



# NEWS RELEASE

Jun 30,2003

## The Relationship Between Ratings and Default The Broad-Definition Default Ratio and the Rating Transition Matrix

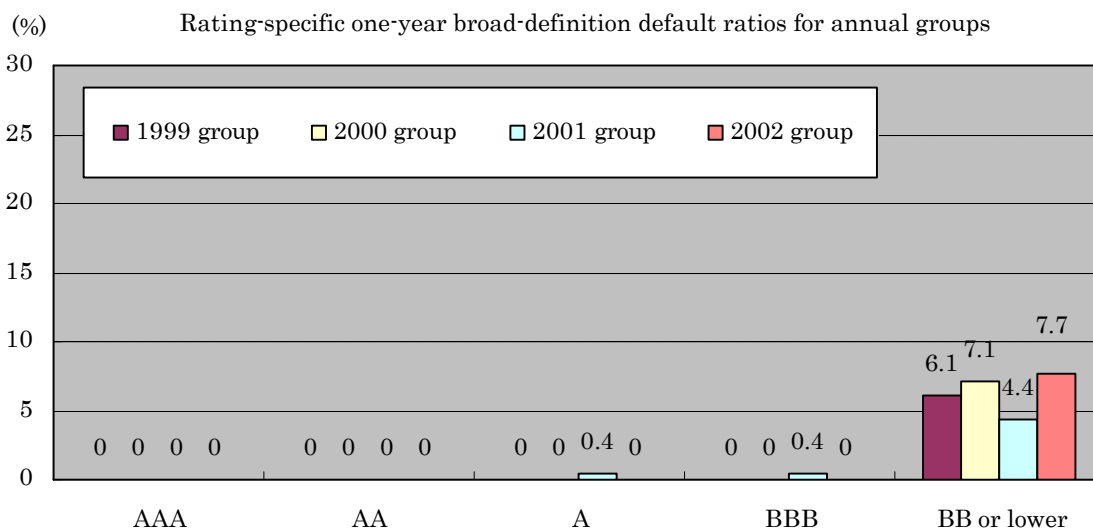
In June 2000, Rating and Investment Information, Inc. (R&I), began to publicly announce the broad-definition default ratio as an indicator of the probability of a corporate being substantially incapable to make payment on its debts. R&I releases an update each year, and data for fiscal 2002 (April 1, 2002, to March 31, 2003) have now been added. The definition of broad-definition default includes not only bond default and legal bankruptcy procedures but also such events as loan waivers. The surveys on which this ratio is based cover 1,250 companies rated by R&I from fiscal 1978 to fiscal 2002. A strong correlation between R&I ratings and the broad-definition default ratio can be observed.

Some of the major characteristics for fiscal 2002 are as follows.

- The number of companies covered by the survey that suffered broad-definition default was 15, still a high level.
- Of the 674 Japanese corporates rated by R&I at the start of fiscal 2002, five suffered broad-definition default during the year. The ratings for all of those companies at the beginning of the fiscal year were BB or lower. As a result, the broad-definition default ratio for fiscal 2002 as a whole was zero for ratings of BBB or more, and 7.69% for ratings of BB or lower.

Clarification of the relationship between ratings and default on the basis of actual historical values can be seen as an important fundamental building block for the bond market. From now on, the broad-definition default ratio for ratings of BB or lower will be broken down into data for BB and B or lower, and a transition matrix for asset-backed securities has been added. Broad-definition default ratio figures as well as the rating transition matrix data on which they are based can be downloaded from R&I's web site (<http://www.r-i.co.jp/>). The company intends to continue making this kind of information openly available.

Exhibit 1



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## I. The Broad-Definition Default Ratio

### 1. The Broad-Definition Default Ratio in Fiscal 2002

The broad-definition default ratio (henceforth referred to as the “default ratio”) refers to the probability of a corporate being substantially incapable to make payment on its debts. At the present time, when there are few actual instances of defaulting on publicly offered corporate bonds, this ratio serves as an indicator of the potential bond default ratio. The sample of companies covered includes all of the issuers domiciled in Japan that received an R&I long-term debt rating during the period from April 1, 1978, to April 1, 2003. Altogether, there are 1,250 such companies, of which 674 had ratings as of April 1, 2002.

When R&I calculates the default ratio, issuers that fit the definition shown in Exhibit 2 are counted as instances of broad-definition default. This definition provides a detailed

enumeration of circumstances in which third-party economic loss is incurred due to substantial default. Exhibit 3 shows the transition in the number of cases of default on the basis of this definition. This number in fiscal 2002 is still high at 15, which was 1 less from 16 of fiscal 2001. (At the time of last June’s announcement 15 cases of default had been identified for fiscal 2002. One more company, a case of abandonment of claims, was added when a subsequent survey was conducted.)

