Moody's Investors Service, Inc.

Annual Certification of Form NRSRO 2014

FORM NRSRO

OMB APPROVAL
OMB Number: 3235-0625
Expires: November 30, 2017
Estimated average burden hours per response: 36

APPLICATION FOR REGISTRATION AS A NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION (NRSRO)

SEC 1541 (1-15)

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

APPLICATION FOR REGISTRATION AS A NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION (NRSRO)

☐ INITIAL APPLICATION

☐ APPLICATION TO ADD CLASS OF CREDIT RATINGS

☐ APPLICATION SUPPLEMENT
Items and/or Exhibits Supplemented:

_____

☑ ANNUAL CERTIFICATION

☐ UPDATE OF REGISTRATION
Items and/or Exhibits Amended:

_____

☐ WITHDRAWAL FROM REGISTRATION

Important: Refer to Form NRSRO Instructions for General Instructions, Item-by-Item Instructions, an Explanation of Terms, and the Disclosure Reporting Page (NRSRO). "You" and "your" mean the person filing or furnishing, as applicable, this Form NRSRO. "Applicant" and "NRSRO" mean the person filing or furnishing, as applicable, this Form NRSRO and any credit rating affiliate identified in Item 3.

1. **A.** Your full name:

Moody's Investors Service, Inc.

B. (i) Name under which your credit rating business is primarily conducted, if different from Item 1A:

N/A

(ii) Any other name under which your credit rating business is conducted and where it is used (other than the name of a credit rating affiliate identified in Item 3):

N/A

C. Address of your principal office (do not use a P.O. Box):

250 Greenwich Street	New York	NY	10007
(Number and Street)	(City)	(State/Country)	(Zip/Postal Code)

D. Mailing address, if different:

N/A			
(Number and Street)	(City)	(State/Country)	(Zip/Postal Code)

E. Contact person (See Instructions):

James Bodovitz		MIS Designated Compliance Officer	
(Name and Title)			
250 Greenwich Street	New York	NY	10007
(Number and Street)	(City)	(State/Country)	(Zip/Postal Code)

CERTIFICATION:

The undersigned has executed this Form NRSRO on behalf of, and on the authority of, the Applicant/NRSRO. The undersigned, on behalf of the Applicant/NRSRO, represents that the information and statements contained in this Form, including Exhibits and attachments, all of which are part of this Form, are accurate in all significant respects. If

this is an ANNUAL CERTIFICATION, the undersigned, on behalf of the NRSRO, represents that the NRSRO's application on Form NRSRO, as amended, is accurate in all significant respects.

27 March 2015 (Date) | Moody's Investors Service, Inc. (Name of the Applicant/NRSRO)

By: [signature] (Signature) | Michel Madelain, President and Chief Operating Officer (Print Name and Title)

2. **A.** Your legal status:

☑ Corporation ☐ Limited Liability Company ☐ Partnership ☐ Other (specify) _____

B. Month and day of your fiscal year end: 12/31

C. Place and date of your formation (i.e., state or country where you were incorporated, where your partnership agreement was filed, or where you otherwise were formed):

State/Country of formation: Delaware, USA Date of formation: 5/10/68

3. Your credit rating affiliates (See Instructions):

Item 3 is attached and is made a part of this Form NRSRO

(Name) (Address)

(Name) (Address)

(Name) (Address)

(Name) (Address)

(Name) (Address)

4. The designated compliance officer of the Applicant/NRSRO (See Instructions):

James Bodovitz MIS Designated Compliance Officer

(Name and Title)

250 Greenwich Street | New York | NY | 10007

(Number and Street) (City) (State/Country) (Postal Code)

5. Describe in detail how this Form NRSRO and Exhibits 1 through 9 to this Form NRSRO will be made publicly and freely available on an easily accessible portion of the corporate Internet website of the Applicant/NRSRO (See Instructions):

Form NRSRO and its exhibits will be publicly available, free of charge, on the Regulatory Affairs page of our website, www.moodys.com.

6. **COMPLETE ITEM 6 ONLY IF THIS IS AN INITIAL APPLICATION, APPLICATION SUPPLEMENT, OR APPLICATION TO ADD A CLASS OF CREDIT RATINGS.**

A. Indicate below the classes of credit ratings for which the Applicant/NRSRO is applying to be registered. For each class, indicate the approximate number of obligors, securities, and money market instruments in that class as of the date of this application for which the Applicant/NRSRO has an outstanding credit rating and the approximate date the Applicant/NRSRO began issuing credit ratings as a "credit rating agency" in that class on a continuous basis through the present (See Instructions):

Class of credit ratings	Applying for registration	Approximate number currently outstanding	Approximate date issuance commenced
financial institutions as that term is defined in section 3(a)(46) of the Exchange Act (15 U.S.C. 78c(a)(46)), brokers as that term is defined in section 3(a)(4) of the Exchange Act (15 U.S.C. 78c(a)(4)), and dealers as that term is defined in section 3(a)(5) of the Exchange Act (15 U.S.C. 78c(a)(5))	☐		
insurance companies as that term is defined in section 3(a)(19) of the Exchange Act (15 U.S.C. 78c(a)(19))	☐		
corporate issuers	☐		
issuers of asset-backed securities as that term is defined in 17 CFR 229.1101(c)	☐		
issuers of government securities as that term is defined in section 3(a)(42) of the Exchange Act (15 U.S.C. 78c(a)(42)), municipal securities as that term is defined in section 3(a)(29) of the Exchange Act (15 U.S.C. 78c(a)(29)), and foreign government securities	☐		

B. Briefly describe how the Applicant/NRSRO makes the credit ratings in the classes indicated in Item 6A readily accessible for free or for a reasonable fee (See Instructions):

_____

_____

_____

C. Check the applicable box and attach certifications from qualified institutional buyers, if required (See Instructions):

☐ The Applicant/NRSRO is attaching _____certifications from qualified institutional buyers to this application. Each is marked "Certification from Qualified Institutional Buyer."

☐ The Applicant/NRSRO is exempt from the requirement to file certifications from qualified institutional buyers pursuant to section 15E(a)(1)(D) of the Exchange Act.

Note: You are not required to make a Certification from a Qualified Institutional Buyer filed with this Form NRSRO publicly available on your corporate Internet website pursuant to Exchange Act Rule 17g-1(i). You may request that the Commission keep these certifications confidential by marking each page "Confidential Treatment" and complying with Commission rules governing confidential treatment. The Commission will keep the certifications confidential upon request to the extent permitted by law.

7. DO NOT COMPLETE ITEM 7 IF THIS IS AN INITIAL APPLICATION.

A. Indicate below the classes of credit ratings for which the NRSRO is currently registered. For each class, indicate the approximate number of obligors, securities, and money market instruments in that class for which the NRSRO had an outstanding credit rating as of the most recent calendar year end and the approximate date the NRSRO began issuing credit ratings as a "credit rating agency" in that class on a continuous basis through the present (See Instructions):

Class of credit rating	Currently registered	Approximate number outstanding as of the most recent calendar year end	Approximate date issuance commenced
financial institutions as that term is defined in section 3(a)(46) of the Exchange Act (15 U.S.C. 78c(a)(46)), brokers as that term is defined in section 3(a)(4) of the Exchange Act (15 U.S.C. 78c(a)(4)), and dealers as that term is defined in section 3(a)(5) of the Exchange Act (15 U.S.C. 78c(a)(5))	✔	52,049	1919
insurance companies as that term is defined in section 3(a)(19) of the Exchange Act (15 U.S.C. 78c(a)(19))	✔	3,336	1919
corporate issuers	✔	41,364	1909
issuers of asset-backed securities as that term is defined in 17 CFR 229.1101(c)	✔	71,504	1983
issuers of government securities as that term is defined in section 3(a)(42) of the Act (15 U.S.C. 78c(a)(42)), municipal securities as that term is defined in section 3(a)(29) of the Exchange Act (15 U.S.C. 78c(a)(29)), and foreign government securities	✔	673,166	1914

B. Briefly describe how the NRSRO makes the credit ratings in the classes indicated in Item 7A readily accessible for free or for a reasonable fee (See Instructions):

All public credit ratings are available free of charge, generally through press releases, on our website, www.moodys.com

8. Answer each question. Provide information that relates to a "Yes" answer on a Disclosure Reporting Page (NRSRO) and submit the Disclosure Reporting Page with this Form NRSRO (See Instructions). You are not required to make any disclosure reporting pages submitted with this Form publicly available on your corporate Internet website pursuant to Exchange Act Rule 17g-1(i). You may request that the Commission keep any disclosure reporting pages confidential by marking each page "Confidential Treatment" and complying with Commission rules governing confidential treatment. The Commission will keep the disclosure reporting pages confidential upon request to the extent permitted by law.	

	YES	NO
A. Has the Applicant/NRSRO or any person within the Applicant/NRSRO committed or omitted any act, or been subject to an order or finding, enumerated in subparagraphs (A), (D), (E), (G), or (H) of section 15(b)(4) of the Securities Exchange Act of 1934, been convicted of any offense specified in section 15(b)(4)(B) of the Securities Exchange Act of 1934, or been enjoined from any action, conduct, or practice specified in section 15(b)(4)(C) of the Securities Exchange Act of 1934 in the ten years preceding the date of the initial application of the Applicant/NRSRO for registration as an NRSRO or at any time thereafter?	☐	☑
B. Has the Applicant/NRSRO or any person within the Applicant/NRSRO been convicted of any crime that is punishable by imprisonment for 1 or more years, and that is not described in section 15(b)(4) of the Securities Exchange Act of 1934, or been convicted of a substantially equivalent crime by a foreign court of competent jurisdiction in the ten years preceding the date of the initial application of the Applicant/NRSRO for registration as an NRSRO or at any time thereafter?	☑	☐
C. Is any person within the Applicant/NRSRO subject to any order of the Commission barring or suspending the right of the person to be associated with an NRSRO?	☐	☑

9. Exhibits (See Instructions).

Exhibit 1. Credit ratings performance measurement statistics.

☑ Exhibit 1 is attached and made a part of this Form NRSRO.

Exhibit 2. A description of the procedures and methodologies used in determining credit ratings.

☑ Exhibit 2 is attached and made a part of Form NRSRO.

Exhibit 3. Policies or procedures adopted and implemented to prevent the misuse of material, nonpublic information.

☑ Exhibit 3 is attached and made a part of this Form NRSRO.

Exhibit 4. Organizational structure.

☑ Exhibit 4 is attached to and made a part of this Form NRSRO.

Exhibit 5. The code of ethics or a statement of the reasons why a code of ethics is not in effect.

☑ Exhibit 5 is attached to and made a part of this Form NRSRO.

Exhibit 6. Identification of conflicts of interests relating to the issuance of credit ratings.

☑ Exhibit 6 is attached to and made a part of this Form NRSRO.

Exhibit 7. Policies and procedures to address and manage conflicts of interest.

☑ Exhibit 7 is attached to and made a part of this Form NRSRO.

Exhibit 8. Certain information regarding the credit rating agency's credit analysts and credit analyst supervisors.

☑ Exhibit 8 is attached to and made a part of this Form NRSRO.

Exhibit 9. Certain information regarding the credit rating agency's designated compliance officer.

☑ Exhibit 9 is attached to and made a part of this Form NRSRO.

Exhibit 10. A list of the largest users of credit rating services by the amount of net revenue earned from the user during the fiscal year ending immediately before the date of the initial application.

☑ Exhibit 10 is attached to and made a part of this Form NRSRO.

Note: You are not required to make this Exhibit publicly available on your corporate Internet website pursuant to Exchange Act Rule 17g-1(i). You may request that the Commission keep this Exhibit confidential by marking each page "Confidential Treatment" and complying with Commission rules governing confidential treatment. The Commission will keep the information and documents in the Exhibit confidential upon request to the extent permitted by law.

Exhibit 11. Audited financial statements for each of the three fiscal or calendar years ending immediately before the date of the initial application.

☑ Exhibit 11 is attached to and made a part of this Form NRSRO.

Note: You are not required to make this Exhibit publicly available on your corporate Internet website pursuant to Exchange Act Rule 17g-1(i). You may request that the Commission keep this Exhibit confidential by marking each page "Confidential Treatment" and complying with Commission rules governing confidential treatment. The Commission will keep the information and documents in the Exhibit confidential upon request to the extent permitted by law.

Exhibit 12. Information regarding revenues for the fiscal or calendar year ending immediately before the date of the initial application.

☑ Exhibit 12 is attached to and made a part of this Form NRSRO.

Note: You are not required to make this Exhibit publicly available on your corporate Internet website pursuant to Exchange Act Rule 17g-1(i). You may request that the Commission keep this Exhibit confidential by marking each page "Confidential Treatment" and complying with Commission rules governing confidential treatment. The Commission will keep the information and documents in the Exhibit confidential upon request to the extent permitted by law.

Exhibit 13. The total and median annual compensation of credit analysts.

☑ Exhibit 13 is attached and made a part of this Form NRSRO.

Note: You are not required to make this Exhibit publicly available on your corporate Internet website pursuant to Exchange Act Rule 17g-1(i). You may request that the Commission keep this Exhibit confidential by marking each page "Confidential Treatment" and complying with Commission rules governing confidential treatment. The Commission will keep the information and documents in the Exhibit confidential upon request to the extent permitted by law.

DISCLOSURE REPORTING PAGE (NRSRO)

This Disclosure Reporting Page (DRP) is to be used to provide information concerning affirmative responses to **Item 8** of Form NRSRO.

Submit a separate DRP for each person that: (a) has committed or omitted any act, or been subject to an order or finding, enumerated in subparagraphs (A), (D), (E), (G), or (H) of section 15(b)(4) of the Securities Exchange Act of 1934, has been convicted of any offense specified in section 15(b)(4)(B) of the Securities Exchange Act of 1934, or has been enjoined from any action, conduct, or practice specified in section 15(b)(4)(C) of the Securities Exchange Act of 1934; (b) has been convicted of any crime that is punishable by imprisonment for 1 or more years, and that is not described in section 15(b)(4) of the Securities Exchange Act of 1934, or has been convicted of a substantially equivalent crime by a foreign court of competent jurisdiction; or (c) is subject to any order of the Commission barring or suspending the right of the person to be associated with an NRSRO.

Name of Applicant/NRSRO: Moody's Investors Service Inc.

Date: 2/6/2015

Check Item being responded to:

- ☐ Item 8A
- ☑ Item 8B
- ☐ Item 8C

Full name of the person for whom this DRP is being submitted:

Moody's Investors Service, Inc.

If this DRP provides information relating to a “Yes” answer to Item 8A, describe the act(s) that was (were) committed or omitted; or the order(s) or finding(s); or the injunction(s) (provide the relevant statute(s) or regulation(s)) and provide jurisdiction(s) and date(s):

If this DRP provides information relating to a “Yes” answer to Item 8B, describe the crime(s) and provide jurisdiction(s) and date(s):

Please refer to Disclosure Reporting Page Appendix

If this DRP provides information relating to a “Yes” answer to Item 8C, attach the relevant Commission order(s) and provide the date(s):

Moody's Investors Service ("MIS")

Item 3

Credit Rating Affiliates

Moody's Investors Service Limited One Canada Square Canary Wharf London, E14 5FA, United Kingdom	Moody's América Latina Ltda. Avenida Nações Unidas, 12.551 16th Floor, Room 1601 São Paulo, SP 04578-903, Brazil
Moody's Eastern Europe LLC 21, 1st Tverskaya-Yamskaya str., Moscow, 125047, Russian Federation	Moody's Latin America Agente de Calificacion de Riesgo S.A. Ingeniero Butty 240 16th Floor Ciudad Autonoma de Buenos Aires, Argentina 1001
Moody's Investors Service Hong Kong Limited 24/F, One Pacific Place, 88 Queensway, Admiralty, Hong Kong, People's Republic of China	Moody's Deutschland GmbH An der Welle 5 Frankfurt am Main, 60322, Germany
Moody's de México S.A. de C.V., I.C.V. Ave. Paseo de las Palmas No. 405 - 502 Col. Lomas de Chapultepec México, DF 11000	Moody's Investors Service Pty Limited Level 10, 1 O'Connell Street Sydney, NSW 2000, Australia
Moody's Investors Service España, S.A. Calle Principe de Vergara, 131, 6 Planta Madrid, 28002, Spain	Moody's Italia S.r.l. Corso di Porta Romana 68 Milan, 20122, Italy
Moody's France S.A.S. 96 Boulevard Haussmann 74-80 rue d'Anjou Paris, 75008, France	Moody's (Japan) K.K. Atago Green Hills Mori Tower 20fl 2-5-1 Atago, Minato-ku Tokyo 105-6220, Japan
Moody's Canada Inc. 70 York Street Suite 1400 Toronto, Ontario M5J 1S9 Canada	Moody's Investors Service Singapore Pte. Ltd. Registered Office Address: 3 Raffles Place #06-01, Bharat Building, Singapore 048617 Principal Place of Business: 50 Raffles Place #23-06, Singapore Land Tower, Singapore 048623
Moody's Investors Service South Africa (Pty) Limited The Forum 2 Maude Street 2196 Sandton Johannesburg, South Africa	Moody's Investors Service Cyprus Limited Porto Bello Building 1 Siafi Street, 3042 Limassol P.O. Box 53205 CY-3301 Limassol Cyprus
Moody's Investors Service Middle East Limited Office 303, 304, Gate Precinct Building 3, Level 3, Dubai International Financial Centre Street, PO Box 506845, Dubai UAE	

Moody's Investors Service ("MIS")

Item 8 Supplement

In the United States, MIS's practice is to conduct background checks through a third-party vendor in connection with hiring employees. These checks include a criminal record search, and may also include verification of prior employment and education. We do not conduct criminal record checks for employees hired outside of the United States in all jurisdictions because in certain non-United States jurisdictions, legal constraints prevent us from doing so. Although in rare circumstances, MIS may hire an individual despite the fact that he/she has been convicted of a crime in the past because MIS believes that the offense is not relevant to the individual's employment, it is not of a serious enough nature to preclude his/her employment, and/or the offense occurred far enough in the past, MIS does not currently maintain records reflecting such circumstances. For these reasons, we cannot say with certainty that no person within MIS has been convicted of a crime or committed an offense enumerated in Section 15(b)(4) of the Securities Exchange Act of 1934 or other offense punishable by imprisonment for one or more years, or of a substantially equivalent crime by a foreign court of competent jurisdiction in the ten years preceding the date of our initial application for NRSRO registration, or at any time thereafter.

Please note, when responding to Item 8 (A)-(C), we have interpreted "any person within the Applicant/NRSRO" to include only persons currently employed by the Applicant.

Moody's Investors Service ("MIS")

Disclosure Reporting Page Appendix

On April 10, 2001, MIS agreed to a settlement with the Antitrust Division of the U.S. Department of Justice arising from an incident in 1996 involving the destruction of documents. Under the terms of the settlement, MIS pleaded guilty to one count of obstruction of justice in violation of 18 U.S.C. § 1505 and agreed to pay a fine of $195,000. The settlement and guilty plea arose out of an isolated incident in March 1996 in which an employee destroyed some copies of documents called for under a Civil Investigative Demand served on MIS by the Antitrust Division in connection with a civil investigation into alleged anticompetitive practices in the credit rating industry. The Antitrust Division ultimately closed the civil investigation in 1999 without taking any action against MIS.

Moody's Investors Service ("MIS")

Exhibit 1

Credit Ratings Performance Measurement Statistics

Performance Measurement Statistics for applicable asset classes of credit ratings over 1-, 3-, and 10-year periods through December 31, 2014 are provided in tables on the following pages, pp. 14-87. Please note that all the numbers in these tables are in percentage.

