



# NEWS RELEASE

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## Rating Transition Matrix for Securitized Products

R&I has sought to disclose rating performance and provide a fundamental building block for the bond market by publicly releasing information for corporate ratings, such as the broad-definition default ratio. Although R&I had not been disclosing performance in the form of default rates for securitized product ratings because there have not been any defaults on such products to-date, in June 2003 R&I began releasing the Rating Transition Matrix, limited to just publicly issued ratings for securitized products. For the most recent information, R&I has added data for fiscal 2003 and broadened the scope of the survey to include non-public ratings.

Characteristics of the rating transition for securitized products that can be understood from the survey results are as follows.

- The stability of the ratings is high compared to corporate bonds, because credit enhancements for securitized products are set according to the cash flow characteristics of the specific backing assets.
- Actual instances of rating downgrades involved securitized products less diversified backing assets.
- Actual instances of rating upgrades involved securitized products for which the cash flow generated by the backing assets was allocated in order beginning from the highest ranking tranche.

R&I plans to continue making the performance of its securitized product ratings openly available in the future, while pursuing further refinements to its data consolidation and improvements aimed at providing beneficial investment information based on the characteristics of the securitized products.

### 1 Methodology

#### 1.1 Securitized products covered

- The securitized products covered are products for which R&I has assigned a long term credit rating and that R&I is monitoring continuously.<sup>1</sup> As a rule, the assigned ratings are for products typically having a structure by which credit enhancement is provided for the cash flow of the backing assets by means such as a senior/subordinate structure. Products for which default by the specified corporation will directly influence payments of principal and interest on the securitized product<sup>2</sup> were excluded.
- Of the securitized products covered, the securitized products for which R&I has publicly released a rating<sup>3</sup> are products that had been assigned a rating as of April 1, 1998 and products that were rated between April 1, 1998 and March 31, 2003. Securitized products with a non-public rating include products that had been assigned a rating as of January 1, 2003 and products that were rated between January 1, 2003 and March 31, 2003.

<sup>1</sup> Securitized products do not include real estate investment trusts (REITs), but do include Government Housing Loan Corporation bonds.

<sup>2</sup> Excluded products include products such as repackaged bonds, credit-linked notes referencing a single security, first-to-default credit link notes, and products that were assigned a rating that depends upon a guarantee attached to the backing assets or to the securitized product itself, and for which generally the securitized product rating has been decided based on the "weak-link" principle. Synthetic CDO were not excluded, because even though there is a possibility they will be affected directly by a Japanese Government Bond or swap counterparty default the rating assigned unambiguously reflects the creditworthiness of the reference pool.

<sup>3</sup> In addition to securitized products for which R&I publicly announced at the time as a press release the fact it had assigned a rating, this also includes those products only described in the rating lists (*R&I Quarterly on Bonds & Ratings* and the R&I homepage) R&I releases publicly.

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## 1.2 Criteria for counting the number of rated tranches

- As a rule, R&I considers all of the tranches having a *pari passu* ranking<sup>4,5</sup> for distribution of the cash flow generated from the same backing assets to be one tranche when counting the number of rated tranches (the word “tranche” when used below has this same meaning).
- The tracking start date<sup>6</sup> for the tranche rating was assumed to be the issue date or trust execution date<sup>7</sup>, and the tracking expiration date<sup>8</sup> was assumed to be the date when the outstanding tranche balance was repaid.
- In total there were 474 tranches covered by the survey. This included 265 tranches for which R&I publicly released a rating, and 209 tranches with non-public ratings.

## 1.3 Rating Transition Matrix calculation method

The Rating Transition Matrix shows how the ratings assigned to a certain tranche have changed over time. R&I calculated the following two different transition matrices by changing the method for setting the observation period.

### < Rating Transition Matrix by Fiscal Year >

R&I calculated the ratings of the tranches covered by the survey at each fiscal year-end, then summarized how the rating distribution conditions at the beginning and end of each fiscal year had changed. In the table below, the ratings arrayed in descending order in the left-hand column represent the ratings as of March 31, 2000. The ratings assigned one year later, on March 31, 2001, are in the columns under the rating headings shown in the uppermost row. For example, on March 31, 2000, there were a total of 49 tranches with a AAA rating. Of these, 45 still had a AAA rating on March 31, 2001, none were rated AA+, one tranche was rated AA and so on, with no tranches rated B-, CCC+ or lower. There were also three tranches that had been redeemed. The column for redemptions also includes tranches whose outstanding balance was repaid in full prior to the scheduled redemption date for reasons such as early redemption or repayment as a result of purchase.