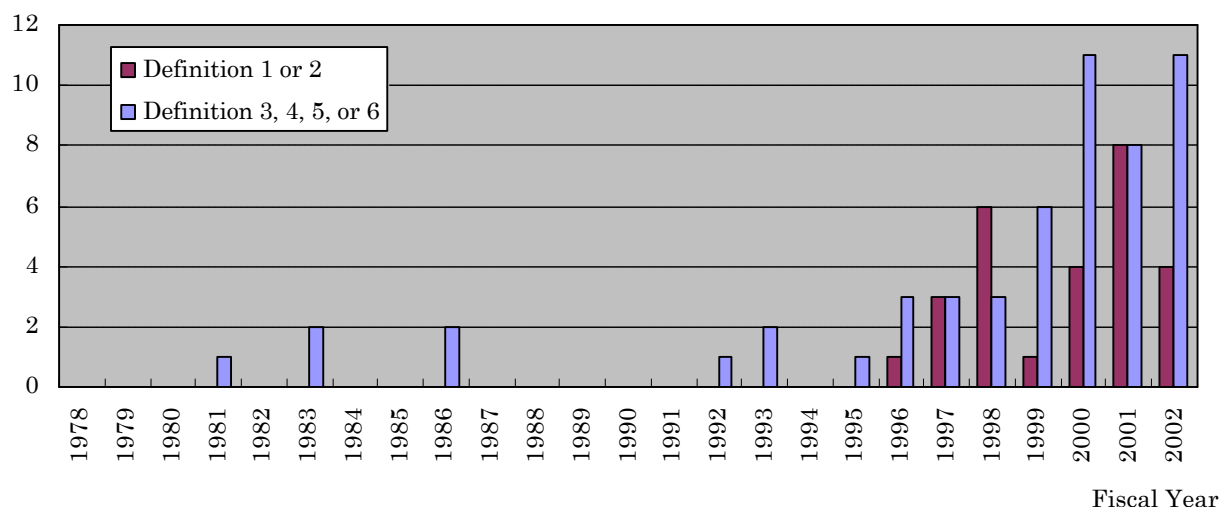
#### Exhibit 2

##### Definition of the broad-definition default ratio

- (1) Bond default
- (2) Legal bankruptcy
  - (a) Court application for bankruptcy
  - (b) Court application to come under the protection of the Corporate Reorganization Law
  - (c) Court application to come under the protection of the Civil Rehabilitation Law (under the Composition Act prior to April 2000)
  - (d) Court application for special liquidation measures to commence
  - (e) Court application for liquidation procedures under commercial law to commence
  - (f) Discretionary liquidation after a first nonpayment
  - (g) Receipt of an order terminating bank dealings following a second nonpayment
  - (h) Internal liquidation even without nonpayment (i.e., when a company representative acknowledges a state of bankruptcy)
  - (i) Nationalization as part of bankruptcy proceedings
  - (j) Voluntary termination of business
- (3) Abandonment of claims
- (4) Emergency merger or transfer of key operating assets (when the assets do not have any value)
- (5) Infusion of capital to avoid having negative equity
- (6) A position of negative equity (when this is followed by the receipt of financial assistance to avoid bankruptcy)

#### Exhibit 3

##### Incidence of broad-definition default





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Four companies fit category 1 or 2 of the definition, both of which are typically viewed as bankruptcy. The proportion of such cases among all instances of broad-definition default was lower than in fiscal 2001.

Five of the 15 companies had an R&I rating at the start of fiscal 2002. The other 10 were all companies that had received ratings at least one year prior to the end of fiscal 2002 (that is, on or before March 31, 2001), and the impact of their default status is also reflected in the revision of the cumulative default ratios for two years or longer.

## 2. Results of the Broad-Definition Default Ratio Calculation

Exhibit 1 on the first page of this news release presents the rating-specific one-year default ratios for annual groups. It shows the proportion of default among issuers with identical ratings at the outset of each fiscal year. Despite fiscal 2001 default ratios of 0.4% for both A and BBB ratings, overall it is clear that default occurrence rises high when ratings are low. A gap among different ratings is visible even in the case of cumulative default ratios for periods of two years or longer (Exhibits 4 and 5).

The groups that appear in some Exhibits indicate groupings for default ratio surveys. Each group has been named according to the first fiscal year of its survey period. For example, the 2002 group refers to the group of 674 companies that had R&I ratings as of April 1, 2002.

Trends in the three-year cumulative default ratio (Exhibit 6) show changes in the default ratio according to the first year of the survey period. The default ratio rises from the second half of the 1990s when credit risk increased. The three-year cumulative default ratio measured from 1998 is rising to 2.46% for all companies that had ratings as of April 1, 1998, 1.29% for companies with a rating of BBB or higher and 25.64% for companies with a rating of BB or lower. Despite declining in the two years that followed, the annual and two-year cumulative default ratios are leveling off, so the three-year cumulative default ratio is likely to remain at a high level in the future.

