News Release

JCR Rating Transition Matrices and Cumulative Default Rates

JCR announces, as it has done annually in the past, its latest rating transition matrices and cumulative default rates as based on its ratings assigned by 2012. Historical data used in the calculation (the number of issuers or issues, number of defaulted corporations, etc.) are to be posted on JCR's website (http://www.jcr.co.jp).

Rating Transition Matrices and Cumulative Default Rates for Corporations, etc. ("Corporate Rating")

I. Modifications Made from Last Year

In survey of rating transition matrices and cumulative default rates ("CDRs") for corporations, etc. ("corporate rating") this time ("this survey" or "the survey"), a part of method employed was modified from last year. This modification is intended to reflect modifications made to a part of JCR's rating symbol system and to further increase comparability of statistics with respect to rating transitions.

As a major modification firstly, JCR added "LD" to the rating transition matrices in line with the adding of "LD" to the rating symbol on August 28, 2012. "LD" indicates that "JCR judges that while an obligor does not honor part of the agreed to financial obligations, but it honors all its other agreed to financial obligations." JCR has reflected this situation as "LD" in the rating transition matrices since August 28, 2012.

For the corporate rating transition matrices and CDRs, JCR has previously observed transitions and tallied the number every month during the covered period. In this survey, JCR observed transitions and tallied the number from the beginning of each year for each year. As for the previous surveys of "Broadly Defined Three-year CDRs Based on Category-wise Ratings," however, JCR has observed transitions from the beginning of each year for each year as in the case of this survey.

For the CDRs, JCR has been publishing two kinds of CDRs; CDRs which do not include debt forgiveness or debt-to-equity swaps ("DES"), and CDRs which do include debt forgiveness and DES with respect to definition of defaults. In this survey, JCR publishes only CDRs with the latter definition of defaults which is more broadly defined defaults than the former. The latter definition is the same as the "Broadly Defined Three-year CDRs Based on Category-wise Ratings" in the previous surveys.

JCR also changed coverage of survey partly. In particular, JCR added medical institutions and educational institutions to the coverage of the survey.

II. Corporate Rating Transition Matrices

1. Coverage of Survey

JCR covered resident corporations, for which JCR made public long-term ratings during period from January 1, 2000 to December 31 2012, and does not include non-resident corporations, countries (sovereigns), local governments, and investment corporations or J-REITs in this survey.

In principle, JCR uses long-term issuer ratings. In cases where there is no long-term issuer rating, JCR chose a proper rating from long-term issue rating or ability to pay insurance claims rating and used it. JCR excluded ratings on guaranteed products or products with subordinated clause and "p" ratings (ratings assigned without soliciting by an issuer) from the survey. However, in cases where JCR withdrew a solicited rating following request for withdrawal from the issuer and then assigned a "p" rating to the issuer shortly after the rating withdrawal, and this "p" rating has defaulted finally, JCR treated such "p" ratings as succession from the solicited rating. In cases where a rating is placed under Credit Monitor, JCR uses the symbol of the rating, on which Credit Monitor is placed.

2. Method Employed

Rating transition matrices illustrate changes of ratings at a certain point after a certain period elapses in probability form (percentage).

JCR prepares a frequency distribution table in the form of matrix, listing the ratings at the beginning of each year during the covered period (from 2000 to 2012 in this survey) as the initial ratings on vertical axis (column) and the ratings after a lapse of tallying unit period on horizontal axis (row). In case of creation of rating transition matrix for 1 year tallying unit period, for example, JCR creates a

frequency distribution table that indicates changes of ratings at the beginning of year 2000 one year later and then creates a table in the same way for the ratings at the beginning of year 2001, and thereafter. JCR then simply adds the numbers in the cells of the multiple frequency distribution tables created in the aforementioned process at the same position and divides the figure totaled in each cell by the total number of ratings at the initial time (the total number of data for each row) for each rating category to indicate the results in percentage form as rating transition matrix.

In cases where reorganizations such as mergers and company splits have been conducted, JCR focuses attention on legal survival or extinction and decides continuation or non-continuation of the transition observations. In cases where JCR assigned a rating for a new company into which two companies rated by JCR merged, JCR, in principle, traces rating transition of the new company from the rating of the surviving company and does not trace rating transition of the new company from the extinct company.

In cases where "LD" or "D" has been assigned for a certain issuer during a certain year, JCR treats the record in the rating transition matrix as if the rating at the end of the year was "LD" or "D".