For information regarding default, transition and loss severity research, including performance measurement statistics prepared by the Credit Policy Research team of Moody's Investors Service, please refer to the Guide to Moody's Default Research, available at https://www.moodys.com/Pages/GuideToDefaultResearch.aspx.

For definitions of categories, notches, grades, and rankings used by Moody's Investors Service, please refer to Moody's Investors Service Rating Symbols and Definitions guide, available at https://www.moodys.com/Pages/amr002002.aspx.

Please note that these publications are updated on a regular basis. For the most current version of these publications, please refer to the "Special Reports" and "Ratings Disclosures" pages of the "Research & Ratings" tab on www.moodys.com.

Sample rating actions in XBRL (eXtensible Business Reporting Language) format pursuant to requirements of 17 CFR240.17g-2(d) are publicly available at https://www.moodys.com/Pages/reg001004.aspx.

Average One-Year Rating Transition Rates, by broad ratings 1983-2014

Issuers of Asset backed Securities

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	77.62%	2.26%	1.65%	1.31%	1.06%	1.06%	1.82%	13.22%
Aa	4.92%	68.73%	5.36%	3.59%	2.34%	2.61%	4.76%	7.69%
A	1.15%	3.28%	67.53%	6.35%	3.80%	3.55%	6.48%	7.85%
Baa	0.34%	0.69%	3.14%	65.73%	6.04%	5.39%	11.78%	6.89%
Ba	0.15%	0.22%	0.98%	4.14%	61.19%	7.32%	19.34%	6.65%
B	0.04%	0.08%	0.20%	0.81%	3.95%	58.08%	31.79%	5.05%
Caa-C	0.00%	0.00%	0.01%	0.04%	0.32%	0.74%	89.92%	8.96%

Short Term Issuers of Asset Backed Securities

	P-1	P-2	P-3	NP	WR
P-1	70.40%	0.88%	0.03%	0.21%	28.48%
P-2	14.75%	58.95%	1.84%	0.43%	24.02%
P-3	0.00%	0.00%	58.73%	7.94%	33.33%
NP	0.00%	0.00%	0.00%	40.26%	59.74%

Corporate issuers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	85.87%	7.23%	0.99%	0.00%	0.09%	0.01%	0.01%	5.81%
Aa	0.73%	84.68%	8.73%	0.54%	0.07%	0.05%	0.00%	5.20%
A	0.02%	1.45%	86.58%	6.07%	0.50%	0.14%	0.06%	5.18%
Baa	0.02%	0.06%	3.32%	86.14%	3.65%	0.73%	0.27%	5.81%
Ba	0.01%	0.04%	0.24%	5.34%	74.67%	8.21%	1.24%	10.25%
B	0.00%	0.02%	0.09%	0.28%	4.08%	74.12%	8.95%	12.45%
Caa-C	0.00%	0.01%	0.02%	0.12%	0.38%	6.92%	67.91%	24.64%

Average One-Year Rating Transition Rates, by broad ratings 1983-2014

Financial Institutions, Brokers and Dealers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	82.32%	12.93%	0.15%	0.00%	0.00%	0.00%	0.00%	4.60%
Aa	0.74%	83.17%	8.79%	0.62%	0.04%	0.00%	0.02%	6.63%
A	0.06%	4.65%	82.05%	5.47%	0.86%	0.09%	0.11%	6.72%
Baa	0.04%	0.66%	9.15%	74.90%	5.39%	1.41%	0.45%	7.99%
Ba	0.00%	0.09%	0.86%	7.65%	69.85%	8.09%	2.17%	11.30%
B	0.00%	0.09%	0.19%	0.48%	9.43%	66.38%	7.32%	16.11%
Caa-C	0.00%	0.30%	0.00%	0.30%	0.74%	3.80%	68.31%	26.54%

Insurance Companies

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	83.77%	13.32%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%
Aa	0.31%	82.29%	10.17%	0.51%	0.21%	0.03%	0.18%	6.29%
A	0.05%	1.68%	85.87%	5.56%	0.13%	0.28%	0.03%	6.41%
Baa	0.06%	0.39%	3.17%	87.94%	1.96%	0.56%	0.15%	5.76%
Ba	0.00%	0.00%	0.89%	7.40%	75.07%	3.86%	2.64%	10.14%
B	0.00%	0.00%	0.92%	1.21%	4.77%	64.46%	13.00%	15.64%
Caa-C	0.00%	0.00%	0.31%	1.87%	0.78%	5.93%	63.73%	27.38%

Sovereign

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	96.76%	3.07%	0.04%	0.10%	0.00%	0.00%	0.00%	0.04%
Aa	3.54%	93.13%	1.77%	0.81%	0.12%	0.00%	0.00%	0.62%
A	0.00%	4.59%	90.39%	3.62%	1.33%	0.08%	0.00%	0.00%
Baa	0.00%	0.00%	6.27%	89.16%	3.96%	0.56%	0.05%	0.00%
Ba	0.00%	0.00%	0.00%	8.69%	84.93%	5.39%	0.85%	0.15%
B	0.00%	0.00%	0.00%	0.00%	5.09%	89.15%	5.31%	0.45%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.11%	12.92%	85.70%	1.27%

International Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	91.64%	4.61%	0.00%	0.00%	0.00%	0.00%	0.00%	3.74%
Aa	2.03%	91.04%	2.69%	0.41%	0.02%	0.00%	0.00%	3.82%
A	0.00%	5.43%	84.69%	5.47%	0.89%	0.08%	0.00%	3.44%
Baa	0.00%	0.00%	3.26%	82.15%	8.16%	0.54%	0.00%	5.88%
Ba	0.00%	0.00%	0.00%	2.42%	82.12%	4.11%	2.21%	9.15%
B	0.00%	0.00%	0.00%	0.00%	5.10%	68.96%	14.12%	11.82%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	6.47%	78.01%	15.52%

Average One-Year Rating Transition Rates, by broad ratings 1983-2014

United States Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	93.92%	1.60%	0.13%	0.05%	0.01%	0.00%	0.00%	4.29%
Aa	0.42%	95.27%	1.56%	0.04%	0.01%	0.00%	0.00%	2.69%
A	0.04%	1.89%	92.08%	0.79%	0.07%	0.01%	0.00%	5.11%
Baa	0.02%	0.05%	1.52%	89.71%	0.71%	0.07%	0.02%	7.89%
Ba	0.06%	0.09%	0.29%	4.59%	80.88%	3.45%	0.68%	9.96%
B	0.00%	0.18%	0.74%	1.43%	4.24%	77.60%	7.87%	7.95%
Caa-C	0.00%	0.01%	0.19%	0.41%	1.04%	1.54%	81.52%	15.29%

Short-Term Municipal MIG

	MIG 1	MIG 2	MIG 3	SG	WR
MIG 1	25.27%	0.03%	0.02%	0.01%	74.66%
MIG 2	0.41%	33.37%	1.19%	0.00%	65.02%
MIG 3	0.00%	0.00%	29.39%	4.08%	66.53%
SG	0.00%	0.00%	0.00%	16.67%	83.33%

Short-Term Municipal

	P-1	P-2	P-3	NP	WR
P-1	88.23%	0.50%	0.05%	0.03%	11.19%
P-2	6.48%	72.23%	0.07%	0.00%	21.22%
P-3	17.54%	0.00%	50.88%	0.00%	31.58%
NP	0.00%	0.00%	0.00%	0.00%	100.00%

Short-Term Corporate Commercial Paper

	P-1	P-2	P-3	NP	WR
P-1	90.07%	4.19%	0.20%	0.25%	5.30%
P-2	4.17%	82.96%	3.37%	1.87%	7.63%
P-3	0.34%	14.55%	58.02%	10.41%	16.68%
NP	0.06%	0.93%	4.59%	75.89%	18.52%

One-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Issuers of Asset Backed Securities

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	77.74%	0.71%	0.17%	0.01%	0.00%	0.00%	0.00%	21.37%
Aa	19.78%	62.12%	2.82%	0.31%	0.00%	0.00%	0.00%	14.97%
A	3.20%	10.65%	67.97%	1.93%	0.14%	0.05%	0.00%	16.06%
Baa	0.54%	2.00%	12.10%	70.91%	3.25%	0.10%	0.00%	11.09%
Ba	0.14%	0.51%	1.88%	12.16%	72.13%	4.08%	0.70%	8.40%
B	0.06%	0.10%	0.29%	1.76%	12.46%	74.92%	4.89%	5.51%
Caa-C	0.00%	0.00%	0.00%	0.04%	0.26%	1.60%	90.08%	8.02%

Short Term Issuers of Asset Backed Securities

	P-1	P-2	P-3	NP	WR
P-1	63.69%	3.91%	0.00%	0.00%	32.40%
P-2	6.67%	66.67%	0.00%	0.00%	26.67%
P-3	0.00%	0.00%	100.00%	0.00%	0.00%
NP					

Corporate Issuers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	90.32%	6.45%	0.00%	0.00%	0.00%	0.00%	3.23%
A	0.00%	4.31%	89.82%	1.96%	0.00%	0.00%	0.00%	3.91%
Baa	0.00%	0.00%	5.20%	88.17%	2.24%	0.09%	0.00%	4.30%
Ba	0.00%	0.00%	0.20%	6.26%	78.99%	6.87%	0.20%	7.47%
B	0.00%	0.00%	0.08%	0.08%	2.73%	76.32%	6.95%	13.82%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	6.50%	74.14%	19.36%

Financial Institutions, Brokers and Dealers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	89.42%	6.73%	0.00%	0.00%	0.00%	0.00%	3.85%
A	0.00%	0.39%	90.70%	5.04%	0.00%	0.00%	0.39%	3.49%
Baa	0.00%	0.00%	2.54%	87.71%	3.81%	0.42%	0.42%	5.08%
Ba	0.00%	0.00%	1.04%	6.25%	70.83%	13.54%	1.04%	7.29%
B	0.00%	0.00%	0.00%	0.00%	6.52%	63.04%	9.78%	20.65%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	77.42%	22.58%

One-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Insurance Companies

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa								
Aa	0.00%	90.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%
A	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa	0.00%	0.00%	0.00%	92.55%	1.06%	0.00%	0.00%	6.38%
Ba	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
B	0.00%	0.00%	0.00%	0.00%	16.67%	58.33%	0.00%	25.00%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	84.62%	7.69%

Sovereign

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	88.89%	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%
A	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa	0.00%	0.00%	6.90%	89.66%	3.45%	0.00%	0.00%	0.00%
Ba	0.00%	0.00%	0.00%	5.00%	90.00%	5.00%	0.00%	0.00%
B	0.00%	0.00%	0.00%	0.00%	0.00%	96.00%	4.00%	0.00%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	80.00%	0.00%

International Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	88.24%	5.88%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%
Aa	2.56%	66.67%	30.77%	0.00%	0.00%	0.00%	0.00%	0.00%
A	0.00%	0.00%	75.00%	0.00%	0.00%	0.00%	0.00%	25.00%
Baa	0.00%	0.00%	0.00%	88.46%	3.85%	0.00%	0.00%	7.69%
Ba	0.00%	0.00%	0.00%	0.00%	93.75%	0.00%	0.00%	6.25%
B	0.00%	0.00%	0.00%	0.00%	8.33%	50.00%	25.00%	16.67%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	87.50%	12.50%

United States Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	88.99%	2.34%	0.00%	0.00%	0.00%	0.00%	0.00%	8.68%
Aa	0.13%	92.35%	1.63%	0.01%	0.00%	0.00%	0.00%	5.88%
A	0.00%	2.11%	89.95%	0.99%	0.05%	0.04%	0.00%	6.86%
Baa	0.00%	0.12%	6.09%	81.73%	2.92%	0.73%	0.61%	7.80%
Ba	0.00%	0.60%	0.60%	4.17%	77.38%	1.19%	2.98%	13.10%
B	0.00%	0.00%	0.00%	9.76%	17.07%	58.54%	4.88%	9.76%
Caa-C	0.00%	0.00%	0.00%	0.00%	3.23%	6.45%	61.29%	29.03%

One-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Short-Term Municipal MIG

	MIG 1	MIG 2	MIG 3	SG	WR
MIG 1	11.90%	0.00%	0.00%	0.00%	88.10%
MIG 2	0.00%	50.00%	0.00%	0.00%	50.00%
MIG 3	0.00%	0.00%	25.00%	0.00%	75.00%
SG					

Short-Term Municipal

	P-1	P-2	P-3	NP	WR
P-1	88.74%	0.00%	0.00%	0.00%	11.26%
P-2	25.00%	0.00%	0.00%	0.00%	75.00%
P-3					
NP					

Short-Term Corporate Commercial Paper

	P-1	P-2	P-3	NP	WR
P-1	97.81%	1.20%	0.00%	0.00%	1.00%
P-2	4.77%	88.29%	2.39%	0.22%	4.34%
P-3	0.00%	22.22%	64.81%	7.41%	5.56%
NP	0.00%	2.44%	3.66%	79.27%	14.63%

Average One-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Issuers of Asset Backed Securities

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	77.62%	0.63%	0.77%	0.86%	0.69%	0.49%	0.46%	0.50%	0.38%	0.43%	0.41%	0.25%	0.40%	0.24%	0.21%	0.62%	0.58%	0.48%	0.29%	0.39%	0.08%	13.22%
Aa1	7.99%	63.70%	1.37%	1.31%	1.78%	1.26%	1.40%	0.99%	0.89%	0.92%	1.00%	0.69%	0.91%	0.86%	0.71%	0.89%	0.58%	0.61%	0.47%	2.22%	1.68%	7.77%
Aa2	4.14%	1.57%	69.25%	1.41%	1.73%	1.67%	1.62%	1.39%	1.07%	0.84%	0.81%	0.52%	0.59%	0.68%	0.70%	0.77%	0.49%	0.47%	0.36%	0.93%	1.46%	7.52%
Aa3	3.19%	2.13%	1.81%	60.19%	2.08%	2.55%	2.41%	1.99%	1.48%	1.55%	1.04%	0.89%	1.00%	1.08%	1.29%	1.34%	0.77%	1.09%	0.47%	1.32%	2.36%	7.97%
A1	2.15%	1.39%	1.64%	1.66%	56.92%	1.67%	2.91%	3.33%	2.39%	1.98%	1.57%	1.00%	1.44%	1.29%	1.31%	1.79%	1.36%	1.29%	0.73%	1.25%	1.94%	8.99%
A2	0.87%	0.57%	1.32%	1.16%	1.35%	69.60%	1.06%	1.69%	1.61%	1.84%	1.52%	0.85%	0.83%	0.74%	0.79%	1.19%	0.67%	0.79%	0.61%	1.44%	1.74%	7.76%
A3	0.81%	0.46%	0.70%	1.33%	2.09%	1.43%	60.07%	2.21%	2.68%	2.79%	2.10%	1.37%	1.41%	1.17%	1.42%	1.94%	1.16%	1.37%	1.03%	2.33%	3.10%	7.01%
Baa1	0.52%	0.23%	0.32%	0.56%	1.24%	1.47%	1.81%	57.86%	1.85%	3.20%	2.67%	1.83%	1.93%	1.71%	1.64%	2.31%	1.76%	2.19%	1.29%	2.84%	3.90%	6.88%
Baa2	0.28%	0.12%	0.22%	0.27%	0.54%	1.20%	1.23%	1.42%	65.59%	1.60%	2.13%	1.50%	1.82%	1.70%	1.32%	1.72%	1.32%	1.38%	1.12%	2.88%	3.75%	6.89%
Baa3	0.30%	0.15%	0.12%	0.21%	0.62%	0.57%	1.15%	1.64%	1.30%	60.75%	1.96%	2.15%	2.47%	2.00%	1.76%	2.37%	1.80%	1.93%	1.52%	3.57%	4.73%	6.92%
Ba1	0.24%	0.09%	0.12%	0.16%	0.31%	0.57%	0.91%	1.70%	1.92%	2.75%	52.34%	1.52%	2.89%	2.36%	1.92%	2.20%	2.93%	3.43%	2.45%	4.41%	7.56%	7.23%
Ba2	0.13%	0.06%	0.05%	0.09%	0.13%	0.21%	0.30%	0.68%	1.21%	1.75%	1.75%	61.45%	1.24%	2.10%	2.10%	2.79%	1.99%	2.79%	2.17%	4.14%	6.67%	6.21%
Ba3	0.07%	0.02%	0.03%	0.06%	0.12%	0.17%	0.26%	0.35%	0.72%	1.30%	2.35%	1.42%	58.06%	2.80%	2.77%	3.10%	2.96%	3.02%	2.73%	3.93%	7.16%	6.61%
B1	0.05%	0.02%	0.03%	0.07%	0.13%	0.07%	0.16%	0.31%	0.33%	1.00%	2.36%	2.45%	1.66%	53.13%	2.23%	4.05%	4.19%	3.68%	2.89%	3.90%	11.39%	5.92%
B2	0.05%	0.02%	0.03%	0.06%	0.05%	0.08%	0.04%	0.13%	0.11%	0.41%	1.04%	1.38%	1.52%	0.85%	58.86%	2.34%	4.42%	3.76%	3.60%	4.06%	11.62%	5.59%
B3	0.03%	0.00%	0.01%	0.01%	0.03%	0.04%	0.05%	0.09%	0.10%	0.21%	0.50%	0.76%	1.03%	1.54%	1.22%	51.27%	6.06%	8.71%	6.89%	4.29%	13.13%	4.03%
Caa1	0.02%	0.00%	0.00%	0.02%	0.01%	0.01%	0.03%	0.03%	0.05%	0.12%	0.29%	0.44%	0.50%	0.85%	1.06%	0.80%	60.32%	8.08%	10.31%	5.08%	8.87%	3.11%
Caa2	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	0.02%	0.02%	0.03%	0.05%	0.15%	0.23%	0.42%	0.51%	0.49%	1.40%	0.63%	68.25%	8.92%	7.56%	9.06%	2.26%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.03%	0.06%	0.11%	0.19%	0.44%	0.58%	0.24%	0.50%	1.00%	0.79%	77.68%	7.12%	8.40%	2.84%
Ca	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.03%	0.04%	0.11%	0.15%	0.08%	0.17%	0.36%	0.64%	0.94%	70.76%	21.54%	5.13%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.01%	0.02%	0.04%	0.08%	0.22%	0.28%	85.25%	14.08%