Exhibit 4

(%) Rating-specific cumulative broad-definition default ratios over two years

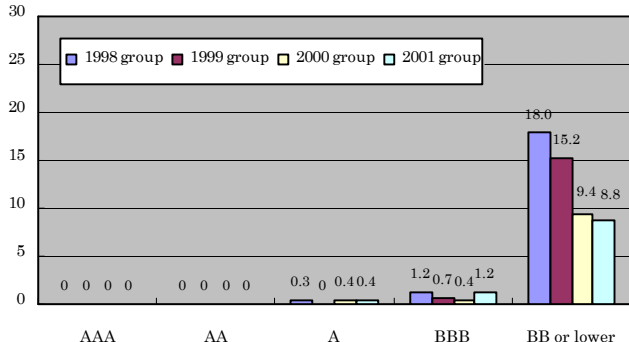


Exhibit 5

(%) Rating-specific cumulative broad-definition default ratios over three years

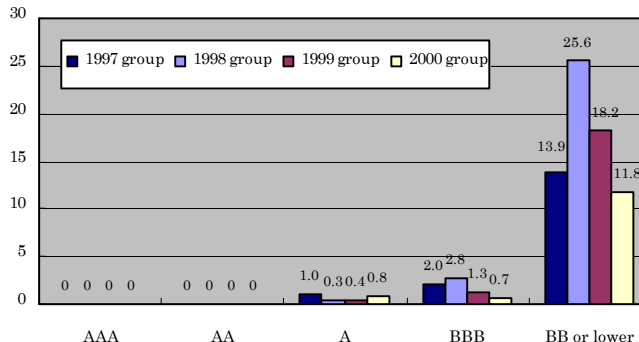
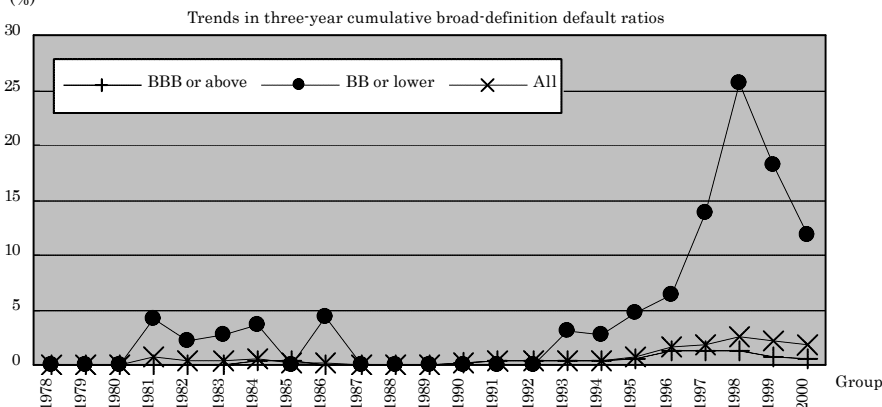


Exhibit 6



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Exhibit 7

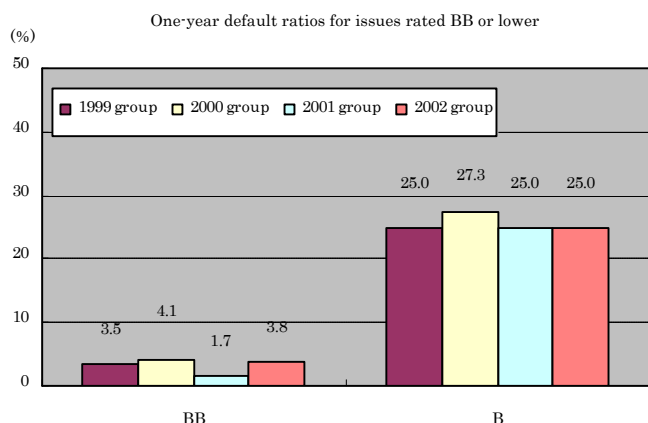
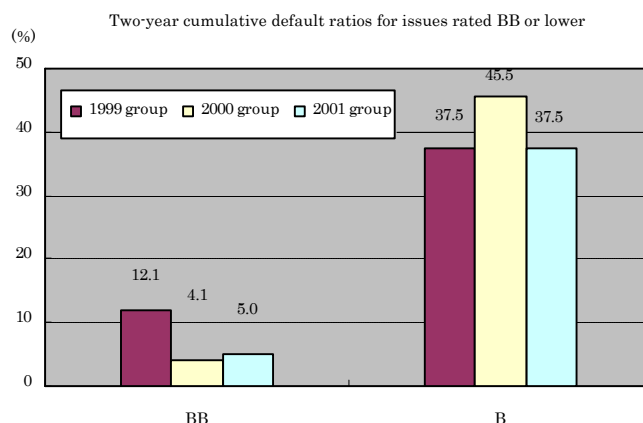


Exhibit 8



Exhibits 7 and 8 show the default ratio for companies with ratings of BB and lower broken down into BB and B ratings. The number of issuers in the B sample was 8 companies in the 1999 group, 11 in the 2000 group, 8 in the 2001 group, and 12 in the 2002 group. While it should be pointed out that just a single case of default causes the default ratio to change by as much as 10 percentage points or so, there is nevertheless a visible difference between the BB and B ratings.

## II. The Rating Transition Matrix

The rating transition matrix shows how ratings assigned to issuers change over a certain period of time. Exhibit 9 is a concrete example of a rating transition matrix. It indicates what specific issuer ratings as of April 1, 2002, had become one year later, on April 1, 2003. For example, on April 1, 2002, there were 73 companies with a BBB- rating. Of these, 51 still had a BBB- rating on April 1, 2003, 1 had upgraded to BBB+, 4 had downgraded to BB+ and 1 to BB. The 16 remaining companies did not have ratings as of April 1, 2003, mainly because their rated bonds had been redeemed.

The rating transition matrix serves as the basis for broad-definition default ratio computations. Exhibit 9 shows that the total number of companies considered cases of broad-definition default (the numbers appear in columns "BD1" through "BD6") was 5. All issuers were in the BB zone or

Exhibit 9: Sample rating transition matrix

		Rating on April 1 of the final survey year																Cumulative no. of companies fitting definition 1, 2, 3, 4, 5, or 6 of broad-definition default through April 1 of the final survey year						No. of companies with no rating on April 1 of the final survey year	TOTAL					
First survey year		AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	C	BD1	BD2	BD3	BD4	BD5	BD6	(NR)	
Rating on April 1 of the first survey year	AAA	7	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	AA+	0	16	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
	AA	0	0	28	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	33
	AA-	0	0	1	33	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	40
	A+	0	0	0	0	57	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	65
	A	0	0	0	0	1	59	19	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	84
	A-	0	0	0	0	0	1	92	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	112
	BBB+	0	0	0	0	0	0	2	65	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	81
	BBB	0	0	0	0	0	0	0	1	64	12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	84
	BBB-	0	0	0	0	0	0	0	0	1	0	51	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	73
	BB+	0	0	0	0	0	0	0	0	0	0	20	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7	31
	BB	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	8
	BB-	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	14
	B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	1	0	0	6
	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	6
	B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CCC+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CCC-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
C	0	0	0	0	0	0	0	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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lower on April 1, 2002. Meanwhile, as the exhibit's "Total" column shows, a total of 65 companies had a rating in the BB zone or lower on that date. Accordingly, the broad-definition default ratio for the BB zone or lower can be calculated as 7.69% (5 / 65).