3. Rating Transition Matrices (from 2000 to 2012) (Please refer to Tables 1 through 3)

Table 1. Rating Transition Matrix (tallying unit period: 1 year)

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC or lower	LD	D
AAA	94.05	4.86	0.54	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA+	1.27	91.14	6.33	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	0.34	1.01	93.96	3.69	0.00	0.34	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA-	0.00	0.00	3.32	89.42	6.22	0.62	0.21	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A+	0.00	0.01	0.26	5.45	87.92	5.97	0.13	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
A	0.00	0.00	0.29	0.57	6.32	86.60	5.26	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-	0.00	0.00	0.08	0.17	0.33	9.47	84.22	4.98	0.08	0.08	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BBB+	0.00	0.00	0.00	0.00	0.24	1.06	9.32	81.13	7.67	0.24	0.00	0.12	0.00	0.12	0.00	0.00	0.12	0.00	0.00
BBB	0.00	0.00	0.00	0.09	0.00	0.19	0.94	8.17	82.82	6.57	0.47	0.09	0.00	0.09	0.00	0.00	0.09	0.09	0.38
BBB-	0.00	0.00	0.00	0.00	0.32	0.16	0.16	0.32	10.03	79.94	6.47	1.29	0.00	0.32	0.32	0.32	0.00	0.00	0.32
BB+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	16.81	69.03	7.96	1.77	0.88	0.00	0.88	0.00	0.00	1.77
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.44	15.56	64.44	11.11	4.44	0.00	0.00	0.00	0.00	0.00
BB-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.53	21.05	42.11	15.79	0.00	0.00	10.53	0.00	0.00
B+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.14	0.00	0.00	21.43	57.14	0.00	0.00	0.00	14.29
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.57	0.00	14.29	0.00	57.14
B-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	60.00	20.00	0.00	0.00
CCC or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33	0.00	66.67

Table 2. Rating Transition Matrix (tallying unit period: 3 years)

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC or lower	LD	D
AAA	85.33	9.33	4.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA+	3.64	75.45	15.45	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	0.46	4.63	82.87	7.87	0.93	1.39	0.46	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA-	0.00	0.00	8.17	72.21	16.08	2.18	0.00	0.00	0.82	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A+	0.00	0.00	1.71	13.14	69.62	12.97	1.19	0.68	0.17	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
A	0.00	0.00	0.64	1.67	16.45	65.42	10.15	4.88	0.39	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.13	0.00	0.00
A-	0.00	0.00	0.32	0.32	2.55	22.51	63.06	8.17	1.59	1.06	0.11	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.11
BBB+	0.00	0.00	0.16	0.16	0.65	5.34	20.39	53.56	14.89	3.72	0.32	0.00	0.16	0.00	0.00	0.00	0.32	0.00	0.32
BBB	0.00	0.00	0.00	0.26	0.00	1.53	4.46	19.52	59.06	12.63	1.02	0.26	0.00	0.13	0.00	0.00	0.13	0.13	0.89
BBB-	0.00	0.00	0.00	0.44	0.44	1.33	1.78	3.56	23.56	52.00	9.78	1.78	0.22	0.22	0.44	0.67	0.00	0.00	3.78
BB+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.63	8.45	32.39	29.58	11.27	5.63	1.41	0.00	0.00	0.00	0.00	5.63
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	29.17	33.33	16.67	4.17	0.00	0.00	0.00	0.00	0.00
BB-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.77	23.08	0.00	15.38	15.38	0.00	0.00	0.00	0.00	15.38
B+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.67	16.67	0.00	16.67	8.33	8.33	0.00	0.00	0.00	0.00	33.33
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
B-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.67	0.00	0.00	0.00	0.00	0.00	0.00	33.33
CCC or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.29	0.00	85.71

Table 3. Rating Transition Matrix (tallying unit period: 5 years)

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC or lower	LD	D
AAA	78.95	12.28	6.14	0.00	0.88	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA+	4.76	63.10	25.00	5.95	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	0.00	8.22	70.55	13.01	2.74	2.05	0.68	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA-	0.00	0.38	12.50	63.26	18.56	2.65	0.00	1.52	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
A+	0.00	0.00	2.75	19.22	57.67	16.02	2.06	1.60	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
A	0.00	0.00	1.62	1.80	26.03	51.71	10.95	6.10	0.72	0.18	0.00	0.18	0.18	0.00	0.00	0.00	0.54	0.00	0.00
A-	0.00	0.00	0.28	1.42	6.67	28.79	48.79	9.65	2.55	1.28	0.14	0.14	0.00	0.00	0.00	0.14	0.00	0.00	0.14
BBB+	0.00	0.00	0.24	0.72	0.96	9.64	26.27	42.17	13.49	3.86	0.24	0.24	0.00	0.00	0.48	0.24	0.24	0.24	0.96
BBB	0.00	0.00	0.00	0.18	0.18	5.04	6.83	26.98	47.12	11.51	0.90	0.18	0.00	0.00	0.00	0.00	0.00	0.00	1.08
BBB-	0.00	0.00	0.32	0.32	0.63	1.89	5.36	9.78	25.55	41.96	5.05	1.89	0.63	0.00	0.00	0.00	0.00	0.00	6.62
BB+	0.00	0.00	0.00	0.00	0.00	4.08	2.04	4.08	24.49	28.57	18.37	6.12	2.04	2.04	0.00	0.00	0.00	0.00	8.16
BB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.76	23.53	17.65	23.53	11.76	5.88	0.00	0.00	0.00	0.00	5.88
BB-	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.00	33.33	0.00	0.00	11.11	22.22	0.00	0.00	0.00	0.00	0.00	22.22
B+	0.00	0.00	0.00	0.00	0.00	0.00	18.18	0.00	18.18	0.00	18.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.45
B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
B-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
CCC or lower	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00