Average One-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Corporate Issuers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	85.87%	4.14%	2.53%	0.56%	0.69%	0.26%	0.04%	0.00%	0.00%	0.00%	0.05%	0.05%	0.00%	0.01%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	5.81%
Aa1	1.88%	79.05%	5.81%	3.96%	0.97%	1.39%	0.15%	0.33%	0.06%	0.02%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.37%
Aa2	1.05%	3.39%	76.63%	8.27%	3.42%	1.22%	0.62%	0.11%	0.17%	0.00%	0.02%	0.02%	0.00%	0.04%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.02%
Aa3	0.08%	0.45%	3.29%	77.08%	9.06%	3.48%	0.76%	0.31%	0.29%	0.14%	0.01%	0.06%	0.05%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.87%
A1	0.05%	0.08%	0.37%	3.72%	78.53%	8.00%	2.94%	0.47%	0.22%	0.15%	0.27%	0.18%	0.05%	0.13%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	4.78%
A2	0.02%	0.00%	0.11%	0.84%	3.62%	77.48%	8.12%	2.87%	1.00%	0.38%	0.11%	0.12%	0.16%	0.08%	0.03%	0.00%	0.04%	0.07%	0.01%	0.00%	0.00%	4.96%
A3	0.00%	0.00%	0.05%	0.07%	0.90%	5.41%	75.81%	7.51%	2.83%	0.96%	0.31%	0.15%	0.15%	0.09%	0.05%	0.02%	0.01%	0.00%	0.01%	0.04%	0.00%	5.65%
Baa1	0.00%	0.01%	0.03%	0.03%	0.07%	1.21%	5.80%	75.64%	7.48%	2.43%	0.56%	0.28%	0.30%	0.29%	0.04%	0.04%	0.06%	0.03%	0.01%	0.08%	0.01%	5.61%
Baa2	0.03%	0.03%	0.02%	0.03%	0.11%	0.40%	1.68%	6.12%	76.25%	6.54%	1.30%	0.48%	0.42%	0.33%	0.25%	0.09%	0.12%	0.02%	0.03%	0.06%	0.00%	5.71%
Baa3	0.02%	0.00%	0.00%	0.03%	0.03%	0.17%	0.33%	1.90%	8.71%	72.75%	4.84%	2.43%	0.98%	0.67%	0.32%	0.22%	0.17%	0.09%	0.02%	0.14%	0.01%	6.17%
Ba1	0.03%	0.00%	0.00%	0.03%	0.06%	0.09%	0.25%	0.46%	2.33%	10.48%	64.74%	4.90%	3.57%	1.38%	0.99%	0.49%	0.14%	0.44%	0.05%	0.11%	0.01%	9.45%
Ba2	0.00%	0.00%	0.03%	0.03%	0.01%	0.07%	0.05%	0.28%	0.59%	3.50%	7.84%	64.19%	6.84%	2.75%	2.04%	0.86%	0.21%	0.31%	0.05%	0.13%	0.02%	10.20%
Ba3	0.00%	0.02%	0.01%	0.01%	0.01%	0.09%	0.10%	0.15%	0.30%	0.65%	1.89%	6.54%	64.31%	6.37%	4.56%	2.32%	0.59%	0.89%	0.14%	0.23%	0.05%	10.78%
B1	0.01%	0.00%	0.01%	0.01%	0.03%	0.05%	0.09%	0.06%	0.14%	0.23%	0.40%	2.13%	6.58%	64.75%	6.47%	4.32%	1.23%	1.14%	0.33%	0.60%	0.08%	11.33%
B2	0.00%	0.00%	0.01%	0.01%	0.02%	0.00%	0.03%	0.09%	0.07%	0.09%	0.18%	0.52%	1.75%	6.76%	62.08%	8.86%	3.49%	2.24%	0.77%	0.96%	0.17%	11.90%
B3	0.00%	0.00%	0.03%	0.00%	0.00%	0.01%	0.04%	0.03%	0.05%	0.08%	0.07%	0.17%	0.47%	1.88%	6.56%	60.79%	7.26%	4.96%	1.46%	1.54%	0.47%	14.10%
Caa1	0.00%	0.02%	0.00%	0.00%	0.00%	0.02%	0.00%	0.04%	0.00%	0.03%	0.04%	0.09%	0.14%	0.56%	1.91%	9.54%	55.53%	9.42%	3.97%	2.54%	1.09%	15.05%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.01%	0.13%	0.12%	0.04%	0.08%	0.46%	0.49%	1.02%	3.13%	7.27%	51.72%	5.18%	4.66%	2.17%	23.52%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	0.06%	0.00%	0.19%	0.27%	1.47%	3.49%	8.33%	38.77%	8.54%	5.06%	33.62%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.06%	0.00%	0.03%	0.07%	0.24%	0.46%	0.71%	1.24%	1.51%	2.61%	3.36%	46.21%	3.03%	40.43%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	0.00%	0.00%	0.00%	0.00%	0.57%	0.54%	1.31%	1.09%	1.36%	38.90%	55.93%

Average One-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Financial Institutions, Brokers and Dealers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	82.32%	9.78%	2.53%	0.62%	0.12%	0.03%	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%	4.60%
Aa1	1.44%	69.17%	11.87%	8.08%	2.68%	0.40%	0.07%	0.21%	0.02%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.99%
Aa2	1.10%	4.88%	68.51%	11.90%	3.56%	1.98%	0.35%	0.14%	0.31%	0.15%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.11%
Aa3	0.21%	1.86%	5.10%	72.38%	8.48%	3.69%	0.81%	0.27%	0.35%	0.18%	0.00%	0.00%	0.02%	0.01%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%	6.60%
A1	0.06%	0.19%	2.29%	7.00%	69.96%	8.04%	3.22%	1.02%	0.67%	0.21%	0.19%	0.14%	0.07%	0.01%	0.01%	0.03%	0.00%	0.05%	0.04%	0.00%	0.02%	6.79%
A2	0.09%	0.01%	0.28%	1.59%	8.26%	70.06%	7.15%	3.59%	1.24%	0.63%	0.52%	0.18%	0.11%	0.00%	0.02%	0.01%	0.04%	0.07%	0.00%	0.00%	0.02%	6.11%
A3	0.00%	0.09%	0.15%	0.72%	3.65%	9.06%	65.94%	5.86%	3.84%	1.30%	1.10%	0.13%	0.39%	0.14%	0.11%	0.00%	0.00%	0.05%	0.03%	0.00%	0.00%	7.43%
Baa1	0.10%	0.15%	0.38%	0.48%	0.82%	3.92%	9.99%	59.62%	8.92%	3.90%	1.74%	1.28%	0.48%	0.47%	0.23%	0.07%	0.05%	0.07%	0.08%	0.00%	0.00%	7.26%
Baa2	0.00%	0.00%	0.14%	0.19%	0.26%	1.99%	5.79%	8.81%	60.60%	7.39%	2.16%	0.85%	1.05%	1.03%	0.43%	0.15%	0.08%	0.02%	0.00%	0.07%	0.01%	9.00%
Baa3	0.00%	0.07%	0.16%	0.32%	0.08%	0.43%	1.27%	5.53%	9.50%	61.20%	5.69%	2.00%	2.56%	1.07%	0.57%	0.53%	0.17%	0.13%	0.84%	0.11%	0.00%	7.78%
Ba1	0.00%	0.00%	0.24%	0.00%	0.65%	0.36%	0.38%	1.43%	4.68%	8.59%	54.31%	5.47%	7.99%	2.12%	1.29%	0.54%	0.05%	0.49%	0.40%	0.51%	0.34%	10.13%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	0.22%	1.04%	4.25%	7.93%	55.82%	10.35%	3.79%	1.48%	0.88%	0.20%	0.53%	1.01%	0.29%	0.33%	11.69%
Ba3	0.00%	0.00%	0.00%	0.00%	0.12%	0.69%	0.06%	0.00%	0.53%	1.38%	5.17%	8.50%	54.61%	7.87%	4.78%	1.67%	0.18%	0.85%	0.71%	0.33%	0.33%	12.22%
B1	0.00%	0.18%	0.00%	0.00%	0.00%	0.40%	0.00%	0.00%	0.00%	0.57%	1.10%	5.29%	8.61%	50.44%	12.69%	2.81%	0.94%	0.97%	0.42%	1.12%	0.26%	14.21%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%	0.22%	0.50%	1.35%	3.57%	12.48%	52.02%	5.58%	4.33%	0.94%	0.91%	1.16%	0.38%	16.18%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.77%	0.64%	0.00%	2.18%	8.77%	49.14%	6.59%	4.86%	3.33%	1.02%	1.22%	21.50%
Caa1	0.00%	0.00%	0.00%	1.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	2.35%	44.62%	8.41%	6.65%	5.68%	0.98%	29.35%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.28%	0.70%	0.00%	0.56%	0.00%	5.60%	8.40%	56.30%	3.50%	7.00%	5.18%	12.32%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.96%	0.38%	0.00%	0.19%	2.68%	2.29%	0.00%	8.60%	2.29%	10.33%	39.96%	1.15%	2.29%	28.87%
Ca	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%	1.64%	0.00%	0.00%	63.56%	2.60%	32.19%
C	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%	0.00%	0.00%	66.67%	33.33%

Average One-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Insurance Companies

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	83.77%	4.65%	7.33%	1.34%	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%	2.91%
Aa1	1.29%	79.58%	5.91%	7.26%	0.67%	0.00%	0.28%	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%	5.01%
Aa2	0.14%	0.76%	76.27%	8.74%	5.00%	1.01%	1.56%	0.00%	0.17%	0.03%	0.42%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	0.42%	0.00%	0.07%	0.00%	5.31%
Aa3	0.00%	0.44%	0.83%	74.01%	9.85%	4.65%	1.52%	0.32%	0.64%	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	7.54%
A1	0.00%	0.00%	0.48%	3.97%	74.62%	9.23%	3.27%	1.60%	0.62%	0.26%	0.00%	0.00%	0.00%	0.00%	0.16%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	5.70%
A2	0.13%	0.00%	0.07%	0.39%	3.63%	75.92%	10.43%	1.97%	0.49%	0.52%	0.15%	0.07%	0.00%	0.03%	0.05%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	6.01%
A3	0.00%	0.16%	0.19%	0.30%	0.33%	5.46%	75.28%	7.03%	2.54%	0.80%	0.06%	0.08%	0.02%	0.16%	0.03%	0.16%	0.02%	0.00%	0.00%	0.06%	0.00%	7.34%
Baa1	0.19%	0.26%	0.26%	0.21%	0.34%	1.01%	6.01%	74.17%	8.38%	2.27%	0.02%	0.26%	0.00%	0.00%	0.24%	0.15%	0.00%	0.06%	0.15%	0.00%	0.00%	6.03%
Baa2	0.00%	0.11%	0.00%	0.28%	0.44%	0.30%	0.76%	5.45%	80.07%	4.99%	0.98%	0.50%	0.30%	0.00%	0.11%	0.00%	0.11%	0.00%	0.07%	0.00%	0.00%	5.53%
Baa3	0.00%	0.00%	0.00%	0.00%	0.29%	0.00%	0.29%	1.84%	7.95%	78.31%	2.31%	1.20%	0.64%	0.86%	0.10%	0.42%	0.00%	0.02%	0.00%	0.00%	0.00%	5.77%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.27%	0.00%	3.82%	6.97%	67.74%	4.48%	1.37%	0.61%	0.71%	1.02%	0.00%	1.17%	0.15%	0.46%	0.05%	10.18%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.92%	1.74%	4.19%	12.37%	57.98%	6.75%	0.82%	1.33%	1.12%	0.82%	0.51%	1.53%	0.61%	0.00%	9.30%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.01%	0.20%	0.30%	0.71%	9.48%	6.45%	60.08%	3.33%	3.73%	0.40%	1.01%	2.32%	0.10%	0.00%	0.00%	10.89%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.67%	1.60%	0.00%	0.00%	1.60%	10.43%	53.74%	2.94%	3.07%	0.53%	4.68%	0.94%	3.34%	0.40%	16.04%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.96%	0.00%	0.00%	1.96%	0.00%	0.00%	1.96%	9.64%	55.23%	7.35%	2.45%	0.98%	3.10%	1.14%	0.16%	14.05%
B3	0.00%	0.00%	0.00%	0.00%	0.48%	0.00%	0.48%	0.00%	0.00%	0.00%	0.00%	0.00%	1.16%	2.42%	1.84%	59.01%	10.76%	4.26%	1.16%	1.84%	0.29%	16.28%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.68%	1.68%	3.64%	8.68%	47.06%	11.76%	0.56%	1.12%	0.84%	22.97%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.61%	0.87%	0.00%	0.00%	0.00%	0.44%	0.65%	4.36%	52.72%	3.92%	4.79%	4.14%	25.49%
Caa3	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%	3.55%	8.51%	5.67%	8.51%	36.17%	0.71%	4.26%	32.62%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.48%	4.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.48%	6.30%	0.74%	0.00%	59.63%	2.96%	22.96%
C	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%	0.00%	0.00%	20.00%	80.00%

Average One-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Sovereign

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	96.76%	2.46%	0.61%	0.00%	0.04%	0.00%	0.00%	0.10%	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%	0.04%
Aa1	6.67%	83.10%	6.03%	1.67%	0.56%	0.00%	0.08%	0.71%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%
Aa2	3.16%	6.31%	82.58%	3.68%	0.66%	1.12%	0.59%	0.20%	0.26%	0.26%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.85%
Aa3	0.94%	0.00%	11.07%	85.04%	1.40%	0.78%	0.00%	0.31%	0.23%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A1	0.00%	0.00%	0.70%	10.68%	80.83%	4.05%	0.78%	0.08%	0.31%	0.62%	1.33%	0.55%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A2	0.00%	0.00%	0.21%	2.13%	11.05%	77.08%	3.77%	1.85%	1.24%	1.30%	0.96%	0.27%	0.07%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A3	0.00%	0.00%	0.00%	0.00%	4.49%	9.82%	79.34%	4.57%	0.42%	0.51%	0.59%	0.00%	0.08%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa1	0.00%	0.00%	0.00%	0.00%	2.01%	4.74%	7.84%	79.94%	1.51%	2.66%	0.43%	0.36%	0.43%	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	1.19%	3.77%	11.58%	79.23%	2.39%	1.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.66%	2.71%	11.22%	76.67%	4.86%	1.93%	0.55%	0.00%	0.11%	1.16%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.15%	2.07%	14.93%	75.83%	2.87%	1.21%	0.80%	0.06%	0.40%	0.06%	0.00%	0.17%	0.46%	0.00%	0.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.92%	12.72%	73.03%	4.17%	2.70%	1.83%	0.95%	0.73%	0.00%	0.00%	0.51%	0.00%	0.44%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	4.15%	11.08%	71.61%	8.21%	2.87%	1.29%	0.00%	0.00%	0.40%	0.20%	0.00%	0.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.15%	8.07%	78.37%	8.19%	2.37%	0.40%	0.00%	0.11%	0.17%	0.17%	0.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.97%	11.21%	72.42%	6.65%	5.75%	0.00%	0.60%	1.05%	0.00%	1.35%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.11%	4.00%	11.78%	72.11%	4.33%	1.67%	3.00%	2.00%	0.00%	0.00%
Caa1	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%	2.14%	11.79%	77.49%	3.52%	0.77%	2.30%	0.15%	1.84%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.95%	0.00%	0.95%	16.19%	23.81%	55.24%	0.00%	2.86%	0.00%	0.00%
Caa3	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%	12.35%	2.47%	19.75%	14.81%	48.15%	2.47%	0.00%	0.00%
Ca	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%	1.18%	25.88%	24.71%	23.53%	15.29%	9.41%	0.00%
C	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%	15.00%	0.00%	45.00%	0.00%	40.00%	0.00%

Average One-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

International Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	91.64%	3.20%	1.37%	0.04%	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%	3.74%
Aa1	4.34%	79.81%	10.98%	1.66%	0.27%	0.30%	0.00%	0.10%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.41%
Aa2	2.16%	4.23%	82.38%	4.94%	1.35%	0.49%	0.38%	0.06%	0.08%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.89%
Aa3	0.00%	1.30%	5.13%	82.79%	2.65%	1.49%	0.88%	0.17%	0.50%	0.17%	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.88%
A1	0.00%	0.00%	1.18%	6.71%	78.33%	6.93%	1.35%	2.18%	0.39%	0.26%	0.61%	0.13%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.83%
A2	0.00%	0.71%	1.25%	1.43%	9.03%	72.85%	2.26%	2.61%	2.97%	1.01%	0.18%	0.48%	0.18%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.99%
A3	0.00%	0.00%	0.92%	1.58%	0.00%	8.56%	71.54%	1.45%	7.38%	2.11%	0.40%	0.79%	0.00%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.87%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	1.85%	5.56%	79.63%	0.46%	5.86%	1.54%	0.00%	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.48%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.40%	10.22%	75.95%	3.81%	0.40%	0.60%	1.40%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.81%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.54%	64.40%	14.04%	3.47%	0.43%	1.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.96%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.68%	5.48%	66.71%	13.29%	2.47%	1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.27%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.26%	4.37%	71.83%	5.16%	1.59%	0.53%	3.17%	1.19%	0.00%	1.98%	0.00%	0.00%	9.92%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.83%	70.00%	5.65%	0.00%	1.30%	1.30%	0.00%	2.83%	0.00%	0.00%	6.09%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.22%	6.44%	55.46%	6.08%	5.55%	3.58%	0.00%	3.76%	1.97%	0.00%	13.95%
B2	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%	10.69%	63.21%	7.86%	5.66%	0.00%	0.94%	3.77%	1.57%	6.29%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.01%	0.00%	5.35%	53.51%	19.40%	1.34%	3.34%	0.00%	1.34%	13.71%
Caa1	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%	1.03%	8.90%	49.32%	10.27%	4.11%	7.19%	0.00%	19.18%
Caa2	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%	7.79%	0.00%	60.39%	14.94%	0.00%	7.79%	9.09%
Caa3	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%	6.15%	0.00%	57.44%	10.26%	1.54%	24.62%
Ca	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%	2.70%	6.56%	9.27%	9.27%	4.63%	62.16%	0.00%	5.41%
C	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%	0.00%	0.00%	77.14%	22.86%

Average One-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

United States Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	93.92%	1.10%	0.39%	0.11%	0.05%	0.07%	0.01%	0.03%	0.02%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.29%
Aa1	2.14%	91.85%	3.10%	0.41%	0.27%	0.05%	0.02%	0.02%	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%	2.14%
Aa2	0.21%	1.50%	92.68%	1.78%	0.51%	0.18%	0.03%	0.02%	0.02%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.06%
Aa3	0.04%	0.43%	3.11%	91.07%	2.21%	0.44%	0.10%	0.03%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.55%
A1	0.03%	0.06%	0.58%	2.91%	90.40%	1.57%	0.24%	0.14%	0.06%	0.01%	0.01%	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.96%
A2	0.04%	0.03%	0.12%	0.48%	2.35%	88.45%	1.41%	0.62%	0.27%	0.03%	0.04%	0.04%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.12%
A3	0.04%	0.04%	0.08%	0.38%	1.55%	4.02%	85.42%	2.06%	0.38%	0.23%	0.18%	0.03%	0.03%	0.02%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	5.52%
Baa1	0.03%	0.01%	0.02%	0.04%	0.23%	1.02%	1.30%	87.54%	1.53%	0.22%	0.10%	0.07%	0.02%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	7.83%
Baa2	0.02%	0.01%	0.03%	0.01%	0.11%	0.38%	0.16%	1.28%	87.89%	1.47%	0.29%	0.30%	0.05%	0.01%	0.04%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	7.95%
Baa3	0.00%	0.01%	0.00%	0.02%	0.07%	0.14%	0.40%	0.73%	2.33%	83.75%	2.65%	1.12%	0.38%	0.21%	0.08%	0.13%	0.06%	0.00%	0.04%	0.01%	0.02%	7.83%
Ba1	0.09%	0.09%	0.08%	0.00%	0.00%	0.09%	0.11%	0.69%	2.51%	5.69%	69.05%	4.69%	2.46%	1.11%	0.61%	0.57%	0.17%	0.11%	0.04%	0.03%	0.06%	11.77%
Ba2	0.05%	0.00%	0.04%	0.03%	0.13%	0.19%	0.05%	0.28%	1.36%	0.89%	2.35%	80.31%	2.85%	1.16%	1.00%	0.32%	0.15%	0.21%	0.08%	0.06%	0.03%	8.45%
Ba3	0.00%	0.00%	0.00%	0.00%	0.09%	0.00%	0.12%	0.10%	0.67%	1.71%	1.48%	3.91%	68.34%	3.91%	3.74%	2.32%	0.75%	0.79%	0.09%	0.19%	0.17%	11.64%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.40%	0.46%	0.00%	0.40%	3.22%	5.64%	65.54%	5.44%	3.95%	2.12%	2.56%	0.37%	1.29%	0.66%	7.93%
B2	0.00%	0.00%	0.26%	0.09%	0.64%	0.46%	0.22%	0.00%	0.66%	0.70%	0.00%	1.24%	1.41%	3.31%	74.61%	3.92%	1.96%	1.48%	0.81%	0.35%	0.37%	7.52%
B3	0.00%	0.00%	0.00%	0.00%	0.26%	0.00%	0.00%	0.26%	2.25%	0.00%	0.00%	0.00%	0.92%	0.20%	3.73%	65.95%	3.78%	4.49%	3.22%	3.32%	2.50%	9.14%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.45%	0.00%	1.34%	1.34%	0.00%	4.36%	1.01%	1.12%	50.28%	4.47%	8.16%	10.61%	1.90%	14.97%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%	1.12%	0.00%	0.56%	0.00%	0.00%	0.00%	0.28%	0.88%	0.56%	73.87%	2.09%	4.97%	2.88%	12.69%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.61%	1.47%	0.00%	1.47%	0.00%	0.00%	0.94%	65.19%	13.25%	5.09%	10.98%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.72%	0.00%	0.66%	0.00%	0.00%	0.00%	0.36%	0.00%	75.00%	5.31%	17.93%
C	0.00%	0.00%	0.07%	0.00%	0.79%	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%	80.46%	18.67%