Because the broad-definition default is not the same as actual default, there are instances when an issuer has a rating while it has been counted as a case of broad-definition default. Even such an issuer is categorized as an instance of broad-definition default in Exhibit 9. For example, even an issuer with an actual rating of B+ will be tallied in the "BD6" column and not in the one for a B+ rating if that issuer fits category 6 of the definition of broad-definition default. (The data that can be downloaded are available not only in the format shown in Exhibit 9 but also as a matrix that consists solely of actual ratings and omits any consideration of the concept of broad definition default.)

In addition, Appendix 2 shows the rating transition matrix for asset-backed securities. Ratings for asset-backed securities have a short history compared with corporate debt, and there is little comparative data. However, it can be inferred that ratings for asset-backed securities are more stable than those for corporate debt.

### III. Methodology

#### 1. The broad-definition default ratio

##### a. Ratings

The ratings used for the default ratio calculation are senior long-term credit ratings, which R&I introduced in October 2001. The calculation does not include municipal bond ratings, insurance claims paying ability ratings, or asset-backed securities ratings. It also excludes ratings for bonds backed by guarantees by parent companies, banks, or financial guarantee companies. For the fiscal years up through March 31, 1998, the calculation uses ratings issued by the Japan Bond Research Institute (JBRI) and Nippon Investors Services (NIS), which are the two companies whose merger created R&I. It also includes publicly announced trial ratings that were assigned prior to these two companies' commencement of business ratings. In instances when there are ratings from both JBRI and NIS, the lower of the two is used.

When R&I assigns an issuer a long-term debt rating, it first analyzes that company's default risk. In other words, R&I determines the likelihood that the issuer will fall into default or other management difficulties. The next step is to analyze recovery risk, which means gauging the likely extent of the recovery of the principal of corporate bonds and other specific obligations in the event of default. Analysis of default risk constitutes the essence of the rating process. Such analysis evaluates an issuer's ability to meet all of its financial obligations, and its outcome carries considerable weight in terms of assessing a company's creditworthiness. The rating at this stage is known as a senior long-term credit rating. It is used for the default ratio in order to perform a rating-specific calculation of the probability of a corporate being substantially incapable to make payment on its debts.

#### Definition of the senior long-term credit rating

An R&I senior long-term credit rating is an opinion regarding an issuer's overall capacity to pay its entire financial obligations, without taking into account the degree of recovery of specific obligations.

A senior long-term credit rating will in principle be assigned to all issuers. A rating for an individual issue may be higher or lower than the issuer's senior long-term credit rating depending on the terms and conditions of the issue.

##### b. The Companies Covered

The sample of issuers covered includes all of the issuers domiciled in Japan that received an R&I long-term debt rating during the period from April 1, 1978, to April 1, 2003. The total number of such companies was 1,250, of which 674 had current ratings as of April 1, 2002.

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Issuing companies that have only had a short-term debt rating have been excluded. The long-term ratings data are managed in R&I's Bond Rating Data Base.

## c. The Calculation Method

The groups that appear in Exhibit 1 and elsewhere indicate groupings for default ratio surveys. Each group has been named according to the first fiscal year of its survey period. For example, the 1999 group refers to the group of 756 companies that had R&I ratings as of April 1, 1999.

The survey starts on April 1 of each year from 1978 to 2002. This produces a total of 25 sets of survey results.

Each group is broken down by each rating as of the survey's starting point. The number of default cases over the years that have elapsed since the survey began is counted for each rating. The default figure for each rating is then divided by the total number of issuers that initially held that rating. The outcome of this process is each group's rating-specific cumulative default ratios.

To use the 1999 group as an example, its 756 issuers can be broken down by their initial ratings as follows: 24 companies had an AAA rating, 90 an AA, 271 an A, 305 a BBB, and 66 a rating of BB or lower. Of the 66 issuers with a rating of BB or lower, 4 companies had defaulted within one year, 10 within two years, 12 within three years, and 13 within four years. When each of these annual figures is divided by the original total of 66 companies, this yields cumulative default ratios for the first through the fourth years of 6.1%, 15.2%, 18.2%, and 19.7%, respectively.

## d. The Method for Computing the Cumulative Average Default Ratio

The computation of the cumulative average default ratios that appear in Appendix A was performed as follows. First, R&I compiled data such as those in Exhibit 10, which presents data for the 1999 group. For instance, the number "2" that is under "Year 3" in the "BB or lower" row indicates that 2 of the 66 companies with a rating of BB or lower on April 1, 1999, defaulted during the third year. (It should be noted that this number is not the cumulative default figure in the first three years.) The data thus compiled then served as the basis for computing the proportion of issuers to which the definition of default applies in specific n'th years, as is shown in Exhibit 11. For example, the proportion of issuers rated BB or lower actually defaulting in the third year becomes 3.03% (2 / 66). The proportion thus calculated is referred to as the "n'th-year default ratio." It is clear from the definition of the n'th-year default ratio that adding up individual n'th-year default ratios when "n" is equivalent to 1 through 10 will produce a figure that corresponds to the 10-year cumulative broad-definition default ratio. In this way, the n'th-year default ratios for each group are calculated in the same way as for the 1999 group in Exhibit 11. There is an upper limit, though, on "n" for each group. For example, the ratio calculation for the 1999 group can only be done up to four years (to fiscal 2002).