III. CDRs Based on Category-wise Corporate Rating

1. Coverage of Survey

Coverage of survey for CDRs in this survey is the same as that for rating transition matrix.

2. Method Employed

To calculate CDRs, JCR observes change in the pool of ratings which existed at the beginning of each year during the covered period (from 2000 to 2012 in this survey) (cohort of each year). JCR counts the number of defaulted issuers for each number of years elapsed for cohort of each year by rating category, and produces weighted averages against the number of surviving issuers at the beginning of each number of years elapsed to obtain a marginal default rate for each number of years elapsed. The method employed is summarized as follows.

Y year denotes each year of the period covered.

a_Y The number of initially rated issuers for Y year cohort (pool of ratings existed at the beginning of Y year).

$d_{Y,t}$: The number of defaulted issuers among the initially rated issuers which defaulted during t th year for Y year cohort.

Then, the number of surviving issuers at the beginning of t th year for Y year cohort can be described as below.

$$a(Y,t) = \begin{cases} a_Y & t=1 \\ a_Y - \sum_t d_{Y,t-1} & t \neq 1 \end{cases}$$

Using the above, weighted average default rate at t th year is described as below.

$$\alpha_t = \frac{\sum_Y d_{Y,t}}{\sum_Y a(Y,t)}$$

Then, CDRs for n years are described by the following formula:

$$1 - \prod_{i=1}^{n}(1-\alpha_i)$$

In cases where reorganizations such as mergers and company splits have been conducted, JCR, in principle, focuses attention on legal survival or extinction and traces rating transition accordingly. This is the same as the policy for rating transition matrices. To calculate CDRs, however, in cases where a new company created by merger between rated companies defaults, JCR treats both the surviving company and the extinct company as defaulted. In case of default of a new company created by merger of the extinct company being rated by JCR and the surviving company not being rated by JCR, JCR counts a default for the extinct company which had been rated.

JCR traces default of issuers, for which ratings have been extinguished owing to withdrawals requested by the issuer or other reasons, and reflects the results in calculation of CDRs. JCR includes these traced issuers whose ratings have been extinguished in calculation of the default rate for both the numerator and the denominator if they default. JCR includes these traced issuers whose ratings have been extinguished in calculation of the default rate for the denominator only if they do not default. JCR stops the tracing, however, when tracing of defaults is considered difficult owing to some reasons such as significant difficulty in obtaining important information including financial statements on such issuers whose ratings have been extinguished.

3. Definition of Default

Default means a state, in which principal or interest payments of financial obligations cannot be honored as initially agreed, with respect to the CDRs. This includes the following cases: (i) JCR judges that all the financial obligations are, in effect, in default. (ii) JCR judges that while an obligor does not honor part of the agreed to financial obligations, but it honors all its other agreed to financial obligations. Usually, when cases fall under the former, "D" ratings are assigned, and "LD" ratings are assigned when cases fall under the latter. Commencement of legal bankruptcy proceedings is a typical example of the former situation, and a situation where specific creditor grants debt forgiveness or DES for debt relief is a typical example of the latter situation. JCR counts a case where "JCR judges that while an obligor does not honor part of the agreed to financial obligations, but it honors all its other agreed to financial obligations" as a default for calculating CDRs even prior to its introduction of "LD" to the rating symbol on August 28, 2012.

4. CDRs (from 2000 to 2012) (Please refer to Table 4)

Table 4. CDRs
(Unit: %)

Rating	1-year	2-year	3-year	4-year	5-year
AAA	0.00	0.00	0.00	0.00	0.00
AA	0.00	0.00	0.00	0.00	0.00
A	0.03	0.14	0.22	0.35	0.55
BBB	0.62	1.49	2.34	3.00	3.52
BB	3.38	5.94	9.46	12.19	15.11
B	20.59	38.24	52.94	58.82	58.82
CCC or lower	66.67	66.67	66.67	66.67	66.67

Rating Transition Matrices for Asset-Backed Securities (ABS)

"Rating Transition Matrices by Lapse of Months" and "1-Year (on a Calendar Year Basis) Rating Transition Matrices" based on data in the latest three years are as follows.