One-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Issuers of Asset Backed Securities

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	77.74%	0.35%	0.29%	0.08%	0.05%	0.04%	0.08%	0.01%	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%	21.37%
Aa1	33.44%	48.72%	0.64%	0.96%	0.21%	0.11%	0.21%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.60%
Aa2	15.63%	6.15%	60.48%	0.91%	0.50%	0.20%	0.20%	0.00%	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.83%
Aa3	10.59%	10.81%	4.34%	52.97%	5.83%	0.85%	0.42%	0.53%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.45%
A1	6.54%	5.60%	6.54%	4.76%	55.74%	0.93%	1.59%	0.19%	0.09%	0.00%	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.46%
A2	2.71%	3.42%	3.49%	4.65%	3.75%	66.93%	0.71%	1.10%	0.13%	0.45%	0.00%	0.00%	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.60%
A3	1.56%	0.98%	1.97%	3.01%	14.82%	2.66%	53.45%	1.80%	0.64%	0.75%	0.00%	0.00%	0.00%	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.30%
Baa1	0.45%	0.40%	0.50%	1.59%	3.28%	4.52%	6.86%	65.08%	0.89%	3.18%	0.75%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.32%
Baa2	0.89%	0.48%	0.75%	1.03%	3.09%	3.57%	8.37%	5.56%	58.54%	3.02%	2.61%	0.34%	0.07%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.53%
Baa3	0.36%	0.18%	0.66%	0.36%	1.80%	1.56%	3.12%	9.29%	3.71%	63.33%	3.06%	2.94%	0.24%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.23%
Ba1	0.38%	0.19%	0.57%	0.51%	1.01%	1.14%	1.58%	3.23%	8.36%	10.01%	56.74%	1.01%	4.56%	0.70%	0.13%	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	9.82%
Ba2	0.00%	0.27%	0.07%	0.07%	0.41%	0.27%	0.75%	1.44%	2.19%	11.18%	8.98%	61.73%	2.19%	2.95%	0.27%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	7.13%
Ba3	0.05%	0.00%	0.00%	0.00%	0.10%	0.19%	0.48%	0.43%	1.06%	1.63%	7.40%	4.71%	66.92%	4.09%	2.40%	0.63%	0.91%	0.34%	0.43%	0.00%	0.00%	8.22%
B1	0.00%	0.06%	0.00%	0.00%	0.26%	0.13%	0.26%	0.58%	0.71%	2.27%	3.11%	8.93%	5.70%	64.47%	2.07%	3.50%	1.04%	0.39%	0.13%	0.06%	0.00%	6.34%
B2	0.14%	0.07%	0.07%	0.14%	0.00%	0.14%	0.00%	0.07%	0.21%	1.03%	1.59%	3.17%	9.24%	3.72%	67.54%	3.24%	3.38%	0.14%	0.07%	0.00%	0.07%	6.00%
B3	0.05%	0.00%	0.00%	0.00%	0.00%	0.05%	0.05%	0.11%	0.05%	0.44%	1.48%	1.75%	3.56%	10.07%	13.13%	56.18%	5.58%	2.24%	0.66%	0.05%	0.11%	4.43%
Caa1	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.04%	0.07%	0.39%	0.53%	1.30%	1.76%	4.40%	2.82%	77.07%	5.74%	2.71%	0.11%	0.14%	2.89%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.09%	0.07%	0.27%	0.67%	0.79%	2.56%	1.39%	88.11%	3.37%	0.67%	0.20%	1.75%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.02%	0.05%	0.07%	0.12%	0.05%	0.32%	0.49%	0.68%	2.56%	0.81%	90.31%	1.17%	1.31%	2.02%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.03%	0.02%	0.02%	0.00%	0.11%	0.19%	0.55%	0.48%	1.81%	1.67%	91.05%	1.86%	2.20%
C	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%	0.01%	0.01%	0.07%	0.16%	0.15%	0.75%	0.88%	83.46%	14.50%

One-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Corporate Issuers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	100.00%	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%	0.00%	0.00%	0.00%	0.00%
Aa1	0.00%	94.74%	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%	0.00%	5.26%
Aa2	0.00%	0.00%	85.71%	14.29%	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%
Aa3	0.00%	0.00%	8.33%	78.33%	8.33%	1.67%	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%	3.33%
A1	0.00%	0.00%	0.00%	17.74%	70.97%	4.84%	0.81%	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%	5.65%
A2	0.00%	0.00%	0.00%	0.00%	12.88%	84.85%	0.76%	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%	1.52%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	15.69%	76.08%	3.53%	0.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.31%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	15.32%	69.08%	9.25%	2.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.05%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.97%	14.08%	73.30%	5.83%	1.21%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.37%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.40%	11.73%	76.82%	3.91%	1.40%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.47%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.71%	12.77%	69.50%	8.51%	0.71%	1.42%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.67%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.41%	5.77%	71.79%	7.69%	0.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.51%	0.00%	0.00%	1.01%	1.01%	8.08%	65.15%	12.12%	2.02%	1.01%	0.51%	0.00%	0.00%	0.00%	0.00%	8.59%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%	1.51%	1.89%	6.79%	64.91%	7.17%	1.89%	0.75%	0.00%	0.00%	0.00%	0.00%	14.72%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.28%	1.13%	8.45%	65.35%	9.30%	1.69%	1.13%	0.00%	0.00%	0.00%	12.39%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.00%	0.34%	6.97%	65.99%	10.54%	1.53%	0.17%	0.00%	0.00%	14.29%
Caa1	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%	0.22%	0.43%	9.27%	64.22%	8.41%	1.29%	0.43%	0.00%	15.73%
Caa2	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%	0.53%	1.05%	16.32%	49.47%	10.53%	3.16%	0.53%	18.42%
Caa3	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%	1.64%	6.56%	42.62%	6.56%	6.56%	36.07%
Ca	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%	4.17%	8.33%	4.17%	41.67%	12.50%	29.17%
C	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%	6.67%	0.00%	0.00%	33.33%	60.00%

One-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Financial Institutions, Brokers and Dealers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	100.00%	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%	0.00%	0.00%	0.00%	0.00%
Aa1	0.00%	100.00%	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%	0.00%	0.00%	0.00%
Aa2	0.00%	4.35%	95.65%	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%	0.00%
Aa3	0.00%	0.00%	0.00%	82.54%	11.11%	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%	6.35%
A1	0.00%	0.00%	0.00%	1.49%	88.06%	4.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.49%	0.00%	0.00%	4.48%
A2	0.00%	0.00%	0.00%	0.00%	5.88%	83.19%	5.04%	4.20%	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%	1.68%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	8.33%	75.00%	8.33%	2.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.56%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.20%	70.49%	14.75%	1.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.92%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.04%	11.46%	64.58%	13.54%	1.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.33%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.53%	15.19%	68.35%	10.13%	0.00%	0.00%	0.00%	1.27%	0.00%	0.00%	1.27%	0.00%	0.00%	0.00%	1.27%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.45%	0.00%	0.00%	20.69%	65.52%	3.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.90%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%	64.71%	11.76%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%	0.00%	0.00%	11.76%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	4.00%	62.00%	16.00%	4.00%	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.33%	56.67%	20.00%	3.33%	0.00%	0.00%	0.00%	0.00%	0.00%	6.67%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%	8.82%	47.06%	5.88%	11.76%	0.00%	0.00%	0.00%	0.00%	20.59%
B3	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%	3.57%	42.86%	14.29%	3.57%	0.00%	0.00%	0.00%	35.71%
Caa1	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%	52.94%	11.76%	17.65%	0.00%	0.00%	17.65%
Caa2	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%	87.50%	0.00%	0.00%	0.00%	12.50%
Caa3	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%	25.00%	0.00%	25.00%	50.00%
Ca	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%	0.00%	0.00%	50.00%	50.00%
C																						

One-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Insurance Companies

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa																						
Aa1	0.00%	100.00%	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%	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	100.00%	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%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%	85.71%	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%	14.29%
A1	0.00%	0.00%	0.00%	0.00%	88.89%	11.11%	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%
A2	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	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%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	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%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	86.96%	0.00%	4.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.70%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.35%	89.13%	2.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.35%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	88.00%	4.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%
Ba1																						
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B1	0.00%	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%	0.00%	0.00%	33.33%
B2	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%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B3	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%	71.43%	0.00%	0.00%	0.00%	0.00%	0.00%	28.57%
Caa1	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%	12.50%	62.50%	0.00%	0.00%	12.50%	0.00%	12.50%
Caa2	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%	20.00%	60.00%	0.00%	20.00%	0.00%	0.00%
Caa3																						
Ca																						
C																						

One-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

International Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	88.24%	5.88%	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%	0.00%	5.88%
Aa1	8.33%	91.67%	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%	0.00%	0.00%
Aa2	0.00%	0.00%	100.00%	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%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%	14.29%	85.71%	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%
A1	0.00%	0.00%	0.00%	0.00%	66.67%	33.33%	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%	0.00%	0.00%	0.00%
A2	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%	0.00%	0.00%	0.00%	100.00%
A3																						
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	83.33%	16.67%	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%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.27%	72.73%	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%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	33.33%	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.22%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	88.89%	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.33%	66.67%	8.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	36.36%	63.64%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	83.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B2																						
B3	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%	16.67%	50.00%	0.00%	0.00%	0.00%	0.00%	33.33%
Caa1	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%	60.00%	20.00%	0.00%	0.00%	20.00%
Caa2	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%	0.00%	0.00%	0.00%
Caa3	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%	0.00%	0.00%	0.00%
Ca																						
C	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%	0.00%	0.00%	100.00%	0.00%

One-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

Sovereign

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	100.00%	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%	0.00%	0.00%	0.00%	0.00%
Aa1	0.00%	100.00%	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%	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	100.00%	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%	0.00%	0.00%
Aa3	0.00%	0.00%	10.00%	70.00%	20.00%	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%
A1	0.00%	0.00%	0.00%	0.00%	100.00%	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%
A2	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	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%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	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%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.11%	55.56%	33.33%	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%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	12.50%	75.00%	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%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	58.33%	8.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	83.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	15.38%	69.23%	0.00%	0.00%	7.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B1	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%	80.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B2	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%	25.00%	25.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B3	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%	83.33%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%
Caa1	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%	16.67%	50.00%	16.67%	16.67%	0.00%	0.00%	0.00%
Caa2	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%	0.00%	0.00%	0.00%	0.00%
Caa3	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%	33.33%	0.00%	33.33%	0.00%	0.00%	0.00%
Ca																						
C																						

One-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2014 cohort)

United States Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	88.99%	2.11%	0.11%	0.11%	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%	8.68%
Aa1	0.84%	90.29%	3.04%	0.08%	0.00%	0.00%	0.08%	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%	5.66%
Aa2	0.00%	1.13%	90.32%	2.43%	0.28%	0.06%	0.03%	0.03%	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%	5.73%
Aa3	0.00%	0.10%	2.33%	87.78%	2.56%	0.90%	0.19%	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%	6.14%
A1	0.00%	0.00%	0.17%	2.97%	86.30%	2.89%	0.52%	0.23%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.88%
A2	0.00%	0.00%	0.00%	0.41%	4.48%	83.51%	3.26%	0.81%	0.14%	0.07%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.26%
A3	0.00%	0.00%	0.15%	0.31%	0.93%	4.49%	82.82%	4.02%	0.62%	0.15%	0.15%	0.00%	0.15%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%
Baa1	0.00%	0.26%	0.00%	0.00%	0.00%	2.83%	9.51%	69.67%	6.43%	2.57%	0.26%	0.26%	0.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.97%
Baa2	0.00%	0.00%	0.00%	0.00%	0.42%	0.00%	0.00%	5.02%	79.50%	3.35%	2.51%	0.42%	0.84%	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	7.53%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.52%	1.55%	4.66%	74.09%	3.11%	2.07%	1.04%	0.00%	1.04%	1.55%	2.07%	0.00%	0.52%	0.00%	0.00%	7.77%
Ba1	0.00%	0.00%	0.90%	0.00%	0.00%	0.00%	0.90%	0.00%	0.90%	4.50%	68.47%	4.50%	3.60%	0.00%	0.00%	0.90%	1.80%	1.80%	0.00%	0.00%	0.00%	11.71%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	69.44%	11.11%	0.00%	0.00%	0.00%	0.00%	2.78%	0.00%	0.00%	0.00%	16.67%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.76%	0.00%	0.00%	0.00%	0.00%	76.19%	4.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	5.00%	70.00%	0.00%	5.00%	0.00%	5.00%	0.00%	0.00%	0.00%	5.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	42.86%	14.29%	14.29%	14.29%	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.57%	0.00%	0.00%	0.00%	7.14%	0.00%	0.00%	42.86%	0.00%	0.00%	0.00%	0.00%	0.00%	21.43%
Caa1	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%	25.00%	25.00%	0.00%	25.00%	25.00%	0.00%	0.00%
Caa2	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%	50.00%	0.00%	0.00%	0.00%	50.00%
Caa3	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%	0.00%	0.00%	20.00%	20.00%	0.00%	20.00%	20.00%
Ca	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%	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%	55.56%	0.00%	33.33%
C	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%	0.00%	0.00%	66.67%	33.33%

Average Three-Year Rating Transition Rates, by broad ratings 1983-2014

Issuers of Asset backed Securities

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	43.29%	3.34%	2.78%	2.61%	2.30%	2.64%	8.13%	34.90%
Aa	8.12%	32.63%	6.81%	5.23%	4.13%	3.55%	17.17%	22.37%
A	2.59%	4.40%	31.85%	7.09%	5.85%	4.48%	20.63%	23.12%
Baa	1.02%	1.25%	4.21%	29.05%	6.91%	6.84%	29.78%	20.93%
Ba	0.59%	0.74%	2.18%	4.86%	25.29%	7.70%	38.64%	20.00%
B	0.13%	0.21%	0.62%	1.96%	4.65%	24.74%	52.97%	14.73%
Caa-C	0.02%	0.02%	0.06%	0.19%	0.85%	1.01%	67.06%	30.79%

Short Term Issuers of Asset Backed Securities

	P-1	P-2	P-3	NP	WR
P-1	48.79%	1.33%	0.11%	0.27%	49.50%
P-2	14.07%	32.25%	0.32%	0.55%	52.81%
P-3	0.00%	0.00%	9.52%	0.00%	90.48%
NP	0.00%	0.00%	0.00%	0.00%	100.00%

Corporate Issuers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	63.16%	16.62%	2.72%	0.03%	0.36%	0.00%	0.00%	17.12%
Aa	1.83%	59.50%	19.94%	1.96%	0.53%	0.29%	0.03%	15.91%
A	0.08%	3.27%	64.83%	13.98%	1.67%	0.50%	0.24%	15.42%
Baa	0.05%	0.24%	7.39%	64.60%	7.22%	2.30%	0.85%	17.35%
Ba	0.01%	0.07%	0.83%	10.88%	40.96%	13.73%	3.78%	29.73%
B	0.02%	0.04%	0.17%	1.01%	6.98%	40.03%	13.00%	38.75%
Caa-C	0.00%	0.01%	0.08%	0.27%	1.24%	10.16%	29.17%	59.08%

Financial Institutions, Brokers and Dealers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	57.07%	27.67%	2.17%	0.26%	0.01%	0.00%	0.01%	12.81%
Aa	1.25%	57.67%	18.58%	2.94%	0.67%	0.07%	0.11%	18.72%
A	0.13%	10.90%	55.04%	9.55%	2.31%	0.97%	0.61%	20.49%
Baa	0.12%	2.17%	21.04%	40.90%	7.43%	2.13%	1.37%	24.83%
Ba	0.00%	0.19%	3.35%	13.95%	33.67%	9.31%	4.29%	35.23%
B	0.00%	0.54%	0.65%	3.06%	14.48%	27.56%	6.89%	46.81%
Caa-C	0.00%	0.26%	0.00%	0.13%	0.52%	7.01%	36.12%	55.97%

Average Three-Year Rating Transition Rates, by broad ratings 1983-2014

Insurance Companies

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	59.98%	27.98%	1.34%	0.00%	0.00%	0.00%	0.00%	10.70%
Aa	0.60%	55.16%	20.91%	2.41%	0.43%	0.13%	0.61%	19.76%
A	0.20%	3.20%	64.95%	12.58%	0.60%	0.45%	0.34%	17.67%
Baa	0.08%	1.03%	7.29%	67.61%	3.42%	1.63%	0.55%	18.40%
Ba	0.00%	0.18%	1.68%	18.03%	43.40%	4.80%	5.84%	26.07%
B	0.00%	0.00%	1.28%	3.34%	7.46%	26.37%	16.25%	45.28%
Caa-C	0.00%	0.00%	0.00%	3.52%	1.51%	6.24%	25.55%	63.18%

Sovereign

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	90.83%	7.34%	0.49%	1.05%	0.25%	0.00%	0.00%	0.04%
Aa	11.72%	79.65%	2.66%	1.74%	1.85%	0.08%	0.35%	1.95%
A	0.00%	14.56%	73.59%	8.39%	2.59%	0.08%	0.79%	0.00%
Baa	0.00%	0.00%	18.97%	69.80%	8.98%	2.15%	0.11%	0.00%
Ba	0.00%	0.00%	1.47%	23.01%	61.00%	10.66%	3.05%	0.82%
B	0.00%	0.00%	0.00%	1.08%	13.46%	73.84%	10.40%	1.22%
Caa-C	0.00%	0.00%	0.00%	0.25%	2.90%	33.50%	58.82%	4.53%

International Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	78.76%	11.73%	0.00%	0.15%	0.00%	0.00%	0.00%	9.36%
Aa	5.20%	73.82%	4.87%	2.16%	0.72%	0.16%	0.00%	13.06%
A	0.38%	14.87%	64.33%	9.23%	3.17%	0.11%	0.00%	7.90%
Baa	0.00%	0.00%	9.58%	52.89%	12.51%	1.90%	0.00%	23.12%
Ba	0.00%	0.00%	0.00%	5.23%	55.85%	2.62%	5.64%	30.66%
B	0.00%	0.00%	0.00%	0.00%	1.88%	42.32%	27.73%	28.07%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.67%	12.78%	36.67%	49.89%

United States Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	83.46%	3.78%	0.35%	0.15%	0.02%	0.00%	0.00%	12.24%
Aa	1.27%	86.63%	4.24%	0.18%	0.02%	0.00%	0.01%	7.65%
A	0.09%	5.33%	77.31%	1.94%	0.20%	0.05%	0.01%	15.06%
Baa	0.06%	0.19%	3.89%	71.17%	1.43%	0.22%	0.08%	22.96%
Ba	0.05%	0.24%	1.03%	9.95%	55.02%	5.40%	2.26%	26.04%
B	0.00%	0.08%	2.20%	3.39%	9.74%	48.31%	12.42%	23.85%
Caa-C	0.00%	0.00%	0.50%	1.12%	1.89%	2.57%	55.49%	38.43%