The next step is to calculate the averages of the n'th-year default ratios for all the annual groups. The averages are weighted to compensate for the different sizes of the individual sample groups. The number of groups included in the average for each successive year shrinks as the value of "n" increases. This

Exhibit 10: No. of companies defaulting in the n'th years

1999 group	Year 1	Year 2	Year 3	Year 4	No. in sample
AAA	0	0	0	0	24
AA	0	0	0	0	90
A	0	0	1	1	271
BBB	0	2	2	1	305
BB or lower	4	6	2	1	66

Exhibit 11: Default ratios in the n'th years (%)

1999 group	Year 1	Year 2	Year 3	Year 4	No. in sample
AAA	0.00	0.00	0.00	0.00	24
AA	0.00	0.00	0.00	0.00	90
A	0.00	0.00	0.37	0.37	271
BBB	0.00	0.66	0.66	0.33	305
BB or lower	6.06	9.09	3.03	1.52	66

Exhibit 12: Average n'th-year default ratios (%)

Average	Year 1	Year 2	Year 3	Year 4
AAA	0.00	0.00	0.00	0.00
AA	0.00	0.00	0.06	0.06
A	0.05	0.10	0.20	0.27
BBB	0.14	0.28	0.35	0.41
BB or lower	2.96	1.97	1.65	0.92

Exhibit 13: Cumulative average default ratios (%)

Average	Year 1	Year 2	Year 3	Year 4
AAA	0.00	0.00	0.00	0.00
AA	0.00	0.00	0.06	0.12
A	0.05	0.14	0.34	0.62
BBB	0.14	0.42	0.78	1.19
BB or lower	2.96	4.92	6.57	7.49

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means there are 25 groups in the case of Year 1 and 24 in the case of Year 2. The results of this process, the average n<sup>th</sup>-year default ratios, are shown in Exhibit 12. Taking those results, the 10-year cumulative average default ratios can be obtained by adding up the broad-definition default ratios for each year from the first to the tenth. Exhibit 13 presents the outcome of performing such a calculation to determine the cumulative average default ratios for each year.

The rationale behind selecting this methodology is that it makes maximum use of all currently available data. In the case of the 1999 group, for example, tracking surveys have been performed over four years. To a certain extent, though, this 1999 group's data also contain information that is relevant in terms of the cumulative default ratios for five- and six-year periods. This is because a cumulative default ratio of 1% for a four-year period means that the cumulative default ratio over a period of five or more years will at the very least never be smaller than 1%. A process that follows this sequence—first calculate n<sup>th</sup>-year default ratios for individual groups as previously described, then find the averages of all of the groups' n<sup>th</sup>-year default ratios, and subsequently use these n<sup>th</sup>-year averages to generate cumulative figures—allows the four years' worth of default information provided by the 1999 group to also be utilized as information for the cumulative default ratios for periods of five years or longer. Conversely, information provided by the 1999 group will not be reflected at all in cumulative default ratios for five years or longer if the sequence of the methodology is to first calculate the cumulative default ratios for individual groups and then compute the averages of those ratios.

## 2. The Rating Transition Matrix for Asset-Backed Securities

The survey period is the three years from April 1, 2000 to April 1, 2003, and the ratings are published long-term debt ratings. Asset-backed securities whose risks include heavy dependence on corporate debt ratings are excluded. Furthermore, when a number of bonds or trust beneficiary rights issued by the same vehicle (such as a special purpose company or trust) have the same underlying assets and equal priority to payments, they are counted as one.

## 3. To Access the Data

Detailed calculation results can be downloaded from R&I's web site (<http://www.r-i.co.jp/>). For a list of broad-definition default bond issuers not covered in this news release and changes in their ratings, please contact R&I as follows:

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Structured Finance Rating Dept.  
Phone: +81-3-5644-3454  
E-mail: [ishiwata@r-i.co.jp](mailto:ishiwata@r-i.co.jp) or [thirose@r-i.co.jp](mailto:thirose@r-i.co.jp)



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## Appendix 1: Broad-definition default ratios for each rating

### 1. Cumulative average broad-definition default ratios (%)

Year elapsed	1	2	3	4	5	6	7	8	9	10
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.38	0.58	0.80
AA	0.00	0.00	0.06	0.12	0.19	0.41	0.65	0.92	1.31	1.52
A	0.05	0.14	0.34	0.62	1.00	1.36	1.68	2.07	2.52	2.87
BBB	0.14	0.42	0.78	1.19	1.55	1.97	2.34	2.68	3.03	3.45
BB	1.87	3.34	4.50	5.15	5.87	6.83	8.47	10.05	11.28	12.08
B or lower	7.82	12.01	15.79	17.81	19.24	20.71	22.93	25.22	28.37	30.81
BBB or above	0.08	0.24	0.48	0.78	1.08	1.43	1.75	2.09	2.46	2.82
BB or lower	2.96	4.92	6.57	7.49	8.35	9.41	11.18	12.92	14.61	15.82
All	0.28	0.57	0.91	1.24	1.58	1.97	2.39	2.83	3.30	3.71

### 2. Broad-definition default ratios for each group (%)

2002 group (The group for which the survey commenced April 1, 2002. The same applies below.)

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	-	-	-	-	-	-	-	-	-	18
AA	0.00	-	-	-	-	-	-	-	-	-	92
A	0.00	-	-	-	-	-	-	-	-	-	261
BBB	0.00	-	-	-	-	-	-	-	-	-	238
BB	3.77	-	-	-	-	-	-	-	-	-	53
B or lower	25.00	-	-	-	-	-	-	-	-	-	12
BBB or above	0.00	-	-	-	-	-	-	-	-	-	609
BB or lower	7.69	-	-	-	-	-	-	-	-	-	65
All	0.74	-	-	-	-	-	-	-	-	-	674

#### 2001 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	-	-	-	-	-	-	-	-	18
AA	0.00	0.00	-	-	-	-	-	-	-	-	88
A	0.39	0.39	-	-	-	-	-	-	-	-	255
BBB	0.39	1.16	-	-	-	-	-	-	-	-	258
BB	1.67	5.00	-	-	-	-	-	-	-	-	60
B or lower	25.00	37.50	-	-	-	-	-	-	-	-	8
BBB or above	0.32	0.65	-	-	-	-	-	-	-	-	619
BB or lower	4.41	8.82	-	-	-	-	-	-	-	-	68
All	0.73	1.46	-	-	-	-	-	-	-	-	687