Fiscal 2000	AAA	AA+	AA	...	B-	CCC+ or lower	Redeemed	Total
AAA	45	0	1	...	0	0	3	49
AA+	0	1	0	...	0	0	0	1
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
B-	0	0	0	...	0	0	0	0
CCC+ or lower	0	0	0	...	0	0	0	0

### < Rating Transition Matrix by Months Passed >

This transition matrix summarizes how the distribution of the ratings for tranches covered by the survey had changed corresponding to the number of months passed since the issue date. In the table below, the ratings arrayed in descending order in the left-hand column represent the ratings on the issue date. The ratings assigned 24 months later are in the columns under the rating headings shown in the uppermost row. The figures in the table show, for example, that among the tranches that were still outstanding after 24 months after issuance or that had been redeemed during that period, a total of 198 tranches had been rated AAA when issued. Of these, 182 tranches still had a AAA rating after 24

<sup>4</sup> When there are multiple tranches each of which provides for lump-sum redemption at different maturity and the cash flow from the backing assets is distributed in order from the tranche with the earliest redemption date, R&I bundles together products whose redemption method is switched to a pass-through when the servicer is replaced and whose cash flow is distributed proportionately in the same order in accordance with the outstanding tranche balances (so-called soft bullet maturity) and counts them as one tranche.

<sup>5</sup> Excluding so-called IO (Interest Only) tranches that distribute only the earnings from the backing assets.

<sup>6</sup> For issues organized as a master trust, R&I will assign a rating for the new trust beneficial interest whenever new backing assets are set up on a trust, but when bundling trust beneficial interests that were assigned ratings at different times into a single tranche based on criterion 1.2 above, R&I used the trust execution date for the first trust beneficial interest assigned a rating by R&I as the tracking start date.

<sup>7</sup> As used here, trust execution date means the date when the trust was executed for the main backing assets.

<sup>8</sup> When bundling trust beneficial interests that were assigned ratings at different times into a single tranche based on criterion 1.2 above, R&I used the longest redemption date as the tracking expiration date.

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months, one tranche was rated AA+, one tranche was rated AA and so on. None of these tranches had been downgraded to B- or CCC+ or lower. There were also 14 tranches had been repaid. Like the table for the above matrix, the column for redemptions also includes tranches whose outstanding balance was repaid in full prior to the scheduled redemption date for reasons such as early redemption or repayment as a result of purchase.

After 24 months	AAA	AA+	AA	...	B-	CCC+ or lower	Redeemed	Total
AAA	182	1	1	...	0	0	14	198
AA+	0	5	0	...	0	0	1	6
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
B-	0	0	0	...	0	0	0	0
CCC+ or lower	0	0	0	...	0	0	0	0

## 2 Survey Results

### 2.1 Rating Transition Matrix by Fiscal Year

The Rating Transition Matrix by fiscal year is suitable for considering what affect the economic environment in each period had on tranche ratings.

By comparing the rating transition situation for industrial bonds and securitized products using the data for the same fiscal year, we can see that the effect differs even under the same economic environment. Stated simply, compared with industrial bonds, securitized products exhibit a higher stability of the rating. This proved that by their nature the rating stability of securitized products is higher because credit enhancements corresponding to the cash flow characteristics of the specific backing assets has been provided.

Furthermore, one can see that securitized products have a higher notching difference<sup>9</sup> when the rating is changed. The only actual instance of a downgrade was a CBO facility backed by corporate bonds from between 10 to 20 issuers. we can say the breadth of a downgrade is greater when the backing assets are less diversified. The upgrade trend for the effect from the passage of time since issuance, which is stronger than the effect from the economic environment in each fiscal year, is discussed in the following section.

Although only four years of data from fiscal 2000 through fiscal 2003 is used for the time series (see the appendix at the end of this report), the ratings stability generally may be said to be high.

< Mean value of the rating transition percentage by fiscal year for securitized products<sup>10</sup>

(Fiscal 2000 – Fiscal 2003) >

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower	Sample size
AAA	99.4	0.4	0.2														502
AA+		100.0															22
AA	7.7		92.3														26
AA-				100.0													16
A+	11.1				88.9												9
A	0.9	0.9				94.8		1.7	1.7								116
A-							100.0										16
BBB+																	
BBB								92.7			4.9	2.4					41
BBB-	16.7								66.7			16.7					6
BB+																	
BB												100.0					3
BB-													100.0				4
B+																	
B																	
B- or lower																	

< Mean value of the rating transition percentage by fiscal year for industrial bonds

<sup>9</sup> The display of a “+” (plus) or “-” (minus) sign after the rating is referred to as “notching,” and the difference in the rating class including the notching display is referred to as the “notching difference.”