1. Coverage of Survey

The data covered products with credit enhancement provided in the form of senior-subordinated structure for the underlying assets in principle, for which their ratings were made public from November 1996 to December 2012, in the survey.

Products such as repackaged bonds and guaranteed products linked to ratings of third parties have been excluded in principle. Products consisting of multiple tranches have been counted as one when they have the same ranking while different in maturities.

2. Method Employed and Results

(1) Rating Transition Matrices by Lapse of Months (Please refer to Tables 5 through 7)

JCR surveyed and tallied how the rating on each of the products changed as months elapsed from the rating at the time of the issuance. Shown in Tables 5, 6 and 7 are the distributions of changes after lapse of 12 months, 24 months and 36 months, respectively. JCR did not count the products redeemed before the end of each period or the products that did not exist for each aforementioned period, despite changes in ratings.

Table 5. 12-months Later Rating Transition Matrix

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower
AAA	100.00															
AA+		100.00														
AA		5.88	94.12													
AA-				100.00												
A+					100.00											
A					2.22	97.78										
A-							100.00									
BBB+								100.00								
BBB									95.83	4.17						
BBB-										100.00						
BB+											100.00					
BB												100.00				
BB-																
B+														100.00		
B															100.00	
B- or lower																100.00

Table 6. 24-months Later Rating Transition Matrix

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower
AAA	100.00															
AA+	33.33	66.67														
AA	10.71	14.29	71.43		3.57											
AA-			26.32	68.42	5.26											
A+	16.67				83.33											
A	2.86			2.86		94.29										
A-		11.11					88.89									
BBB+								100.00								
BBB									94.44	5.56						
BBB-										100.00						
BB+											100.00					
BB												100.00				
BB-																
B+														100.00		
B															100.00	
B- or lower																100.00

Table 7. 36-months Later Rating Transition Matrix

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower
AAA	100.00															
AA+		100.00														
AA	26.09	8.70	52.17		4.35	4.35	4.35									
AA-			11.76	64.71			11.76		5.88	5.88						
A+	33.33				66.67											
A	7.41		7.41	3.70	3.70	77.78										
A-	11.11						77.78	11.11								
BBB+								100.00								
BBB						7.14	7.14		78.57	7.14						
BBB-										100.00						
BB+											100.00					
BB												100.00				
BB-													100.00			
B+														100.00		
B															100.00	
B- or lower																100.00

(2) 1-Year (on a Calendar Year Basis) Rating Transition Matrices (Please refer to Tables 8 & 9)

JCR studied how the ratings at the beginning of January each year changed by the end of the year over the period from 2010 to 2012. The changes in the three years were added and averaged as indicated in Table 8. The rating transitions in the year 2012 are also shown in Table 9 for reference.

Table 8. 1-year (on a Calendar Year Basis) Average Rating Transition Matrix for 2010 - 2012

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower
AAA	100.00															
AA+	25.00	75.00														
AA	12.12	3.03	81.82			3.03										
AA-			10.53	84.21	5.26											
A+			10.00		70.00	10.00	10.00									
A	7.41		3.70		11.11	70.37	3.70				3.70					
A-				9.09		9.09	63.64			18.18						
BBB+								100.00								
BBB					14.29				85.71							
BBB-									50.00	50.00						
BB+											100.00					
BB												100.00				
BB-																
B+																
B																
B- or lower																

Table 9. 1-year (on a Calendar Year Basis) Rating Transition Matrix for 2012

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B- or lower
AAA	100.00															
AA+		100.00														
AA	18.18		72.73			9.09										
AA-			16.67	66.67	16.67											
A+					75.00		25.00									
A	12.50		12.50			62.50	12.50									
A-					50.00					50.00						
BBB+								100.00								
BBB									100.00							
BBB-																
BB+																
BB												100.00				
BB-																
B+																
B																
B- or lower																

(Financial Technology Division, Rating Administration Division and Structured Finance Dept.)

Japan Credit Rating Agency, Ltd.

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This press release is a corrected release dated March 27, 2014 because there were mistakes as shown below in the initial release on March 15, 2013.

Correction on March 27, 2014

Table 5. 12-months Later Rating Transition Matrix on Page 4

	AA+	AA
AA	(Wrong) 2.94 (Correct) 5.88	(Wrong) 97.06 (Correct) 94.12

Table 8. 1-year (on a Calendar Year Basis) Average Rating Transition Matrix for 2010 – 2012 on Page 5

	AA+	AA
AA	(Wrong) 0.00 (Correct) 3.03	(Wrong) 84.85 (Correct) 81.82