#### 2000 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	-	-	-	-	-	-	-	18
AA	0.00	0.00	0.00	-	-	-	-	-	-	-	92
A	0.00	0.38	0.76	-	-	-	-	-	-	-	263
BBB	0.00	0.36	0.72	-	-	-	-	-	-	-	279
BB	4.05	4.05	5.41	-	-	-	-	-	-	-	74
B or lower	27.27	45.45	54.55	-	-	-	-	-	-	-	11
BBB or above	0.00	0.31	0.61	-	-	-	-	-	-	-	652
BB or lower	7.06	9.41	11.76	-	-	-	-	-	-	-	85
All	0.81	1.36	1.90	-	-	-	-	-	-	-	737

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## 1999 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	-	-	-	-	-	-	24
AA	0.00	0.00	0.00	0.00	-	-	-	-	-	-	90
A	0.00	0.00	0.37	0.74	-	-	-	-	-	-	271
BBB	0.00	0.66	1.31	1.64	-	-	-	-	-	-	305
BB	3.45	12.07	13.79	15.52	-	-	-	-	-	-	58
B or lower	25.00	37.50	50.00	50.00	-	-	-	-	-	-	8
BBB or above	0.00	0.29	0.72	1.01	-	-	-	-	-	-	690
BB or lower	6.06	15.15	18.18	19.70	-	-	-	-	-	-	66
All	0.53	1.59	2.25	2.65	-	-	-	-	-	-	756

## 1998 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	29
AA	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	118
A	0.00	0.33	0.33	0.66	1.32	-	-	-	-	-	302
BBB	0.93	1.23	2.78	3.40	3.70	-	-	-	-	-	324
BB	11.43	14.29	20.00	20.00	20.00	-	-	-	-	-	35
B or lower	25.00	50.00	75.00	75.00	75.00	-	-	-	-	-	4
BBB or above	0.39	0.65	1.29	1.68	2.07	-	-	-	-	-	773
BB or lower	12.82	17.95	25.64	25.64	25.64	-	-	-	-	-	39
All	0.99	1.48	2.46	2.83	3.20	-	-	-	-	-	812

## 1997 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	30
AA	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	120
A	0.35	0.69	1.04	1.39	1.74	2.08	-	-	-	-	288
BBB	0.00	1.15	2.02	3.75	4.32	4.90	-	-	-	-	347
BB	2.86	11.43	14.29	17.14	17.14	17.14	-	-	-	-	35
B or lower	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	1
BBB or above	0.13	0.76	1.27	2.17	2.55	2.93	-	-	-	-	785
BB or lower	2.78	11.11	13.89	16.67	16.67	16.67	-	-	-	-	36
All	0.24	1.22	1.83	2.80	3.17	3.53	-	-	-	-	821

## 1996 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	29
AA	0.00	0.00	0.91	0.91	0.91	0.91	0.91	-	-	-	110
A	0.00	0.35	1.05	1.75	2.11	2.46	2.81	-	-	-	285
BBB	0.58	0.87	1.74	2.61	3.77	4.64	4.93	-	-	-	345
BB	0.00	0.00	4.65	6.98	11.63	13.95	18.60	-	-	-	43
B or lower	25.00	25.00	25.00	25.00	25.00	25.00	50.00	-	-	-	4
BBB or above	0.26	0.52	1.30	1.95	2.60	3.12	3.38	-	-	-	769
BB or lower	2.13	2.13	6.38	8.51	12.77	14.89	21.28	-	-	-	47
All	0.37	0.61	1.59	2.33	3.19	3.80	4.41	-	-	-	816

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## 1995 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	31
AA	0.00	0.00	0.00	0.99	0.99	0.99	0.99	0.99	-	-	101
A	0.00	0.00	0.37	0.74	1.11	1.85	2.21	2.58	-	-	271
BBB	0.00	0.58	0.86	2.02	2.88	4.03	4.61	4.90	-	-	347
BB	0.00	0.00	2.63	2.63	5.26	10.53	13.16	18.42	-	-	38
B or lower	25.00	25.00	25.00	25.00	25.00	25.00	25.00	50.00	-	-	4
BBB or above	0.00	0.27	0.53	1.33	1.87	2.67	3.07	3.33	-	-	750
BB or lower	2.38	2.38	4.76	4.76	7.14	11.90	14.29	21.43	-	-	42
All	0.13	0.38	0.76	1.52	2.15	3.16	3.66	4.29	-	-	792

## 1994 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	29
AA	0.00	0.00	0.00	0.00	0.91	0.91	0.91	0.91	0.91	-	110
A	0.00	0.00	0.00	0.77	1.93	2.32	3.09	3.47	3.86	-	259
BBB	0.00	0.00	0.66	0.66	1.66	2.66	3.99	5.32	5.65	-	301
BB	0.00	0.00	0.00	3.03	3.03	6.06	12.12	12.12	18.18	-	33
B or lower	0.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	50.00	-	4
BBB or above	0.00	0.00	0.29	0.57	1.57	2.15	3.00	3.72	4.01	-	699
BB or lower	0.00	2.70	2.70	5.41	5.41	8.11	13.51	13.51	21.62	-	37
All	0.00	0.14	0.41	0.82	1.77	2.45	3.53	4.21	4.89	-	736