Average Three-Year Rating Transition Rates, by broad ratings 1983-2014

Short Term Municipal MIG

	MIG 1	MIG 2	MIG 3	SG	WR
MIG 1	7.28%	0.00%	0.01%	0.00%	92.71%
MIG 2	0.00%	11.98%	0.00%	0.00%	88.02%
MIG 3	0.00%	0.00%	0.00%	0.00%	100.00%
SG	0.00%	0.00%	0.00%	0.00%	100.00%

Short Term Municipal

	P-1	P-2	P-3	NP	WR
P-1	68.62%	0.80%	0.07%	0.02%	30.50%
P-2	0.47%	50.33%	0.09%	0.00%	49.11%
P-3	7.84%	0.00%	9.80%	0.00%	82.35%
NP	0.00%	0.00%	0.00%	0.00%	100.00%

Short-Term Corporate Commercial Paper

	P-1	P-2	P-3	NP	WR
P-1	73.08%	9.22%	0.65%	1.06%	15.99%
P-2	9.10%	58.47%	4.99%	3.78%	23.66%
P-3	1.41%	28.40%	23.63%	9.96%	36.60%
NP	0.40%	4.36%	7.31%	45.27%	42.67%

Three-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

Issuers of Asset Backed Securities

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	34.39%	2.20%	3.92%	1.91%	2.72%	1.06%	2.02%	51.77%
Aa	12.49%	21.70%	13.93%	9.59%	3.23%	0.76%	0.44%	37.87%
A	4.62%	7.08%	23.84%	15.55%	8.74%	2.58%	0.77%	36.83%
Baa	2.21%	3.14%	11.08%	29.89%	17.55%	6.40%	1.54%	28.19%
Ba	0.67%	1.55%	4.66%	12.75%	32.18%	13.66%	6.87%	27.67%
B	0.18%	0.28%	1.01%	4.43%	10.28%	37.07%	28.30%	18.44%
Caa-C	0.02%	0.01%	0.03%	0.25%	0.72%	1.72%	68.49%	28.77%

Short Term Issuers of Asset Backed Securities

	P-1	P-2	P-3	NP	WR
P-1	41.32%	5.79%	0.00%	0.00%	52.89%
P-2	8.33%	25.00%	16.67%	0.00%	50.00%
P-3	0.00%	0.00%	0.00%	0.00%	100.00%
NP					

Three-Year Rating Transition Rates, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

Corporate Issuers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	75.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%
Aa	0.00%	73.75%	17.50%	0.00%	0.00%	0.00%	0.00%	8.75%
A	0.00%	4.39%	69.85%	12.98%	0.95%	0.19%	0.00%	11.64%
Baa	0.00%	0.11%	9.25%	72.90%	5.27%	0.54%	0.11%	11.83%
Ba	0.00%	0.00%	0.22%	17.04%	49.56%	12.17%	1.33%	19.69%
B	0.00%	0.00%	0.00%	0.57%	5.73%	41.74%	12.89%	39.06%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.71%	13.39%	37.68%	48.21%

Financial Institutions, Brokers and Dealers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	37.04%	51.85%	0.00%	0.00%	0.00%	0.00%	0.00%	11.11%
Aa	0.00%	40.59%	37.06%	7.06%	0.00%	0.00%	0.59%	14.71%
A	0.00%	1.05%	53.85%	24.83%	1.75%	0.00%	0.00%	18.53%
Baa	0.00%	0.00%	2.50%	60.00%	13.13%	3.13%	1.25%	20.00%
Ba	0.00%	0.00%	0.81%	8.13%	31.71%	21.95%	5.69%	31.71%
B	0.00%	0.00%	0.00%	0.00%	6.45%	38.71%	17.74%	37.10%
Caa-C	0.00%	0.00%	0.00%	0.00%	9.52%	0.00%	47.62%	42.86%

Insurance Companies

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa								
Aa	0.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%
A	0.00%	5.00%	75.00%	13.33%	0.00%	0.00%	0.00%	6.67%
Baa	0.00%	0.00%	0.00%	76.92%	2.20%	0.00%	0.00%	20.88%
Ba	0.00%	0.00%	0.00%	0.00%	75.00%	0.00%	0.00%	25.00%
B	0.00%	0.00%	0.00%	0.00%	18.18%	0.00%	18.18%	63.64%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	22.22%	11.11%	66.67%

Sovereign

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	82.35%	17.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	85.71%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%
A	0.00%	6.67%	60.00%	26.67%	6.67%	0.00%	0.00%	0.00%
Baa	0.00%	0.00%	8.70%	69.57%	13.04%	8.70%	0.00%	0.00%
Ba	0.00%	0.00%	0.00%	35.29%	58.82%	5.88%	0.00%	0.00%
B	0.00%	0.00%	0.00%	0.00%	11.54%	61.54%	26.92%	0.00%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	66.67%	0.00%

Three-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

International Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	65.22%	13.04%	0.00%	0.00%	0.00%	0.00%	0.00%	21.74%
Aa	2.70%	59.46%	35.14%	2.70%	0.00%	0.00%	0.00%	0.00%
A	0.00%	4.00%	4.00%	56.00%	12.00%	0.00%	0.00%	24.00%
Baa	0.00%	0.00%	0.00%	46.67%	33.33%	6.67%	0.00%	13.33%
Ba	0.00%	0.00%	0.00%	0.00%	67.86%	3.57%	0.00%	28.57%
B	0.00%	0.00%	0.00%	0.00%	11.11%	22.22%	66.67%	0.00%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%

United States Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	63.74%	8.01%	0.76%	0.00%	0.00%	0.00%	0.00%	27.49%
Aa	0.27%	78.88%	4.62%	0.43%	0.00%	0.00%	0.00%	15.80%
A	0.00%	3.46%	71.99%	2.71%	0.92%	0.14%	0.02%	20.76%
Baa	0.00%	0.36%	8.68%	53.27%	7.49%	0.95%	1.19%	28.06%
Ba	0.81%	0.81%	0.81%	13.82%	30.08%	4.88%	2.44%	46.34%
B	0.00%	0.00%	0.00%	13.89%	11.11%	33.33%	8.33%	33.33%
Caa-C	0.00%	0.00%	0.00%	0.00%	5.41%	5.41%	37.84%	51.35%

Short Term Municipal MIG

	MIG 1	MIG 2	MIG 3	SG	WR
MIG 1	4.78%	0.00%	0.00%	0.00%	95.22%
MIG 2	0.00%	10.00%	0.00%	0.00%	90.00%
MIG 3					
SG					

Short Term Municipal

	P-1	P-2	P-3	NP	WR
P-1	68.26%	0.00%	0.00%	0.00%	31.74%
P-2	25.00%	0.00%	0.00%	0.00%	75.00%
P-3					
NP					

Short Term Corporate Commercial Paper

	P-1	P-2	P-3	NP	WR
P-1	78.00%	11.68%	0.34%	0.17%	9.81%
P-2	5.69%	71.29%	4.95%	3.22%	14.85%
P-3	0.00%	30.00%	26.00%	24.00%	20.00%
NP	0.00%	2.70%	8.11%	56.76%	32.43%

Average Three-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Issuers of Asset Backed Securities

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	43.29%	0.95%	1.13%	1.26%	1.11%	0.77%	0.89%	1.00%	0.76%	0.85%	0.84%	0.51%	0.95%	0.66%	0.71%	1.28%	1.58%	1.90%	1.88%	1.70%	1.08%	34.90%
Aa1	11.05%	25.58%	1.54%	1.51%	1.83%	1.48%	1.59%	1.64%	1.39%	1.44%	1.50%	0.96%	1.45%	1.22%	1.00%	1.12%	0.93%	1.07%	1.15%	4.56%	14.27%	21.72%
Aa2	7.88%	2.25%	32.10%	2.32%	2.73%	2.21%	2.13%	1.96%	1.71%	1.64%	1.49%	1.04%	1.34%	1.12%	1.03%	1.04%	0.97%	1.00%	0.96%	2.14%	8.49%	22.46%
Aa3	5.42%	2.41%	1.75%	24.15%	2.04%	3.62%	2.68%	2.06%	1.61%	2.23%	2.03%	1.22%	1.70%	1.57%	1.61%	1.36%	1.39%	1.38%	1.53%	2.90%	12.46%	22.89%
A1	3.69%	1.37%	1.95%	1.52%	21.01%	1.68%	2.02%	2.57%	1.98%	3.02%	2.99%	1.76%	2.36%	1.82%	1.54%	1.74%	1.91%	2.05%	1.91%	2.61%	12.73%	25.77%
A2	2.14%	0.94%	1.90%	1.59%	1.87%	33.71%	1.34%	2.09%	2.09%	2.51%	2.37%	1.49%	1.33%	1.14%	1.11%	1.61%	0.99%	1.22%	1.62%	3.22%	9.95%	23.76%
A3	2.60%	0.91%	1.26%	1.78%	1.71%	1.47%	23.67%	1.75%	2.73%	3.07%	2.38%	1.85%	1.96%	1.57%	1.82%	1.92%	1.72%	2.05%	2.15%	4.80%	17.61%	19.24%
Baa1	1.45%	0.43%	0.52%	0.75%	1.54%	1.53%	1.78%	22.08%	1.66%	2.93%	2.93%	2.18%	2.24%	2.27%	1.98%	2.41%	2.56%	2.81%	2.44%	5.20%	19.40%	18.92%
Baa2	0.85%	0.30%	0.48%	0.43%	0.90%	1.64%	1.56%	2.00%	27.50%	1.80%	2.62%	1.94%	2.39%	2.41%	1.74%	2.09%	2.08%	2.26%	2.31%	4.82%	16.06%	21.83%
Baa3	0.96%	0.29%	0.37%	0.33%	1.24%	1.10%	1.58%	1.85%	1.53%	24.02%	1.83%	2.02%	2.69%	2.62%	2.29%	2.98%	2.79%	2.81%	2.78%	5.07%	17.79%	21.04%
Ba1	0.95%	0.35%	0.32%	0.49%	0.85%	1.21%	1.50%	1.87%	1.79%	2.60%	16.95%	1.45%	2.17%	2.26%	2.06%	2.49%	4.04%	5.14%	4.24%	6.01%	20.41%	20.86%
Ba2	0.44%	0.15%	0.15%	0.24%	0.43%	0.46%	0.59%	1.02%	1.48%	1.80%	1.73%	25.23%	1.69%	2.52%	2.18%	2.89%	2.98%	4.50%	4.55%	6.04%	18.58%	20.35%
Ba3	0.40%	0.13%	0.15%	0.24%	0.33%	0.51%	0.76%	0.80%	1.11%	2.14%	2.69%	1.41%	21.78%	2.64%	2.86%	3.43%	4.20%	4.86%	5.26%	6.63%	19.28%	18.41%
B1	0.25%	0.14%	0.11%	0.19%	0.24%	0.31%	0.49%	0.81%	1.01%	1.87%	3.26%	2.66%	1.23%	18.65%	2.84%	4.45%	5.55%	5.30%	4.97%	5.93%	23.23%	16.52%
B2	0.12%	0.07%	0.05%	0.07%	0.09%	0.27%	0.21%	0.42%	0.42%	0.89%	1.70%	1.52%	1.48%	0.94%	24.20%	2.84%	6.19%	5.23%	5.76%	6.42%	24.29%	16.83%
B3	0.06%	0.03%	0.02%	0.02%	0.11%	0.12%	0.17%	0.26%	0.25%	0.53%	0.84%	1.07%	1.13%	1.35%	1.37%	18.69%	7.97%	13.40%	10.94%	6.92%	22.81%	11.93%
Caa1	0.08%	0.02%	0.03%	0.03%	0.02%	0.06%	0.11%	0.19%	0.20%	0.38%	0.61%	0.84%	0.68%	0.88%	1.01%	0.71%	22.10%	14.85%	20.30%	9.81%	16.67%	10.42%
Caa2	0.04%	0.01%	0.01%	0.02%	0.03%	0.05%	0.13%	0.08%	0.12%	0.22%	0.50%	0.78%	0.97%	0.97%	0.46%	1.12%	0.87%	32.14%	18.48%	15.77%	18.57%	8.66%
Caa3	0.02%	0.02%	0.01%	0.03%	0.02%	0.02%	0.04%	0.11%	0.12%	0.21%	0.42%	0.76%	1.09%	1.26%	0.45%	0.58%	1.12%	1.31%	47.59%	15.62%	17.21%	11.98%
Ca	0.02%	0.00%	0.01%	0.01%	0.01%	0.02%	0.01%	0.05%	0.05%	0.08%	0.18%	0.22%	0.37%	0.41%	0.21%	0.26%	0.49%	0.66%	1.18%	37.93%	38.60%	19.25%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.02%	0.05%	0.08%	0.05%	0.09%	0.12%	0.13%	0.26%	0.35%	52.48%	46.34%

Average Three-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Corporate Issuers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	63.16%	7.55%	6.73%	2.34%	1.21%	1.10%	0.40%	0.03%	0.00%	0.00%	0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.12%
Aa1	4.64%	48.70%	10.00%	8.09%	2.87%	4.12%	0.75%	1.10%	0.34%	0.40%	0.30%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.67%
Aa2	2.47%	6.39%	43.01%	15.93%	8.73%	4.50%	1.90%	0.45%	0.46%	0.14%	0.06%	0.09%	0.16%	0.52%	0.14%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	14.95%
Aa3	0.33%	1.43%	6.03%	45.50%	16.38%	8.53%	2.83%	1.62%	0.61%	0.36%	0.23%	0.23%	0.28%	0.14%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.47%
A1	0.24%	0.26%	1.51%	6.83%	48.63%	15.00%	7.90%	2.30%	1.31%	0.80%	0.45%	0.21%	0.24%	0.38%	0.12%	0.12%	0.00%	0.17%	0.00%	0.10%	0.00%	13.44%
A2	0.03%	0.11%	0.12%	2.05%	6.63%	47.04%	14.38%	6.93%	3.50%	1.44%	0.56%	0.54%	0.74%	0.25%	0.11%	0.03%	0.12%	0.15%	0.00%	0.04%	0.00%	15.24%
A3	0.02%	0.01%	0.11%	0.51%	2.34%	10.09%	44.62%	13.18%	6.21%	3.26%	0.94%	0.63%	0.44%	0.32%	0.17%	0.05%	0.05%	0.01%	0.01%	0.08%	0.00%	16.96%
Baa1	0.00%	0.04%	0.05%	0.11%	0.47%	2.87%	10.15%	45.56%	13.53%	5.00%	1.50%	1.37%	0.88%	0.98%	0.24%	0.25%	0.28%	0.17%	0.05%	0.14%	0.00%	16.36%
Baa2	0.10%	0.11%	0.12%	0.10%	0.51%	1.15%	4.32%	10.85%	46.34%	11.01%	2.70%	1.51%	1.13%	0.85%	0.65%	0.58%	0.33%	0.29%	0.04%	0.18%	0.01%	17.12%
Baa3	0.04%	0.00%	0.04%	0.12%	0.14%	0.55%	1.58%	5.10%	15.89%	39.67%	6.91%	3.91%	2.66%	1.81%	1.05%	0.68%	0.30%	0.32%	0.06%	0.38%	0.01%	18.76%
Ba1	0.05%	0.00%	0.01%	0.08%	0.16%	0.61%	0.94%	1.38%	5.70%	15.75%	27.84%	5.96%	5.40%	2.89%	2.70%	1.50%	0.52%	1.12%	0.17%	0.31%	0.08%	26.82%
Ba2	0.00%	0.00%	0.01%	0.03%	0.05%	0.07%	0.44%	0.81%	2.20%	7.26%	9.75%	27.79%	8.63%	4.96%	4.21%	2.35%	0.70%	1.17%	0.17%	0.39%	0.02%	29.01%
Ba3	0.00%	0.06%	0.00%	0.01%	0.04%	0.19%	0.23%	0.32%	0.92%	2.72%	4.01%	7.91%	26.71%	8.02%	6.76%	4.47%	1.43%	2.75%	0.30%	0.94%	0.21%	31.99%
B1	0.05%	0.00%	0.06%	0.02%	0.04%	0.07%	0.16%	0.20%	0.47%	0.95%	1.25%	3.81%	7.84%	27.82%	7.88%	6.58%	2.43%	2.81%	0.99%	1.49%	0.34%	34.75%
B2	0.00%	0.00%	0.01%	0.01%	0.02%	0.04%	0.06%	0.15%	0.22%	0.47%	0.63%	1.44%	3.44%	8.18%	24.72%	10.08%	5.41%	4.00%	1.27%	1.67%	0.51%	37.68%
B3	0.00%	0.00%	0.02%	0.00%	0.02%	0.00%	0.11%	0.08%	0.10%	0.35%	0.19%	0.69%	1.24%	3.86%	7.94%	22.76%	7.20%	5.81%	2.40%	2.19%	0.87%	44.15%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	0.07%	0.00%	0.25%	0.14%	0.19%	1.10%	2.10%	3.98%	10.13%	18.52%	7.77%	4.49%	2.62%	1.11%	47.50%
Caa2	0.00%	0.02%	0.00%	0.00%	0.08%	0.06%	0.00%	0.18%	0.04%	0.16%	0.25%	0.23%	1.01%	1.28%	2.29%	4.91%	5.48%	15.40%	3.51%	3.83%	2.28%	59.00%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.09%	0.18%	0.02%	0.66%	1.49%	3.11%	4.52%	4.66%	6.16%	3.51%	1.91%	73.65%
Ca	0.00%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%	0.00%	0.04%	0.12%	0.25%	0.18%	0.54%	1.43%	1.53%	1.37%	1.95%	1.64%	2.73%	14.55%	1.46%	72.13%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.89%	0.00%	0.00%	0.07%	0.77%	1.43%	0.49%	1.06%	0.64%	1.31%	12.97%	80.37%

