar year, not necessarily in relation to the last rating prior to the default event. In the years under examination, there were no default events in project finance.

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Transition Tables, Project Finance, 2006-2017

Annual Aggregated Transition Table, 2006-2017

| | Aaa.il | Aa1.il | Aa2.il | Aa3.il | A1.il | A2.il | A3.il | Baa1. | ilBaa2.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% | 1% | 97% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A1.il | 0% | 0% | 0% | 3% | 89% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 9% | 0% |
| A2.il | 0% | 0% | 0% | 0% | 8% | 81% | 4% | 0% | 0% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A3.il | 0% | 0% | 0% | 0% | 0% | 6% | 82% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 12% | 0% |
| Baa1.il | 0% | 0% | 0% | 0% | 0% | 0% | 13% | 88% | 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% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa3.il | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 8% | 75% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 17% | 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% |

| Annual Transition Table, 2017 |
|-------------------------------|
|-------------------------------|

| | | | | -, | _ | | | | | | | | | | | | | | | | | | |
|---------|--------|--------|--------|--------|-------|-------|-------|-------|-----------|--------|--------|--------|--------|-------|-------|-------|---------|---------|---------|-------|------|-----|---------|
| | Aaa.il | Aa1.il | Aa2.il | Aa3.il | A1.il | A2.il | A3.iI | Baa1. | ilBaa2.il | Baa3.i | 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% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A1.il | 0% | 0% | 0% | 9% | 91% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A2.il | 0% | 0% | 0% | 0% | 22% | 67% | 11% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A3.il | 0% | 0% | 0% | 0% | 0% | 0% | 75% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 0% |
| Baa1.il | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 75% | 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% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa3.il | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 75% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 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% |

^{*}The percentages shown in the tables are rounded to a whole percent, without adjustment to sum up the table rows to 100%.

Related Reports

- For summaries of rating performance for the years 2009-2016, 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

Report Date: 28.03.2018

Appendix 1 – Methodology for Calculating Transition Matrixes

Midroog groups the issuers to rating groups according to their rating and the relevant time period (T).⁵ The marginal transition rate is the probability that the issuer who "survived" at a certain rating level up to the period T will move to a different rating (upgrade or downgrade) by the end of that period. The cumulative transition rate is the probability of a transition between rating levels from the time the group was formed up to the end of T. Mathematically, the marginal transition rate of 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).

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

In calculating the marginal transition rate in the transitions matrix adjusted for WR, withdrawn ratings are not factored into the calculation at all, but the last rating before the WR.

Where:

 $Z_{i,WR}$ – the rate of transitions from an i rating to WR.

We multiply each rating transition $Z_{i,WR}$ in the transitions matrix that is not WR adjusted with the coefficient $\frac{1}{(1-z_{i,WR})}$.

When: $Z_{i,WR}$ in the WR adjusted transitions matrix is defined as equal to zero.

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⁵ 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 group⁶, 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 achieved, 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.
- Similarly, the minimum AP possible is D/2, where all the ratings in which a default event has been recorded are the same and 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:

⁶ In accordance with the definition for calculation purposes: issuer, series, etc.

AP* = (AP-50%) / (100%-D) +50%

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

In addition, note that the information provided can be embodied in a positive/negative outlook and credit reviews with positive/negative implications and we present an adjusted AP measure for them. It is important to note neither the AP measure nor any other single measure alone can 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.

Appendix 3 – The WR adjusted transition matrices

Annual Aggregated Transition Table (2006-2017) - adjusted for WR

| | Aaa.il | Aa1.il | Aa2.il | Aa3.il | A1.iI | 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 | 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% |
| Aa1.il | 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% |
| Aa3.il | 0% | 0% | 1% | 97% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A1.il | 0% | 0% | 0% | 3% | 97% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A2.il | 0% | 0% | 0% | 0% | 8% | 81% | 4% | 0% | 0% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A3.il | 0% | 0% | 0% | 0% | 0% | 7% | 93% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa1.il | 0% | 0% | 0% | 0% | 0% | 0% | 13% | 88% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa2.il | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa3.il | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 10% | 90% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 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% |
| Ba2.il | 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% |
| B1.il | 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% |
| B3.il | 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% |
| Caa2.il | 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% |
| Ca.il | 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% |

Annual Transition Table (2017) - adjusted for WR

| | 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 | 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% |
| Aa1.il | 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% |
| Aa3.il | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A1.il | 0% | 0% | 0% | 9% | 91% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A2.il | 0% | 0% | 0% | 0% | 22% | 67 % | 11% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| A3.il | 0% | 0% | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa1.il | 0% | 0% | 0% | 0% | 0% | 0% | 25% | 75% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa2.il | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baa3.il | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 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% |
| Ba2.il | 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% |
| B1.il | 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% |
| B3.il | 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% |
| Caa2.il | 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% |
| Ca.il | 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% |

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