## 1993 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31
AA	0.00	0.00	0.00	0.00	0.00	0.89	0.89	0.89	1.79	1.79	112
A	0.00	0.00	0.00	0.00	0.79	1.98	2.77	3.95	3.95	4.35	253
BBB	0.80	0.80	0.80	1.61	1.61	2.81	3.21	4.02	6.02	6.83	249
BB	0.00	0.00	0.00	0.00	0.00	0.00	3.70	11.11	11.11	14.81	27
B or lower	0.00	0.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	40.00	5
BBB or above	0.31	0.31	0.31	0.62	0.93	2.02	2.48	3.26	4.19	4.65	645
BB or lower	0.00	0.00	3.13	3.13	3.13	3.13	6.25	12.50	12.50	18.75	32
All	0.30	0.30	0.44	0.74	1.03	2.07	2.66	3.69	4.58	5.32	677

## 1992 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35
AA	0.00	0.00	0.00	0.00	0.00	1.68	3.36	3.36	3.36	4.20	119
A	0.00	0.00	0.00	0.00	0.00	0.00	0.81	1.62	3.24	3.24	247
BBB	0.00	0.86	0.86	1.29	2.16	2.16	3.45	3.88	4.31	6.47	232
BB	0.00	0.00	0.00	0.00	4.17	4.17	8.33	12.50	16.67	16.67	24
B or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	33.33	3
BBB or above	0.00	0.32	0.32	0.47	0.79	1.11	2.21	2.69	3.48	4.42	633
BB or lower	0.00	0.00	0.00	0.00	3.70	3.70	7.41	11.11	18.52	18.52	27
All	0.00	0.30	0.30	0.45	0.91	1.21	2.42	3.03	4.09	5.00	660

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## 1991 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	2.38	2.38	2.38	2.38	42
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.91	2.73	2.73	2.73	110
A	0.00	0.00	0.89	0.89	1.33	1.33	1.33	2.22	3.11	4.89	225
BBB	0.00	0.00	0.00	0.00	0.00	0.89	0.89	1.79	2.23	2.68	224
BB	0.00	0.00	0.00	0.00	0.00	4.17	4.17	8.33	12.50	12.50	24
B or lower	0.00	0.00	0.00	0.00	0.00	0.00	33.33	33.33	33.33	66.67	3
BBB or above	0.00	0.00	0.33	0.33	0.50	0.83	1.16	2.16	2.66	3.49	601
BB or lower	0.00	0.00	0.00	0.00	0.00	3.70	7.41	11.11	14.81	18.52	27
All	0.00	0.00	0.32	0.32	0.48	0.96	1.43	2.55	3.18	4.14	628

## 1990 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	4.44	4.44	45
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	1.85	1.85	108
A	0.00	0.00	0.00	1.01	1.01	1.52	1.52	1.52	2.02	2.53	198
BBB	0.00	0.00	0.41	0.41	0.41	0.41	1.23	1.23	2.46	2.87	244
BB	0.00	0.00	0.00	0.00	0.00	0.00	4.55	4.55	4.55	9.09	22
B or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	50.00	50.00	2
BBB or above	0.00	0.00	0.17	0.50	0.50	0.67	1.01	1.34	2.35	2.69	595
BB or lower	0.00	0.00	0.00	0.00	0.00	0.00	4.17	8.33	8.33	12.50	24
All	0.00	0.00	0.16	0.48	0.48	0.65	1.13	1.62	2.58	3.07	619

## 1989 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.56	39
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	2.27	88
A	0.00	0.00	0.00	0.00	1.18	1.18	1.76	1.76	1.76	1.76	170
BBB	0.00	0.00	0.00	0.36	0.36	0.36	0.36	1.09	1.45	2.55	275
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	4.00	4.00	25
B or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	50.00	2
BBB or above	0.00	0.00	0.00	0.17	0.52	0.52	0.70	1.05	1.57	2.27	572
BB or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.70	7.41	7.41	27
All	0.00	0.00	0.00	0.17	0.50	0.50	0.67	1.17	1.84	2.50	599

## 1988 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	68
A	0.00	0.00	0.00	0.00	0.00	1.31	1.31	1.96	3.27	3.27	153
BBB	0.00	0.00	0.00	0.00	0.34	0.34	0.34	0.34	0.34	0.68	296
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.17	4.17	24
B or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	3
BBB or above	0.00	0.00	0.00	0.00	0.18	0.55	0.55	0.73	1.10	1.46	547
BB or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.70	7.41	27
All	0.00	0.00	0.00	0.00	0.17	0.52	0.52	0.70	1.22	1.74	574

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## 1987 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	117
BBB	0.00	0.00	0.00	0.00	0.00	0.37	0.37	0.37	0.37	0.37	271
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	25
B or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3
BBB or above	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.21	0.43	469
BB or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.57	28
All	0.00	0.00	0.00	0.00	0.00	0.20	0.20	0.20	0.20	0.60	497

## 1986 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	96
BBB	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.43	230
BB	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	23
B or lower	-	-	-	-	-	-	-	-	-	-	0
BBB or above	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.25	401
BB or lower	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	23
All	0.24	0.24	0.24	0.24	0.24	0.24	0.47	0.47	0.47	0.47	424

## 1985 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92
BBB	0.00	0.51	0.51	0.51	0.51	0.51	0.51	1.02	1.02	1.02	197
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14
B or lower	-	-	-	-	-	-	-	-	-	-	0
BBB or above	0.00	0.28	0.28	0.28	0.28	0.28	0.28	0.56	0.56	0.56	357
BB or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14
All	0.00	0.27	0.27	0.27	0.27	0.27	0.27	0.54	0.54	0.54	371

## 1984 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78
BBB	0.00	0.00	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	168
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18
B or lower	0.00	0.00	11.11	11.11	11.11	11.11	11.11	11.11	11.11	11.11	9
BBB or above	0.00	0.00	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	303
BB or lower	0.00	0.00	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	27
All	0.00	0.00	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	330