<sup>10</sup> The value calculated by matching of the matrices for the number of rating transition cases over four years from fiscal 2000 through fiscal 2003 and dividing by the number of total samples over four years.



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(Fiscal 2000 – Fiscal 2003) ><sup>11</sup>

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower	Broad-definition default	Sample size
AAA	77.0	23.0																61
AA+		85.9	11.8	2.4														85
AA		3.4	87.2	9.4														117
AA-			1.3	86.6	10.2	1.9												157
A+				0.8	87.8	10.2	0.8		0.4									254
A				0.3	1.9	89.1	12.3	1.6		0.6								308
A-						1.4	88.9	7.3	2.1							0.2		423
BBB+							3.3	87.2	7.2	1.6		0.3	0.3					304
BBB							0.3	5.6	80.9	10.6	1.9	0.3		0.3				320
BBB-								0.4	3.1	88.9	6.1	0.8	0.4				0.4	262
BB+										1.0	86.9	5.1	4.0				3.0	99
BB											3.3	63.3	16.7	13.3	3.3			30
BB-									2.9				76.5	5.9	2.9		11.8	34
B+													5.6	66.7	5.6		22.2	18
B															66.7		33.3	15
B- or lower																		0

## 2.2 Rating Transition Matrix by Months Passed

Unlike corporate bonds, which are issued by an operating company to raise funds and are backed by the firm's ongoing operations, securitized products are backed by the cash flow generated by specific assets. The credit enhancement level matching that cash flow is evaluated as a rating. Credit enhancement mechanisms vary, but generally changes in securitized product ratings are expected to increase with each passing month because of the tendency for the cash flow and the credit enhancement level to deviate from projections over time.

After 12 months	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower	Redeemed	Total
AAA	289																6	295
AA+		13																13
AA			17														3	20
AA-				10														10
A+	1				6													7
A						87											3	90
A-							11										1	12
BBB+																		
BBB									20									20
BBB-	1									3								4
BB+																		
BB													2					2
BB-														1				1
B+																		
B																		
B- or lower																		
Total	291	13	17	10	6	87	11		20	3		2	1				13	474

When we examine the Rating Transition Matrix after 12 months, two ratings had been upgraded to AAA. Both actions were exceptions, however, because the agreements covering the backing assets had been revised substantially. Excluding these two instances, there were no rating changes during the first 12 months. The reason is the cash flow from the backing assets does not deviate very much from projections during the 12-month period.

After 24 months and 36 months, a number of instances of rating downgrades accompanying deterioration in the backing assets can be noted. These were the CBO issues mentioned above, in which the diversification of the backing assets was comparatively ineffective because it consisted of corporate bonds issued by only 10 to 20 different issuers. When a corporate bond portfolio offers less diversification, the relative value of the credit enhancement level of the tranche is highly susceptible to the negative effects of a deterioration in the creditworthiness of any one security, with results that are reflected in the rating. But because the credit enhancement level rises relatively as the redemption date nears, even for such CBO issues with less diversification ratings are affirmed in many cases despite deterioration of the creditworthiness of the corporate bond backing assets, and in fact many have been ultimately repaid without incident.

<sup>11</sup> The "broad-definition default" in the table indicates a condition in which the issuing firm has substantially lost the ability to pay its debts and is judged to have caused third parties to suffer an economic loss, regardless of whether the issuer has actually defaulted on its corporate bonds. For a detailed definition and explanation, see the R&I News Release "The Relationship Between Ratings and Default" dated June 30, 2004.



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In the case of well-diversified, effective backing assets, abrupt changes in the performance of the backing assets is rare, and there have been no actual cases of rating downgrades. Even when performance had deteriorated somewhat, the relative rise in the credit enhancement level over time was sufficient to compensate for the change.

After 24 months	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower	Redeemed	Total
AAA	182	1	1														14	198
AA+		5															1	6
AA			8														4	12
AA-				5														5
A+					2													2
A						26			1	1							3	31
A-							4										1	5
BBB+																		
BBB									14			1	1					16
BBB-													1					1
BB+																		
BB																		
BB-																		
B+																		
B																		
B- or lower																		
Total	182	6	9	5	2	26	4		15	1		1	2				23	276

After 36 months	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower	Redeemed	Total
AAA	76	1	1														52	130
AA+		3															1	4
AA			2														6	8
AA-				3														3
A+																		
A						8			1	2							9	20
A-							3										1	4
BBB+																		
BBB									8			1	1				3	13
BBB-																	1	1
BB+																		
BB																		
BB-																		
B+																		
B																		
B- or lower																		
Total	76	4	3	3		8	3		9	2		1	1				73	133