Average Three-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Financial Institutions, Brokers and Dealers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	57.07%	15.28%	7.28%	5.10%	1.64%	0.38%	0.15%	0.26%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	12.81%
Aa1	2.41%	33.28%	18.68%	13.23%	7.95%	3.71%	1.29%	0.99%	0.49%	0.15%	0.21%	0.13%	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.20%
Aa2	1.69%	8.72%	31.76%	18.62%	6.83%	6.27%	1.98%	1.41%	1.91%	0.75%	0.07%	0.19%	0.10%	0.00%	0.00%	0.03%	0.00%	0.05%	0.05%	0.00%	0.00%	19.57%
Aa3	0.48%	4.60%	8.88%	40.07%	12.42%	7.56%	3.22%	1.17%	1.09%	0.52%	0.42%	0.12%	0.35%	0.06%	0.02%	0.05%	0.00%	0.07%	0.04%	0.02%	0.03%	18.82%
A1	0.09%	0.75%	4.95%	13.67%	34.92%	9.95%	6.43%	3.53%	2.54%	0.74%	0.49%	0.40%	0.48%	0.29%	0.02%	0.32%	0.03%	0.26%	0.20%	0.03%	0.09%	19.81%
A2	0.27%	0.12%	1.19%	4.97%	15.15%	35.29%	8.79%	5.52%	2.74%	1.60%	1.48%	0.42%	1.07%	0.18%	0.38%	0.05%	0.05%	0.31%	0.08%	0.10%	0.01%	20.24%
A3	0.01%	0.19%	1.10%	2.17%	8.77%	15.92%	30.74%	6.63%	4.45%	2.49%	1.30%	0.48%	1.13%	0.86%	0.82%	0.33%	0.02%	0.19%	0.38%	0.08%	0.03%	21.91%
Baa1	0.29%	0.20%	1.07%	1.71%	4.01%	9.83%	14.59%	22.06%	9.47%	5.44%	2.37%	2.16%	1.04%	0.42%	1.06%	0.21%	0.08%	0.17%	0.02%	0.13%	0.31%	23.37%
Baa2	0.00%	0.16%	0.36%	0.80%	2.41%	6.56%	9.25%	9.88%	25.05%	8.02%	3.67%	1.48%	1.65%	1.94%	0.49%	0.26%	0.15%	0.09%	0.19%	0.57%	0.06%	26.97%
Baa3	0.00%	0.26%	0.62%	1.04%	1.10%	3.72%	6.95%	10.77%	10.52%	23.77%	5.19%	3.10%	3.39%	0.89%	1.06%	0.19%	0.50%	1.15%	0.94%	0.31%	0.09%	24.46%
Ba1	0.00%	0.00%	0.13%	0.00%	1.08%	2.54%	3.40%	6.77%	6.28%	8.84%	18.88%	5.64%	5.48%	3.30%	2.52%	1.01%	0.38%	1.59%	0.27%	1.10%	0.72%	30.08%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.25%	0.54%	0.82%	2.55%	7.44%	5.00%	25.01%	7.26%	5.38%	2.42%	1.15%	0.48%	0.69%	1.17%	0.64%	0.56%	38.64%
Ba3	0.00%	0.00%	0.00%	0.48%	0.16%	1.03%	0.24%	1.35%	1.93%	3.99%	10.21%	6.66%	17.67%	5.50%	5.95%	1.35%	2.33%	1.19%	0.19%	1.16%	0.50%	38.11%
B1	0.00%	0.81%	0.00%	0.00%	0.00%	0.71%	0.13%	0.71%	0.45%	2.58%	2.27%	4.57%	8.79%	16.77%	13.31%	1.92%	1.31%	0.25%	0.58%	1.97%	0.63%	42.25%
B2	0.00%	0.00%	0.00%	0.33%	0.29%	0.00%	0.00%	0.00%	0.74%	1.53%	1.94%	5.62%	9.75%	6.53%	8.47%	5.17%	5.50%	0.79%	0.45%	1.20%	0.29%	51.40%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.82%	0.00%	2.04%	0.20%	1.12%	0.20%	1.53%	1.83%	13.35%	12.74%	2.24%	4.49%	1.12%	3.16%	1.22%	53.92%
Caa1	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%	5.08%	1.59%	13.33%	2.54%	2.86%	5.08%	2.86%	66.67%
Caa2	0.00%	0.00%	0.00%	1.32%	0.00%	0.00%	0.00%	0.00%	0.22%	0.44%	0.88%	0.00%	1.10%	2.42%	0.66%	5.93%	4.84%	33.19%	1.98%	7.25%	3.74%	36.04%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.81%	3.52%	0.54%	23.04%	8.13%	6.78%	8.40%	0.00%	0.00%	48.78%
Ca	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%	0.58%	0.00%	0.00%	25.47%	0.87%	73.08%
C	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%	0.00%	0.00%	51.24%	48.76%

Average Three-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Insurance Companies

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	59.98%	5.41%	18.21%	4.36%	1.34%	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%	10.70%
Aa1	2.74%	53.26%	7.04%	13.68%	5.01%	0.35%	1.86%	0.41%	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%	15.66%
Aa2	0.14%	0.99%	43.51%	17.15%	6.63%	3.00%	5.29%	1.69%	0.18%	0.35%	0.46%	0.00%	0.67%	0.00%	0.00%	0.11%	0.11%	0.39%	0.00%	0.39%	0.46%	18.49%
Aa3	0.00%	0.90%	0.72%	40.88%	17.05%	10.13%	3.84%	1.70%	0.25%	1.45%	0.00%	0.00%	0.12%	0.00%	0.17%	0.02%	0.32%	0.00%	0.00%	0.00%	0.02%	22.41%
A1	0.00%	0.00%	1.55%	5.74%	43.54%	13.91%	10.02%	4.95%	2.62%	0.92%	0.11%	0.00%	0.00%	0.00%	0.02%	0.73%	0.11%	0.52%	0.00%	0.00%	0.00%	15.27%
A2	0.57%	0.00%	0.20%	1.20%	6.73%	45.09%	20.37%	3.54%	1.00%	1.54%	0.30%	0.93%	0.21%	0.11%	0.09%	0.41%	0.16%	0.00%	0.00%	0.00%	0.00%	17.54%
A3	0.00%	0.17%	0.37%	1.11%	1.71%	12.49%	41.68%	12.94%	7.65%	1.64%	0.10%	0.05%	0.02%	0.00%	0.03%	0.02%	0.00%	0.21%	0.02%	0.07%	0.00%	19.73%
Baa1	0.21%	0.36%	0.53%	0.00%	0.88%	3.18%	11.08%	43.04%	14.02%	5.99%	0.76%	0.21%	0.00%	0.00%	0.64%	0.10%	0.07%	0.05%	0.41%	0.00%	0.00%	18.46%
Baa2	0.00%	0.73%	0.00%	1.26%	0.66%	0.62%	2.97%	8.74%	51.85%	9.61%	2.28%	1.12%	0.46%	0.00%	0.64%	0.05%	0.00%	0.11%	0.02%	0.07%	0.00%	18.83%
Baa3	0.00%	0.00%	0.00%	0.00%	0.18%	0.00%	1.40%	3.42%	19.02%	47.43%	2.78%	0.67%	2.40%	1.64%	0.88%	1.40%	0.15%	0.00%	0.18%	0.53%	0.18%	17.77%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.96%	0.87%	10.99%	13.18%	33.62%	5.26%	0.31%	1.58%	2.10%	0.87%	0.31%	1.89%	0.31%	1.48%	0.00%	24.27%
Ba2	0.00%	0.78%	0.00%	0.00%	0.00%	0.00%	0.66%	4.21%	6.09%	5.76%	17.39%	20.49%	5.76%	0.55%	3.10%	1.55%	2.44%	0.44%	2.88%	0.89%	0.00%	27.02%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	0.21%	5.23%	17.78%	10.46%	23.54%	2.72%	1.05%	1.15%	0.63%	5.96%	0.00%	2.30%	0.00%	28.87%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.56%	1.96%	3.36%	0.00%	2.10%	5.03%	6.43%	16.92%	3.78%	1.96%	2.10%	5.45%	1.96%	5.73%	0.00%	42.66%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.02%	0.35%	0.00%	4.72%	0.70%	0.00%	2.80%	1.75%	21.15%	3.50%	4.37%	1.40%	0.70%	1.75%	0.70%	52.10%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	0.56%	0.00%	0.11%	0.00%	0.00%	5.13%	3.12%	1.34%	24.86%	12.04%	4.24%	1.23%	2.90%	1.34%	43.03%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.37%	9.50%	0.83%	2.89%	18.60%	6.20%	2.07%	0.00%	0.00%	54.55%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.73%	0.00%	0.55%	0.00%	0.82%	0.00%	0.00%	0.55%	28.14%	0.27%	4.10%	0.82%	62.02%
Caa3	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%	7.69%	4.27%	1.71%	0.85%	0.00%	15.38%	0.00%	0.00%	70.09%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.29%	0.00%	0.00%	0.00%	0.00%	0.00%	2.47%	0.00%	2.06%	0.00%	0.00%	0.00%	18.93%	0.00%	66.26%
C	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%	0.00%	0.00%	0.00%	100.00%

Average Three-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Sovereign

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	90.83%	4.24%	2.63%	0.47%	0.41%	0.00%	0.08%	0.31%	0.00%	0.74%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
Aa1	16.03%	63.55%	8.68%	4.46%	1.07%	1.32%	0.00%	0.00%	0.08%	0.83%	0.99%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.98%
Aa2	14.34%	11.92%	55.07%	6.17%	1.28%	1.77%	0.43%	0.21%	2.98%	0.00%	1.56%	0.50%	1.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.56%
Aa3	3.38%	5.35%	20.92%	65.29%	0.94%	0.94%	0.00%	0.38%	0.00%	0.38%	0.56%	0.00%	0.38%	0.00%	0.00%	0.28%	0.00%	0.00%	1.22%	0.00%	0.00%	0.00%
A1	0.00%	0.00%	7.99%	18.52%	51.23%	9.09%	3.23%	0.76%	1.53%	3.14%	2.04%	0.00%	0.68%	0.25%	0.00%	0.00%	0.08%	0.00%	0.00%	0.68%	0.76%	0.00%
A2	0.00%	0.00%	3.56%	10.16%	22.64%	42.96%	5.01%	5.52%	2.10%	3.34%	2.03%	2.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.36%	0.00%	0.29%	0.00%
A3	0.00%	0.00%	0.90%	1.99%	14.20%	19.08%	54.70%	6.42%	1.36%	0.54%	0.54%	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.18%	0.00%
Baa1	0.00%	0.00%	0.00%	0.00%	9.76%	16.82%	14.80%	50.71%	0.93%	4.12%	1.85%	0.59%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.34%	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	0.00%	0.00%	2.02%	4.58%	10.12%	21.73%	52.61%	6.50%	1.60%	0.64%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	1.66%	12.50%	19.35%	42.15%	9.18%	6.45%	2.53%	0.00%	0.13%	5.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.43%	2.86%	9.02%	25.08%	49.21%	4.00%	1.59%	1.78%	1.71%	0.13%	0.63%	0.00%	0.25%	0.00%	0.32%	0.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.47%	13.66%	16.82%	47.69%	3.40%	5.25%	0.77%	4.32%	2.70%	0.85%	0.54%	0.23%	0.00%	2.31%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.25%	8.19%	13.28%	14.02%	34.74%	16.00%	3.10%	5.83%	1.99%	0.00%	1.36%	1.24%	0.00%	0.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.76%	3.45%	4.73%	12.04%	53.21%	12.78%	8.45%	1.76%	0.95%	0.20%	0.68%	0.00%	0.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%	0.91%	2.40%	7.11%	15.05%	46.48%	11.83%	11.08%	0.25%	1.32%	0.00%	0.00%	3.47%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.34%	0.00%	0.00%	4.97%	15.84%	26.44%	31.14%	10.07%	5.64%	3.22%	1.34%	0.00%	0.00%
Caa1	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%	1.04%	7.99%	26.22%	50.35%	3.99%	0.87%	3.30%	0.00%	6.25%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.27%	0.00%	10.23%	0.00%	0.00%	0.00%	1.14%	51.14%	20.45%	14.77%	0.00%	0.00%	0.00%
Caa3	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%	21.05%	17.54%	21.05%	40.35%	0.00%	0.00%	0.00%	0.00%	0.00%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.37%	17.81%	0.00%	16.44%	21.92%	28.77%	12.33%	1.37%	0.00%	0.00%	0.00%
C																						

Average Three-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

International Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	78.76%	7.36%	3.85%	0.53%	0.00%	0.00%	0.00%	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.36%
Aa1	8.45%	52.93%	16.64%	7.55%	1.27%	0.93%	0.26%	1.31%	0.07%	0.49%	0.00%	0.45%	0.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.42%
Aa2	7.11%	10.40%	52.70%	11.13%	2.41%	0.61%	0.59%	0.18%	1.11%	0.32%	0.18%	0.36%	0.38%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.39%
Aa3	0.00%	4.67%	12.78%	53.14%	4.83%	3.00%	0.70%	0.09%	3.07%	0.00%	0.18%	0.03%	0.27%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.90%
A1	0.00%	0.87%	4.43%	11.78%	49.20%	12.83%	2.42%	5.71%	3.33%	1.37%	2.19%	0.27%	0.55%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.93%
A2	1.05%	1.86%	4.71%	7.01%	20.02%	37.63%	3.60%	1.24%	2.85%	5.64%	0.43%	1.80%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.90%
A3	0.00%	0.00%	5.85%	5.14%	2.00%	19.54%	49.50%	0.00%	2.28%	2.14%	3.85%	1.43%	0.00%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.99%
Baa1	0.00%	0.00%	0.00%	0.00%	2.24%	4.48%	11.75%	56.34%	0.56%	1.12%	0.56%	1.12%	0.00%	3.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.91%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.30%	15.33%	48.54%	0.00%	1.09%	2.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.82%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.44%	2.43%	3.09%	34.66%	26.27%	4.19%	0.00%	0.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.26%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.08%	3.33%	2.70%	28.27%	10.40%	9.15%	1.66%	0.00%	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	41.79%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19%	2.33%	0.00%	0.39%	56.40%	3.88%	0.19%	0.00%	1.74%	3.10%	0.00%	1.94%	2.52%	0.00%	27.33%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.88%	4.42%	0.00%	15.93%	46.02%	0.00%	0.00%	4.87%	2.21%	0.00%	5.75%	5.31%	0.00%	14.60%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.06%	19.33%	9.79%	0.24%	7.16%	0.00%	3.58%	14.80%	0.00%	41.05%
B2	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%	18.25%	30.18%	9.47%	13.68%	4.21%	4.21%	1.40%	10.18%	8.42%
B3	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%	7.96%	39.30%	11.94%	9.95%	0.00%	0.00%	1.99%	28.86%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.51%	0.00%	16.74%	0.84%	5.86%	0.00%	1.26%	2.09%	0.00%	70.71%
Caa2	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%	2.27%	7.58%	29.55%	23.48%	0.00%	20.45%	16.67%
Caa3	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%	4.44%	0.00%	8.33%	3.33%	1.67%	82.22%
Ca	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%	6.95%	20.08%	11.58%	27.80%	0.77%	18.15%	0.00%	14.67%
C	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%	0.00%	0.00%	20.00%	80.00%

Average Three-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

United States Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	83.46%	2.42%	1.07%	0.29%	0.16%	0.16%	0.03%	0.09%	0.04%	0.02%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.24%
Aa1	6.19%	77.18%	8.42%	1.27%	0.57%	0.23%	0.05%	0.22%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.85%
Aa2	0.70%	4.15%	79.43%	4.39%	1.50%	0.58%	0.13%	0.06%	0.08%	0.01%	0.01%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.91%
Aa3	0.13%	1.38%	8.88%	75.07%	5.67%	1.24%	0.33%	0.09%	0.06%	0.02%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.11%
A1	0.08%	0.24%	1.87%	7.86%	73.52%	3.53%	0.66%	0.45%	0.20%	0.04%	0.05%	0.03%	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.43%
A2	0.11%	0.07%	0.34%	1.52%	6.00%	68.03%	3.36%	1.42%	0.69%	0.10%	0.10%	0.08%	0.03%	0.02%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	18.10%
A3	0.10%	0.12%	0.24%	1.37%	4.81%	9.78%	60.81%	4.20%	0.87%	0.67%	0.40%	0.13%	0.11%	0.08%	0.02%	0.04%	0.02%	0.00%	0.02%	0.00%	0.01%	16.21%
Baa1	0.07%	0.02%	0.06%	0.19%	0.71%	2.66%	2.99%	66.57%	3.23%	0.43%	0.18%	0.17%	0.07%	0.02%	0.05%	0.02%	0.02%	0.01%	0.00%	0.00%	0.00%	22.54%
Baa2	0.05%	0.01%	0.08%	0.03%	0.32%	0.96%	0.45%	2.98%	66.71%	3.38%	0.62%	0.75%	0.13%	0.05%	0.11%	0.02%	0.01%	0.04%	0.00%	0.01%	0.01%	23.26%
Baa3	0.00%	0.05%	0.06%	0.05%	0.33%	0.42%	1.23%	1.65%	4.94%	58.66%	4.20%	2.02%	1.07%	0.66%	0.28%	0.25%	0.10%	0.07%	0.08%	0.06%	0.13%	23.70%
Ba1	0.01%	0.40%	0.00%	0.13%	0.10%	0.49%	0.91%	2.30%	5.40%	8.59%	38.52%	6.23%	3.85%	1.72%	0.47%	2.10%	0.44%	0.64%	0.20%	0.46%	0.14%	26.90%
Ba2	0.08%	0.00%	0.15%	0.00%	0.28%	0.38%	0.18%	1.02%	3.86%	2.64%	3.84%	53.89%	3.75%	1.74%	1.91%	0.76%	0.33%	0.41%	0.25%	0.25%	0.26%	24.01%
Ba3	0.00%	0.00%	0.00%	0.00%	0.09%	0.00%	0.75%	0.26%	2.09%	5.05%	2.32%	5.98%	32.64%	4.90%	4.02%	2.85%	1.72%	0.89%	0.77%	1.30%	1.55%	32.82%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.34%	1.34%	0.56%	2.83%	8.17%	7.61%	28.61%	6.15%	4.63%	1.94%	4.18%	0.37%	5.97%	1.83%	24.47%
B2	0.00%	0.00%	0.15%	0.00%	1.87%	1.43%	0.37%	0.00%	1.81%	1.76%	0.14%	3.70%	3.65%	2.37%	47.71%	4.92%	1.54%	2.70%	1.47%	1.12%	0.75%	22.54%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.13%	0.69%	2.38%	0.00%	0.00%	0.00%	2.19%	3.07%	6.20%	32.29%	4.69%	5.82%	3.57%	4.44%	6.45%	27.10%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.22%	1.25%	3.74%	2.49%	8.86%	0.28%	0.00%	18.42%	0.97%	9.42%	6.93%	4.16%	41.27%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	2.50%	0.00%	0.00%	0.00%	0.00%	0.54%	0.44%	2.69%	0.00%	45.79%	2.40%	5.04%	3.13%	37.38%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.82%	4.08%	0.00%	0.00%	2.12%	0.00%	0.00%	0.98%	36.54%	13.21%	12.56%	29.69%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	49.27%	8.70%	40.11%
C	0.00%	0.00%	0.00%	0.00%	2.53%	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%	56.37%	41.10%