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## 1983 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74
BBB	0.00	0.00	0.00	0.65	0.65	0.65	0.65	0.65	0.65	0.65	155
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26
B or lower	10.00	10.00	10.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	10
BBB or above	0.00	0.00	0.00	0.35	0.35	0.35	0.35	0.35	0.35	0.35	284
BB or lower	2.78	2.78	2.78	5.56	5.56	5.56	5.56	5.56	5.56	5.56	36
All	0.31	0.31	0.31	0.94	0.94	0.94	0.94	0.94	0.94	0.94	320

## 1982 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76
BBB	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.68	0.68	0.68	148
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29
B or lower	0.00	5.88	5.88	5.88	11.76	11.76	11.76	11.76	11.76	11.76	17
BBB or above	0.00	0.00	0.00	0.00	0.36	0.36	0.36	0.36	0.36	0.36	281
BB or lower	0.00	2.17	2.17	2.17	4.35	4.35	4.35	4.35	4.35	4.35	46
All	0.00	0.31	0.31	0.31	0.92	0.92	0.92	0.92	0.92	0.92	327

## 1981 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73
BBB	0.00	0.00	0.00	0.00	0.00	0.74	0.74	0.74	0.74	0.74	136
BB	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	29
B or lower	0.00	0.00	5.56	5.56	5.56	11.11	11.11	11.11	11.11	11.11	18
BBB or above	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.38	0.38	0.38	265
BB or lower	2.13	2.13	4.26	4.26	4.26	6.38	6.38	6.38	6.38	6.38	47
All	0.32	0.32	0.64	0.64	0.64	1.28	1.28	1.28	1.28	1.28	312

## 1980 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44
BBB	0.00	0.00	0.00	0.00	0.00	0.00	1.05	1.05	1.05	1.05	95
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23
B or lower	0.00	0.00	0.00	12.50	12.50	12.50	18.75	18.75	18.75	18.75	16
BBB or above	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.57	175
BB or lower	0.00	0.00	0.00	5.13	5.13	5.13	7.69	7.69	7.69	7.69	39
All	0.00	0.00	0.00	0.93	0.93	0.93	1.87	1.87	1.87	1.87	214

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## 1979 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45
BBB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	96
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20
B or lower	0.00	0.00	0.00	0.00	6.25	6.25	6.25	12.50	12.50	12.50	16
BBB or above	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	175
BB or lower	0.00	0.00	0.00	0.00	2.78	2.78	2.78	5.56	5.56	5.56	36
All	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.95	0.95	0.95	211

## 1978 group

Year elapsed	1	2	3	4	5	6	7	8	9	10	No. of issuers
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48
BBB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	96
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20
B or lower	0.00	0.00	0.00	0.00	0.00	6.25	6.25	6.25	12.50	12.50	16
BBB or above	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	176
BB or lower	0.00	0.00	0.00	0.00	0.00	2.78	2.78	2.78	5.56	5.56	36
All	0.00	0.00	0.00	0.00	0.00	0.47	0.47	0.47	0.94	0.94	212

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## Appendix 2: Rating Transition Matrix for Asset-Backed Securities

(In the table below, the rating on the left is as of April 1, 2000 while the upper rating is as of April 1, 2001. The same applies below.)

2000-2001	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redemption	Total
AAA	39		1																	3	43
AA+		1																			1
AA			1																		1
AA-				1																	1
A+																					
A						11				1											12
A-							2														2
BBB+																					
BBB									7							1					8
BBB-																					
BB+																					
BB																					
BB-																					
B+																					
B																					
B-																					
CCC																					
CC																					
C																					
Total	39	1	2	1		11	2		7	1					1					3	68

2000-2002	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redemption	Total	
AAA	28	1	1																		13	43
AA+		1																				1
AA			1																			1
AA-				1																		1
A+																						
A						6			1	2											3	12
A-							2															2
BBB+																						
BBB									6				1	1								8
BBB-																						
BB+																						
BB																						
BB-																						
B+																						
B																						
B-																						
CCC																						
CC																						
C																						
Total	28	2	2	1		6	2		7	2			1	1							16	68

2000-2003	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redemption	Total	
AAA	10		1																		32	43
AA+		1																				1
AA			1																			1
AA-																						1
A+																						
A						2				1											9	12
A-																					2	2
BBB+																						
BBB									3					1							4	8
BBB-																						
BB+																						
BB																						
BB-																						
B+																						
B																						
B-																						
CCC																						
CC																						
C																						
Total	10	1	2			2			3	1				1							48	68

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2001-2002	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redemption	Total
AAA	63	2																		11	76
AA+		1																			1
AA			4																		4
AA-				1																	1
A+																					
A						10			2	1										3	16
A-							2														2
BBB+																					
BBB									9				2								11
BBB-										1			1								2
BB+																					
BB																					
BB-													1								1
B+																					
B																					
B-																					
CCC																					
CC																					
C																					
Total	63	3	4	1		10	2		11	2		2	2							14	114

2001-2003	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redemption	Total
AAA	41	1																		34	76
AA+		1																			1
AA			4																		4
AA-																				1	1
A+																					
A						6			1											9	16
A-																				2	2
BBB+																					
BBB									6			1								4	11
BBB-										1			1								2
BB+																					
BB																					
BB-													1								1
B+																					
B																					
B-																					
CCC																					
CC																					
C																					
Total	41	2	4			6			7	1		1	2							50	114

2002-2003	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redemption	Total
AAA	86																			22	108
AA+		2																		1	3
AA			6																		6
AA-				1																1	2
A+					1																1
A						11														4	15
A-																				2	2
BBB+																					
BBB									10											4	14
BBB-										1										1	2
BB+																					
BB												1								1	2
BB-													2								2
B+																					
B																					
B-																					
CCC																					
CC																					
C																					
Total	86	2	6	1	1	11			10	1		1	2							36	157

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