When we examine the character of securitized products as described above, their ratings are expected to show a structure that changes in the direction of upgrades over time. While there have been no actual instances of upgrades until now because of the many tranches rated AAA, the highest rating class, in fiscal 2003 R&I did upgrade mezzanine tranches because of an increase in the credit enhancement ratio. Less than 12 months have passed since R&I revised the ratings on March 31, 2004, however, so these data do not appear in the transition matrix for the 12-month segment described above. The transition matrices for the periods 19 months and 40 months after R&I upgraded these tranches are shown below.

Under the credit enhancement mechanism, there are tranches for which the credit enhancement level becomes relatively higher over time as well as tranches for which the credit enhancement level remains constant. In general, however, the credit enhancement level will tend to become relatively higher if the performance of the backing assets remains at the same level as when the tranche was initially issued. Particularly when the diversification of the backing assets is low, more leeway can exist in the initial credit enhancement level and the frequency and breadth of upgrades also increase when the tranche exhibits strong performance, because the expected scope of the cash flow expands. In fact, for CMBS issues the upgraded tranches did not have a very high degree of diversification, but these are a type of securitized product in which cash flow from the sale of backing real estate assets is allocated sequentially from the senior tranche, and the credit enhancement ratio for the senior tranches rose substantially as real estate sales progressed.

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After 19 months	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower	Redeemed	Total
AAA	219	1	1														9	230
AA+		8															1	9
AA	1		11														4	16
AA-				5														5
A+					4													4
A		1				44			1	1							3	50
A-							7										1	8
BBB+																		
BBB									16			1	1					18
BBB-										1			1					2
BB+																		
BB												1						1
BB-													1					1
B+																		
B																		
B- or lower																		
Total	220	10	12	5	4	44	7		17	2		2	3				18	344

After 40 months	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower	Redeemed	Total
AAA	45	1	1														59	106
AA+		3															1	4
AA	1		1														6	8
AA-				2													1	3
A+																		
A	1					2				2							13	18
A-							1										3	4
BBB+																		
BBB									5				1				6	12
BBB-																	1	1
BB+																		
BB																		
BB-																		
B+																		
B																		
B- or lower																		
Total	47	4	2	2		2	1		5	2			1				90	156

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(Appendix 1) Rating Transition Matrix by fiscal year

Fiscal 2000	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redeemed	Total
AAA	45		1																	3	49
AA+		1																			1
AA			1																		1
AA-				1																	1
A+					1																1
A						11				1											12
A-							2														2
BBB+								7													7
BBB									7												7
BBB-										1											1
BB+											1										1
BB												1									1
BB-													1								1
B+														1							1
B															1						1
B-																1					1
CCC																	1				1
CC																		1			1
C																			1		1
Total	45	1	2	1		11	2		7	1			1							3	74

Fiscal 2001	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redeemed	Total	
AAA	90	2																			10	102
AA+		3																				3
AA			4																			4
AA-				3																		3
A+					1																	1
A						10				2	1										3	16
A-							3															3
BBB+								10														10
BBB									10													10
BBB-										1												1
BB+											1											1
BB												1										1
BB-													1									1
B+														1								1
B															1							1
B-																1						1
CCC																	1					1
CC																		1				1
C																			1			1
Total	90	5	4	3		10	3		12	2		2	2								13	146

Fiscal 2002	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redeemed	Total	
AAA	151																				27	178
AA+		6																			1	7
AA			7																		2	9
AA-				4																	1	5
A+					2																1	2
A						17															5	22
A-							2														2	4
BBB+								11														11
BBB									11													11
BBB-										1												1
BB+											1											1
BB												1										1
BB-													2									2
B+														1								1
B															1							1
B-																1						1
CCC																	1					1
CC																		1				1
C																			1			1
Total	151	6	7	4	2	17	2		11	1		1	2								44	248

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Fiscal 2003	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC	CC	C	Redeemed	Total
AAA	213																			38	251
AA+		12																		2	14
AA	2		12																	2	16
AA-				8																1	9
A+	1				6																7
A	1	1				72														3	77
A-							9														9
BBB+																					
BBB									10											5	15
BBB-	1									2										1	4
BB+																					
BB												2									1
BB-													1							2	3
B+																					
B																					
B-																					
CCC																					
CC																					
C																					
Total	218	13	12	8	6	72	9		10	2		2	1							55	408

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