Three-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

Issuers of Asset Backed Securities

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	34.39%	0.95%	0.79%	0.46%	1.23%	1.35%	1.34%	1.54%	0.16%	0.21%	0.47%	0.05%	2.21%	0.47%	0.41%	0.18%	0.36%	0.43%	1.09%	0.03%	0.11%	51.77%
Aa1	18.87%	17.99%	1.39%	1.20%	2.34%	1.58%	2.85%	5.32%	2.22%	0.76%	0.25%	0.13%	1.46%	0.19%	0.13%	0.00%	0.06%	0.06%	0.00%	0.00%	0.06%	43.13%
Aa2	9.81%	2.69%	19.38%	2.03%	5.68%	2.93%	3.83%	4.78%	1.38%	1.73%	0.54%	1.08%	1.20%	0.66%	0.30%	0.06%	0.30%	0.12%	0.00%	0.00%	0.12%	41.39%
Aa3	9.72%	4.56%	2.03%	13.98%	5.45%	9.87%	5.45%	6.99%	2.53%	2.48%	2.03%	0.50%	2.13%	0.45%	0.15%	0.30%	0.20%	0.15%	0.10%	0.00%	0.10%	30.84%
A1	6.03%	2.42%	2.48%	1.62%	14.00%	1.45%	5.06%	9.64%	3.18%	3.50%	3.61%	1.51%	2.91%	1.45%	0.70%	0.05%	0.27%	0.16%	0.05%	0.00%	0.00%	39.90%
A2	3.84%	2.11%	2.89%	2.95%	3.67%	20.59%	3.78%	6.73%	3.56%	5.23%	3.51%	1.17%	1.61%	1.45%	0.61%	0.33%	0.28%	0.22%	0.11%	0.00%	0.11%	35.23%
A3	3.82%	1.81%	2.01%	2.92%	4.86%	2.33%	15.75%	4.73%	4.34%	5.57%	3.89%	4.93%	3.63%	1.88%	0.91%	0.45%	0.39%	0.19%	0.39%	0.13%	0.06%	35.00%
Baa1	2.94%	1.20%	1.08%	1.68%	3.84%	3.72%	6.73%	19.40%	3.54%	8.77%	5.47%	2.46%	5.23%	2.64%	1.44%	1.08%	0.60%	0.30%	0.18%	0.00%	0.00%	27.69%
Baa2	2.41%	1.10%	0.73%	1.52%	3.45%	2.46%	5.70%	4.08%	19.82%	4.71%	6.54%	4.34%	6.64%	3.14%	1.26%	1.36%	0.78%	0.31%	0.58%	0.16%	0.05%	28.87%
Baa3	1.32%	0.61%	0.77%	0.77%	1.60%	2.37%	3.59%	6.02%	2.26%	21.30%	4.91%	7.51%	9.22%	4.86%	1.49%	1.88%	0.61%	0.39%	0.44%	0.06%	0.11%	27.92%
Ba1	0.99%	1.26%	0.55%	0.93%	1.75%	1.92%	3.18%	5.26%	5.92%	6.41%	16.99%	3.78%	6.19%	5.04%	2.58%	2.36%	1.75%	1.32%	0.82%	0.49%	0.05%	30.47%
Ba2	0.71%	0.32%	0.26%	0.52%	0.97%	1.04%	2.08%	3.44%	2.27%	7.67%	6.11%	22.81%	3.77%	5.98%	4.29%	2.92%	2.66%	2.08%	0.91%	0.26%	0.32%	28.59%
Ba3	0.26%	0.32%	0.06%	0.19%	0.51%	0.90%	1.22%	1.80%	1.86%	2.77%	8.17%	4.37%	25.27%	6.62%	7.20%	4.63%	4.82%	2.25%	2.12%	0.77%	0.39%	23.47%
B1	0.42%	0.18%	0.30%	0.12%	0.65%	0.18%	0.53%	2.14%	1.84%	3.20%	3.97%	6.82%	5.28%	24.73%	4.03%	9.13%	8.72%	2.79%	1.96%	1.72%	0.89%	20.40%
B2	0.15%	0.05%	0.26%	0.00%	0.26%	0.52%	0.26%	1.18%	0.93%	2.22%	2.42%	2.37%	4.79%	2.47%	26.79%	4.95%	14.32%	6.49%	3.40%	1.75%	1.34%	23.08%
B3	0.04%	0.00%	0.04%	0.00%	0.25%	0.29%	0.21%	0.80%	0.59%	1.17%	2.14%	1.93%	2.69%	5.58%	9.40%	23.84%	15.44%	14.23%	4.28%	1.97%	1.85%	13.26%
Caa1	0.10%	0.00%	0.03%	0.03%	0.00%	0.07%	0.14%	0.24%	0.27%	0.95%	1.16%	1.26%	1.46%	1.60%	3.23%	2.11%	42.77%	25.20%	6.39%	2.21%	1.70%	9.08%
Caa2	0.02%	0.02%	0.00%	0.00%	0.00%	0.02%	0.07%	0.10%	0.17%	0.29%	0.56%	0.56%	0.70%	1.58%	1.00%	2.41%	1.41%	63.22%	15.97%	4.40%	2.53%	4.96%
Caa3	0.00%	0.00%	0.00%	0.03%	0.02%	0.00%	0.00%	0.07%	0.05%	0.28%	0.28%	0.46%	0.33%	0.86%	0.50%	0.66%	2.22%	1.87%	70.06%	11.29%	3.60%	7.42%
Ca	0.04%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.04%	0.09%	0.13%	0.17%	0.16%	0.28%	0.57%	0.51%	0.92%	0.99%	1.58%	2.19%	65.91%	13.65%	12.75%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.03%	0.02%	0.07%	0.10%	0.14%	0.20%	0.30%	0.28%	0.62%	0.83%	52.96%	44.42%

Three-Year Rating Transition Rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

Corporate Issuers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	75.00%	6.25%	0.00%	6.25%	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%	12.50%
Aa1	0.00%	61.11%	27.78%	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%	11.11%
Aa2	0.00%	0.00%	43.75%	56.25%	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%
Aa3	0.00%	0.00%	10.87%	47.83%	28.26%	2.17%	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%	10.87%
A1	0.00%	0.00%	0.00%	19.17%	50.00%	13.33%	5.83%	0.00%	0.83%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.83%
A2	0.00%	0.00%	0.00%	0.00%	13.13%	53.75%	9.38%	7.50%	3.13%	0.63%	0.00%	0.00%	0.00%	0.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.88%
A3	0.00%	0.00%	0.00%	0.00%	1.23%	13.52%	51.23%	11.89%	6.97%	1.23%	2.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.89%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	3.64%	18.21%	45.70%	16.89%	2.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.25%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.69%	18.26%	50.00%	9.28%	4.79%	1.20%	0.00%	0.00%	0.60%	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	9.88%
Baa3	0.00%	0.00%	0.00%	0.34%	0.00%	0.00%	0.34%	7.48%	18.37%	50.00%	7.14%	2.38%	0.34%	1.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.59%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.59%	5.56%	27.78%	34.13%	11.90%	5.56%	0.00%	1.59%	0.79%	0.00%	0.79%	0.00%	0.00%	0.00%	10.32%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.58%	0.58%	1.16%	12.21%	10.47%	31.98%	9.30%	5.23%	2.91%	2.33%	0.00%	0.58%	0.58%	0.00%	0.00%	22.09%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.84%	3.25%	13.64%	28.57%	11.69%	7.79%	2.60%	1.95%	0.00%	0.00%	0.00%	0.00%	24.68%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.99%	1.59%	4.78%	9.56%	29.48%	9.96%	5.58%	1.99%	0.00%	0.40%	0.80%	0.40%	33.47%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	1.52%	2.43%	10.33%	22.19%	14.89%	6.08%	2.43%	0.30%	1.82%	0.91%	36.78%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.21%	0.21%	1.07%	3.00%	9.21%	23.77%	11.99%	4.93%	1.50%	0.21%	0.21%	43.68%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.63%	0.32%	1.58%	4.43%	14.87%	25.32%	9.81%	2.53%	0.95%	0.00%	39.56%
Caa2	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%	0.68%	2.05%	18.49%	10.96%	8.90%	2.74%	1.37%	54.79%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.72%	0.00%	0.00%	1.72%	3.45%	13.79%	10.34%	5.17%	1.72%	3.45%	58.62%
Ca	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%	7.69%	0.00%	0.00%	3.85%	11.54%	76.92%
C	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%	7.14%	7.14%	0.00%	0.00%	7.14%	0.00%	0.00%	78.57%

Three-Year Rating Transition Rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

Financial Institutions, Brokers and Dealers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	37.04%	25.93%	25.93%	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%	11.11%
Aa1	0.00%	27.50%	20.00%	17.50%	17.50%	0.00%	0.00%	5.00%	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%	12.50%
Aa2	0.00%	0.00%	18.52%	44.44%	3.70%	11.11%	0.00%	0.00%	3.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.52%
Aa3	0.00%	0.00%	0.00%	25.24%	18.45%	25.24%	6.80%	2.91%	4.85%	0.97%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.97%	0.00%	0.00%	14.56%
A1	0.00%	0.00%	0.00%	3.03%	35.35%	30.30%	2.02%	9.09%	4.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.16%
A2	0.00%	0.00%	0.00%	0.00%	2.50%	33.33%	14.17%	11.67%	15.83%	1.67%	0.83%	0.00%	1.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.33%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	1.49%	38.81%	13.43%	16.42%	4.48%	1.49%	1.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	22.39%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.35%	23.19%	27.54%	8.70%	5.80%	0.00%	4.35%	1.45%	1.45%	0.00%	0.00%	1.45%	0.00%	0.00%	0.00%	21.74%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92%	7.69%	26.92%	25.00%	9.62%	1.92%	1.92%	1.92%	1.92%	0.00%	0.00%	1.92%	0.00%	0.00%	0.00%	19.23%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.56%	5.13%	53.85%	12.82%	0.00%	5.13%	2.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.95%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.94%	0.00%	2.94%	17.65%	8.82%	8.82%	5.88%	14.71%	2.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	35.29%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.38%	4.76%	9.52%	11.90%	16.67%	7.14%	7.14%	7.14%	2.38%	0.00%	0.00%	0.00%	0.00%	30.95%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.38%	2.13%	23.40%	8.51%	14.89%	2.13%	8.51%	4.26%	0.00%	0.00%	0.00%	29.79%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.52%	33.33%	9.52%	9.52%	4.76%	0.00%	9.52%	0.00%	0.00%	23.81%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	0.00%	26.92%	0.00%	15.38%	3.85%	3.85%	0.00%	0.00%	42.31%
B3	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%	6.67%	33.33%	6.67%	6.67%	0.00%	0.00%	0.00%	46.67%
Caa1	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%	0.00%	0.00%	25.00%	75.00%
Caa2	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%	18.18%	36.36%	0.00%	0.00%	9.09%	36.36%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	25.00%	0.00%	25.00%	0.00%	0.00%	0.00%
Ca	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%	0.00%	0.00%	0.00%	100.00%
C																						

Three-Year Rating Transition Rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

Insurance Companies

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa																						
Aa1	0.00%	33.33%	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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.67%
Aa2	0.00%	0.00%	100.00%	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%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%	100.00%	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%	0.00%
A1	0.00%	0.00%	0.00%	17.65%	47.06%	11.76%	0.00%	0.00%	11.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.76%
A2	0.00%	0.00%	0.00%	0.00%	0.00%	87.50%	12.50%	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%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	3.70%	66.67%	7.41%	14.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.41%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	59.09%	22.73%	9.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.82%	56.41%	5.13%	0.00%	2.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	23.08%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	60.00%	3.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	26.67%
Ba1																						
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%
B1	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%	0.00%	0.00%	0.00%	100.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B3	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%	0.00%	25.00%	0.00%	75.00%
Caa1	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%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.00%
Caa2	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%	50.00%	0.00%	0.00%	0.00%	0.00%	50.00%
Caa3																						
Ca	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%	0.00%	0.00%	0.00%	100.00%
C	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%	0.00%	0.00%	0.00%	100.00%

Three-Year Rating Transition Rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

Sovereign

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	82.35%	17.65%	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%	0.00%	0.00%
Aa1	0.00%	100.00%	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%	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	80.00%	0.00%	20.00%	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%
Aa3	0.00%	0.00%	12.50%	75.00%	12.50%	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%
A1	0.00%	0.00%	0.00%	12.50%	50.00%	12.50%	0.00%	0.00%	12.50%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A2	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	25.00%	0.00%	25.00%	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%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	66.67%	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%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	50.00%	33.33%	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%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	75.00%	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%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	7.69%	15.38%	30.77%	15.38%	0.00%	7.69%	0.00%	0.00%	15.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%	14.29%	28.57%	42.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	16.67%	16.67%	16.67%	16.67%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	15.38%	53.85%	15.38%	7.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B2	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%	16.67%	33.33%	33.33%	0.00%	16.67%	0.00%	0.00%	0.00%
B3	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%	42.86%	28.57%	14.29%	14.29%	0.00%	0.00%	0.00%
Caa1	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%	0.00%	0.00%	0.00%	0.00%
Caa2	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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Caa3																						
Ca	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%	0.00%	0.00%	0.00%	0.00%	0.00%
C																						

Three-Year Rating Transition Rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

International Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	65.22%	13.04%	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%	0.00%	21.74%
Aa1	8.33%	75.00%	16.67%	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%	0.00%
Aa2	0.00%	0.00%	100.00%	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%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%	6.67%	80.00%	6.67%	0.00%	6.67%	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%
A1	0.00%	0.00%	0.00%	14.29%	14.29%	0.00%	0.00%	71.43%	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%
A2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	53.85%	0.00%	7.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	38.46%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%
Baa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	40.00%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	20.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	20.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.45%	36.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.18%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.27%	18.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	54.55%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	66.67%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B1	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%	40.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B2	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%	50.00%	50.00%	0.00%	0.00%	0.00%
B3	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%	0.00%	0.00%	0.00%	0.00%
Caa1																						
Caa2	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%	50.00%	0.00%	50.00%	0.00%
Caa3																						
Ca																						
C																						

Three-Year Rating Transition Rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2012 cohort)

United States Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	63.74%	7.17%	0.76%	0.08%	0.42%	0.17%	0.17%	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%	27.49%
Aa1	1.57%	76.18%	7.53%	0.74%	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%	13.98%
Aa2	0.05%	1.85%	73.95%	6.01%	1.53%	0.75%	0.20%	0.08%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	15.51%
Aa3	0.06%	0.21%	3.47%	69.69%	6.61%	1.52%	0.72%	0.57%	0.27%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.80%
A1	0.00%	0.00%	0.37%	4.60%	66.07%	6.06%	1.56%	0.79%	0.21%	0.13%	0.16%	0.03%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.94%
A2	0.00%	0.00%	0.13%	0.67%	7.15%	57.25%	6.28%	1.67%	1.00%	0.73%	1.34%	0.07%	0.40%	0.13%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	23.11%
A3	0.00%	0.00%	0.16%	0.49%	2.27%	8.43%	54.13%	6.97%	2.43%	1.30%	2.43%	0.16%	0.65%	0.16%	0.00%	0.16%	0.00%	0.00%	0.16%	0.00%	0.00%	20.10%
Baa1	0.00%	0.00%	0.25%	0.00%	0.00%	3.55%	11.17%	36.29%	10.91%	2.79%	2.03%	0.51%	0.76%	0.00%	0.51%	0.76%	1.02%	0.00%	0.00%	0.00%	0.00%	29.44%
Baa2	0.00%	0.00%	0.00%	0.00%	0.80%	1.20%	2.81%	7.63%	44.18%	8.43%	2.01%	2.81%	3.21%	0.80%	0.00%	0.40%	0.80%	0.80%	0.00%	0.00%	0.00%	24.10%
Baa3	0.00%	0.51%	0.51%	0.00%	0.00%	0.51%	1.01%	2.02%	4.55%	44.44%	9.09%	5.05%	1.01%	0.00%	0.00%	0.00%	0.00%	0.51%	0.00%	0.51%	0.00%	30.30%
Ba1	0.00%	0.00%	0.00%	1.54%	0.00%	0.00%	1.54%	3.08%	4.62%	13.85%	23.08%	3.08%	4.62%	4.62%	0.00%	3.08%	0.00%	1.54%	1.54%	0.00%	0.00%	33.85%
Ba2	3.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.70%	7.41%	25.93%	3.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.56%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.45%	3.23%	0.00%	19.35%	0.00%	0.00%	3.23%	0.00%	3.23%	0.00%	0.00%	0.00%	64.52%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.43%	0.00%	28.57%	0.00%	7.14%	0.00%	7.14%	7.14%	7.14%	0.00%	21.43%
B2	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%	20.00%	20.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%	23.53%	0.00%	0.00%	0.00%	5.88%	11.76%	0.00%	11.76%	0.00%	0.00%	0.00%	0.00%	0.00%	41.18%
Caa1	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%	0.00%	10.00%	0.00%	0.00%	10.00%	10.00%	50.00%
Caa2	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%	20.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.00%
Caa3	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%	33.33%	33.33%	0.00%	0.00%	33.33%
Ca	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%	0.00%	42.86%	0.00%	57.14%
C	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%	0.00%	0.00%	50.00%	50.00%

Average Ten-Year Rating Transition Rates, by broad ratings 1983-2014

Issuers of Asset backed Securities

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	7.71%	0.57%	1.03%	1.36%	0.95%	0.71%	0.87%	86.80%
Aa	2.88%	4.76%	1.30%	1.31%	1.48%	1.65%	4.11%	82.51%
A	1.16%	0.66%	5.19%	1.55%	1.05%	1.18%	8.30%	80.92%
Baa	1.49%	0.70%	1.06%	3.31%	1.38%	1.79%	14.88%	75.39%
Ba	1.06%	0.71%	1.06%	1.47%	3.32%	2.41%	16.53%	73.44%
B	0.25%	0.39%	0.34%	0.88%	1.34%	4.73%	23.33%	68.73%
Caa-C	0.00%	0.02%	0.02%	0.08%	0.09%	0.55%	16.83%	82.41%

Short Term Issuers of Asset Backed Securities

	P-1	P-2	P-3	NP	WR
P-1	19.00%	0.91%	0.00%	0.04%	80.04%
P-2	12.50%	7.74%	0.00%	0.00%	79.76%
P-3	0.00%	0.00%	0.00%	0.00%	100.00%
NP	0.00%	0.00%	0.00%	0.00%	100.00%

Corporate Issuers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	24.26%	19.08%	9.86%	2.63%	0.23%	0.04%	0.00%	43.90%
Aa	1.63%	20.51%	24.84%	7.05%	1.40%	0.34%	0.23%	44.00%
A	0.05%	2.96%	29.88%	19.33%	3.13%	1.37%	0.47%	42.81%
Baa	0.08%	0.58%	8.11%	30.12%	6.34%	3.09%	1.17%	50.51%
Ba	0.06%	0.14%	1.30%	7.64%	7.99%	7.09%	1.98%	73.81%
B	0.05%	0.02%	0.19%	1.45%	3.04%	7.16%	2.68%	85.41%
Caa-C	0.00%	0.00%	0.14%	0.52%	0.55%	1.59%	1.45%	95.75%

Financial Institutions, Brokers and Dealers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	25.46%	24.63%	10.43%	1.98%	0.37%	0.00%	0.00%	37.13%
Aa	1.75%	27.07%	16.41%	4.88%	0.76%	0.24%	0.34%	48.54%
A	0.16%	15.75%	22.08%	4.72%	1.72%	0.76%	1.04%	53.77%
Baa	0.19%	5.66%	16.20%	8.80%	1.41%	1.40%	1.27%	65.07%
Ba	0.00%	1.32%	6.54%	3.70%	1.13%	1.06%	1.62%	84.62%
B	0.00%	0.04%	0.92%	3.68%	2.73%	0.11%	1.14%	91.38%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.38%	0.00%	3.44%	96.18%

Average Ten-Year Rating Transition Rates, by broad ratings 1983-2014

Insurance Companies

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	18.16%	12.06%	9.80%	6.65%	0.00%	0.00%	0.00%	53.32%
Aa	1.81%	13.55%	22.36%	5.05%	0.93%	0.17%	0.45%	55.69%
A	0.40%	1.75%	33.50%	17.19%	0.46%	0.98%	1.00%	44.72%
Baa	0.00%	0.43%	5.82%	31.88%	2.41%	0.50%	0.78%	58.18%
Ba	0.00%	0.24%	0.10%	16.88%	8.94%	5.10%	5.28%	63.45%
B	0.00%	0.00%	0.00%	2.00%	12.22%	2.00%	5.00%	78.78%
Caa-C	0.00%	0.00%	0.00%	3.74%	0.30%	3.29%	1.79%	90.88%

Sovereign

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	77.18%	17.07%	2.41%	2.35%	0.92%	0.00%	0.00%	0.06%
Aa	44.11%	43.02%	1.16%	3.25%	2.44%	0.00%	0.00%	6.03%
A	2.75%	32.90%	41.20%	14.52%	5.11%	0.39%	3.14%	0.00%
Baa	0.00%	12.46%	38.51%	33.61%	11.55%	3.86%	0.00%	0.00%
Ba	0.00%	1.76%	10.70%	32.06%	28.68%	20.72%	4.79%	1.28%
B	0.00%	0.00%	0.00%	19.91%	17.13%	48.97%	10.57%	3.43%
Caa-C	0.00%	0.00%	0.00%	6.70%	5.02%	36.60%	36.60%	15.07%

International Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	47.99%	22.38%	0.88%	0.00%	0.00%	0.00%	0.00%	28.75%
Aa	17.20%	31.75%	5.10%	3.89%	1.86%	0.66%	0.00%	39.53%
A	3.39%	32.13%	29.98%	2.94%	1.42%	0.09%	0.00%	30.04%
Baa	0.00%	22.04%	8.75%	18.31%	0.00%	0.00%	0.00%	50.89%
Ba	0.00%	0.00%	0.00%	0.00%	12.65%	6.12%	0.00%	81.22%
B	0.00%	0.00%	0.00%	0.00%	0.00%	37.79%	4.11%	58.10%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	9.73%	12.56%	77.71%

United States Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	59.09%	7.50%	0.91%	0.23%	0.02%	0.00%	0.00%	32.25%
Aa	3.77%	63.41%	9.78%	0.26%	0.03%	0.03%	0.01%	22.70%
A	0.31%	11.86%	38.72%	2.72%	0.24%	0.06%	0.03%	46.06%
Baa	0.10%	0.78%	5.19%	26.52%	1.25%	0.26%	0.16%	65.74%
Ba	0.18%	0.51%	2.62%	12.74%	16.16%	1.68%	1.85%	64.28%
B	0.00%	0.59%	4.13%	3.68%	5.17%	12.00%	5.60%	68.83%
Caa-C	0.00%	0.00%	1.22%	1.78%	1.22%	0.00%	19.64%	76.14%

Average Ten-Year Rating Transition Rates, by broad ratings 1983-2014

Short Term Municipal MIG

	MIG 1	MIG 2	MIG 3	SG	WR
MIG 1	1.33%	0.00%	0.00%	0.00%	98.67%
MIG 2	0.00%	0.76%	0.00%	0.00%	99.24%
MIG 3	0.00%	0.00%	0.00%	0.00%	100.00%
SG	0.00%	0.00%	0.00%	0.00%	100.00%

Short Term Municipal

	P-1	P-2	P-3	NP	WR
P-1	29.85%	0.92%	0.03%	0.00%	69.20%
P-2	0.00%	4.03%	0.00%	0.00%	95.97%
P-3	0.00%	0.00%	0.00%	0.00%	100.00%
NP	0.00%	0.00%	0.00%	0.00%	100.00%

Short Term Commercial Paper

	P-1	P-2	P-3	NP	WR
P-1	39.54%	12.15%	0.98%	2.01%	45.33%
P-2	10.29%	23.12%	3.45%	2.16%	60.98%
P-3	5.18%	15.53%	1.73%	3.25%	74.31%
NP	4.05%	3.31%	1.27%	7.33%	84.03%

Ten-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

Issuers of Asset Backed Securities

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	3.50%	1.20%	2.82%	6.47%	5.69%	3.10%	3.30%	73.92%
Aa	0.76%	2.06%	2.64%	4.28%	6.65%	7.17%	14.01%	62.42%
A	0.62%	0.57%	2.52%	2.29%	1.79%	3.33%	25.18%	63.69%
Baa	0.47%	0.55%	1.09%	2.00%	1.68%	1.89%	28.38%	63.95%
Ba	0.93%	0.49%	1.11%	2.09%	2.22%	2.71%	19.35%	71.11%
B	0.72%	0.36%	0.72%	0.99%	1.18%	4.34%	25.95%	65.73%
Caa-C	0.00%	0.09%	0.09%	0.27%	0.45%	0.45%	24.91%	73.74%

Short Term Issuers of Asset Backed Securities

	P-1	P-2	P-3	NP	WR
P-1	12.92%	2.23%	0.00%	0.00%	84.86%
P-2	0.00%	0.00%	0.00%	0.00%	100.00%
P-3					
NP					

Ten-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

Corporate Issuers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	13.16%	31.58%	10.53%	0.00%	0.00%	0.00%	0.00%	44.74%
Aa	0.00%	18.64%	29.66%	3.39%	0.00%	0.00%	0.00%	48.31%
A	0.00%	3.21%	34.18%	17.43%	1.86%	1.18%	0.00%	42.13%
Baa	0.12%	0.25%	10.69%	32.68%	5.65%	1.84%	0.61%	48.16%
Ba	0.00%	0.00%	1.68%	15.35%	10.79%	8.39%	1.44%	62.35%
B	0.00%	0.00%	0.22%	2.70%	5.51%	8.77%	4.27%	78.52%
Caa-C	0.00%	0.00%	0.00%	0.80%	0.80%	3.48%	1.87%	93.05%

Financial Institutions, Brokers and Dealers

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	20.00%	20.00%	8.57%	0.00%	2.86%	0.00%	0.00%	48.57%
Aa	0.32%	11.50%	21.73%	13.42%	2.56%	0.96%	0.00%	49.52%
A	0.00%	3.25%	17.53%	10.71%	4.55%	2.60%	2.27%	59.09%
Baa	0.00%	0.00%	12.07%	16.38%	3.45%	0.86%	4.31%	62.93%
Ba	0.00%	0.00%	0.00%	3.45%	0.00%	6.90%	6.90%	82.76%
B	0.00%	0.00%	0.00%	5.26%	10.53%	0.00%	0.00%	84.21%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%

Insurance Companies

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	0.00%	12.50%	0.00%	25.00%	0.00%	0.00%	0.00%	62.50%
Aa	0.00%	15.15%	21.21%	6.06%	3.03%	0.00%	0.00%	54.55%
A	0.00%	0.00%	29.07%	19.77%	0.00%	2.33%	0.00%	48.84%
Baa	0.00%	0.00%	3.33%	48.33%	0.00%	0.00%	0.00%	48.33%
Ba	0.00%	0.00%	0.00%	36.36%	0.00%	0.00%	0.00%	63.64%
B	0.00%	0.00%	0.00%	8.33%	8.33%	0.00%	0.00%	83.33%
Caa-C								

Sovereign

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	70.00%	15.00%	0.00%	15.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	42.86%	14.29%	14.29%	28.57%	0.00%	0.00%	0.00%
A	0.00%	31.82%	40.91%	13.64%	4.55%	4.55%	4.55%	0.00%
Baa	0.00%	13.33%	13.33%	46.67%	20.00%	6.67%	0.00%	0.00%
Ba	0.00%	0.00%	7.69%	46.15%	23.08%	15.38%	7.69%	0.00%
B	0.00%	0.00%	0.00%	22.22%	11.11%	33.33%	27.78%	5.56%
Caa-C	0.00%	0.00%	0.00%	0.00%	16.67%	33.33%	33.33%	16.67%

Ten-year transition rates, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

International Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	58.82%	17.65%	0.00%	0.00%	0.00%	0.00%	0.00%	23.53%
Aa	7.69%	28.21%	0.00%	15.38%	10.26%	0.00%	0.00%	38.46%
A	0.00%	37.50%	0.00%	25.00%	18.75%	6.25%	0.00%	12.50%
Baa	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Ba	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	83.33%
B	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.56%	44.44%

United States Public Finance

	Aaa	Aa	A	Baa	Ba	B	Caa-C	WR
Aaa	29.60%	6.85%	0.35%	0.28%	0.00%	0.00%	0.00%	62.93%
Aa	1.93%	59.03%	6.52%	0.72%	0.15%	0.03%	0.00%	31.62%
A	0.08%	11.75%	36.25%	2.38%	0.68%	0.11%	0.13%	48.63%
Baa	0.13%	0.65%	7.20%	12.43%	2.95%	0.52%	0.46%	75.65%
Ba	0.81%	0.00%	2.42%	4.03%	6.45%	1.61%	4.03%	80.65%
B	0.00%	0.00%	0.00%	0.00%	2.70%	0.00%	2.70%	94.59%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.34%	89.66%

Short Term Municipal MIG

	MIG 1	MIG 2	MIG 3	SG	WR
MIG 1	0.33%	0.00%	0.00%	0.00%	99.67%
MIG 2	0.00%	0.00%	0.00%	0.00%	100.00%
MIG 3	0.00%	0.00%	0.00%	0.00%	100.00%
SG					

Short Term Municipal

	P-1	P-2	P-3	NP	WR
P-1	29.84%	0.00%	0.00%	0.00%	70.16%
P-2	0.00%	0.00%	0.00%	0.00%	100.00%
P-3					
NP					

Short Term Corporate Commercial paper

	P-1	P-2	P-3	NP	WR
P-1	43.09%	15.85%	0.95%	2.57%	37.53%
P-2	11.29%	35.06%	4.47%	4.47%	44.71%
P-3	7.50%	40.00%	0.00%	0.00%	52.50%
NP	1.47%	2.94%	2.94%	11.76%	80.88%

Average Ten-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Issuers of Asset Backed Securities

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	7.71%	0.12%	0.17%	0.28%	0.23%	0.34%	0.47%	0.72%	0.30%	0.35%	0.31%	0.22%	0.42%	0.20%	0.19%	0.32%	0.18%	0.23%	0.25%	0.17%	0.03%	86.80%
Aa1	0.80%	1.75%	0.52%	0.06%	0.16%	0.09%	0.20%	0.33%	0.39%	0.28%	0.21%	0.13%	0.34%	0.19%	0.12%	0.18%	0.08%	0.06%	0.14%	0.24%	0.24%	93.49%
Aa2	4.08%	0.52%	4.59%	0.38%	0.37%	0.47%	0.55%	0.50%	0.41%	0.55%	0.67%	0.48%	0.91%	0.81%	0.54%	0.84%	0.91%	0.77%	0.85%	1.14%	1.19%	78.48%
Aa3	1.63%	0.63%	0.39%	4.58%	0.74%	0.64%	0.78%	0.44%	0.52%	0.30%	0.17%	0.32%	0.11%	0.32%	0.42%	0.72%	0.86%	0.92%	0.72%	2.46%	1.17%	81.18%
A1	0.96%	0.09%	0.67%	0.39%	3.01%	0.18%	0.48%	0.60%	0.21%	1.13%	0.43%	0.11%	0.10%	0.40%	0.11%	0.26%	0.16%	0.17%	0.42%	0.86%	1.05%	88.21%
A2	1.07%	0.11%	0.22%	0.18%	0.31%	5.28%	0.42%	0.53%	0.34%	0.53%	0.44%	0.33%	0.38%	0.42%	0.39%	0.51%	0.87%	0.69%	1.14%	2.57%	4.09%	79.20%
A3	1.66%	0.19%	0.28%	0.24%	0.74%	0.26%	2.87%	0.85%	0.29%	0.53%	0.58%	0.35%	0.21%	0.43%	0.32%	0.35%	0.71%	0.83%	1.10%	2.53%	5.13%	79.54%
Baa1	0.77%	0.23%	0.17%	0.39%	0.23%	0.46%	0.15%	3.02%	0.27%	0.33%	0.96%	0.49%	0.56%	0.89%	0.41%	1.45%	1.46%	0.62%	0.74%	4.76%	11.73%	69.90%
Baa2	1.50%	0.23%	0.15%	0.19%	0.44%	0.39%	0.38%	1.00%	1.65%	0.38%	0.39%	0.41%	0.46%	0.55%	0.34%	0.72%	0.71%	0.54%	0.94%	3.58%	9.55%	75.50%
Baa3	1.82%	0.20%	0.37%	0.31%	0.31%	0.37%	0.22%	0.30%	0.30%	3.05%	0.45%	0.48%	0.38%	0.63%	0.46%	0.54%	0.95%	0.37%	1.03%	2.74%	6.92%	77.79%
Ba1	2.20%	0.19%	0.34%	0.21%	0.84%	0.58%	0.33%	0.92%	0.85%	0.58%	1.72%	0.31%	0.51%	1.25%	0.89%	1.03%	2.10%	0.97%	0.72%	2.76%	6.36%	74.38%
Ba2	0.99%	0.23%	0.41%	0.27%	0.50%	0.22%	0.33%	0.44%	0.21%	0.48%	0.69%	2.84%	0.26%	0.55%	0.52%	0.55%	1.18%	0.87%	1.03%	3.35%	10.54%	73.52%
Ba3	0.38%	0.02%	0.16%	0.15%	0.30%	0.07%	0.25%	0.51%	0.57%	0.38%	0.58%	0.63%	1.81%	0.93%	1.45%	0.94%	1.37%	1.06%	1.86%	3.31%	10.66%	72.63%
B1	0.58%	0.09%	0.00%	0.28%	0.46%	0.18%	0.08%	0.10%	0.56%	0.63%	0.87%	0.10%	0.19%	3.87%	0.48%	2.20%	2.42%	1.54%	2.15%	2.36%	14.46%	66.40%
B2	0.16%	0.00%	0.45%	0.11%	0.02%	0.23%	0.00%	0.50%	0.32%	0.15%	0.56%	0.68%	0.26%	0.42%	2.41%	1.01%	1.24%	1.81%	1.89%	3.26%	16.20%	68.32%
B3	0.15%	0.00%	0.16%	0.00%	0.11%	0.05%	0.05%	0.06%	0.10%	0.29%	0.57%	0.33%	0.34%	0.85%	0.25%	3.69%	2.10%	2.08%	2.46%	2.88%	12.45%	71.01%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.06%	0.02%	0.00%	0.14%	0.00%	0.08%	0.19%	1.56%	0.00%	0.19%	5.12%	0.45%	1.28%	5.00%	8.52%	77.35%
Caa2	0.00%	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.03%	0.12%	0.11%	0.00%	0.00%	0.12%	0.12%	0.24%	0.15%	3.37%	4.21%	1.39%	3.17%	12.05%	74.82%
Caa3	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%	0.32%	1.12%	0.00%	0.00%	1.53%	1.43%	5.37%	90.23%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.03%	0.00%	0.00%	0.00%	0.09%	0.00%	0.06%	5.17%	10.16%	84.45%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.04%	14.22%	85.54%

Average Ten-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Corporate Issuers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	24.26%	5.66%	6.83%	6.59%	4.29%	4.10%	1.47%	1.67%	0.54%	0.42%	0.08%	0.00%	0.15%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	43.90%
Aa1	2.54%	9.35%	9.09%	11.63%	4.14%	10.87%	2.31%	1.43%	1.68%	0.67%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	46.22%
Aa2	2.65%	3.00%	9.21%	8.77%	10.60%	10.48%	5.18%	2.94%	1.15%	0.91%	0.54%	0.44%	0.00%	0.34%	0.06%	0.00%	0.32%	0.18%	0.00%	0.00%	0.00%	43.23%
Aa3	0.65%	1.66%	4.29%	10.93%	8.66%	11.08%	6.78%	6.17%	2.41%	0.94%	0.82%	0.43%	0.90%	0.37%	0.04%	0.02%	0.03%	0.10%	0.00%	0.00%	0.00%	43.73%
A1	0.17%	0.94%	1.81%	4.55%	11.78%	12.78%	11.53%	6.15%	3.28%	2.62%	1.10%	0.51%	0.54%	0.40%	0.34%	0.15%	0.11%	0.06%	0.00%	0.08%	0.00%	41.09%
A2	0.00%	0.37%	0.15%	0.97%	4.71%	15.11%	10.90%	8.86%	7.10%	3.93%	1.18%	1.13%	0.91%	0.61%	0.59%	0.09%	0.25%	0.22%	0.05%	0.02%	0.01%	42.82%
A3	0.00%	0.18%	0.09%	0.92%	3.61%	7.91%	12.55%	10.27%	8.91%	5.26%	1.49%	1.30%	1.00%	1.02%	0.56%	0.26%	0.32%	0.05%	0.08%	0.07%	0.00%	44.14%
Baa1	0.00%	0.15%	0.10%	0.46%	1.80%	3.09%	6.61%	14.58%	11.99%	8.07%	2.07%	1.69%	1.14%	0.82%	0.76%	0.38%	0.44%	0.25%	0.06%	0.11%	0.00%	45.42%
Baa2	0.18%	0.14%	0.01%	0.54%	1.20%	1.77%	4.64%	8.47%	13.43%	7.91%	2.56%	2.59%	1.43%	1.51%	1.12%	0.77%	0.35%	0.39%	0.02%	0.30%	0.02%	50.66%
Baa3	0.03%	0.14%	0.02%	0.15%	0.52%	1.21%	3.17%	5.57%	10.69%	9.12%	3.16%	2.17%	2.33%	1.50%	1.47%	1.00%	0.93%	0.36%	0.08%	0.21%	0.07%	56.10%
Ba1	0.01%	0.18%	0.00%	0.22%	0.51%	0.93%	1.32%	2.24%	5.25%	6.63%	3.13%	1.82%	2.32%	2.96%	2.06%	1.66%	0.67%	0.62%	0.19%	0.17%	0.23%	66.87%
Ba2	0.08%	0.00%	0.00%	0.00%	0.08%	0.34%	0.80%	1.50%	2.44%	3.52%	3.74%	3.49%	2.56%	2.95%	2.81%	1.87%	0.79%	0.64%	0.26%	0.12%	0.09%	71.92%
Ba3	0.07%	0.00%	0.05%	0.00%	0.00%	0.16%	0.29%	0.35%	1.11%	2.24%	2.12%	2.33%	2.90%	3.33%	2.21%	1.47%	0.92%	0.51%	0.24%	0.29%	0.12%	79.27%
B1	0.01%	0.00%	0.04%	0.00%	0.00%	0.06%	0.22%	0.43%	0.69%	0.97%	0.82%	1.18%	1.97%	2.94%	3.03%	1.93%	1.12%	0.96%	0.39%	0.40%	0.05%	82.78%
B2	0.09%	0.00%	0.00%	0.00%	0.00%	0.02%	0.20%	0.19%	0.18%	0.69%	0.44%	0.82%	1.63%	2.10%	3.43%	3.05%	1.33%	1.12%	0.14%	0.37%	0.10%	84.11%
B3	0.05%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.16%	0.11%	0.68%	0.15%	0.50%	1.17%	1.58%	1.20%	1.49%	0.62%	0.44%	0.32%	0.22%	0.24%	91.02%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.25%	0.83%	0.08%	0.14%	0.17%	0.75%	0.70%	0.70%	0.61%	0.67%	0.40%	0.07%	0.00%	94.64%
Caa2	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.31%	0.17%	0.25%	0.00%	0.16%	0.19%	0.51%	0.59%	0.57%	0.37%	0.44%	0.57%	0.22%	0.56%	0.04%	95.01%
Caa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.36%	0.00%	0.00%	0.04%	0.27%	0.73%	0.00%	0.24%	0.71%	0.73%	0.00%	0.00%	96.91%
Ca	0.00%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.05%	0.18%	0.34%	0.00%	0.26%	0.45%	0.33%	0.10%	0.19%	0.00%	0.00%	0.42%	0.00%	97.62%
C	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%	0.59%	0.00%	2.27%	0.00%	0.21%	0.00%	0.00%	0.00%	96.93%

Average Ten-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Financial Institutions, Brokers and Dealers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	25.46%	5.16%	7.39%	12.08%	5.13%	2.57%	2.73%	1.07%	0.91%	0.00%	0.14%	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.13%
Aa1	3.27%	11.14%	9.56%	11.34%	4.08%	4.26%	4.72%	1.09%	1.20%	0.32%	0.15%	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.12%	48.46%
Aa2	1.74%	5.37%	7.70%	13.56%	6.46%	7.75%	2.15%	2.22%	2.16%	1.31%	0.11%	0.09%	0.08%	0.00%	0.33%	0.00%	0.03%	0.00%	0.05%	0.08%	0.00%	48.80%
Aa3	1.20%	6.09%	7.44%	11.93%	7.65%	6.85%	3.20%	2.47%	1.85%	0.94%	0.39%	0.31%	0.44%	0.05%	0.12%	0.11%	0.00%	0.04%	0.14%	0.16%	0.17%	48.42%
A1	0.27%	2.64%	4.98%	11.10%	12.09%	6.28%	6.09%	1.19%	1.24%	0.74%	0.43%	0.21%	0.60%	0.44%	0.06%	0.06%	0.06%	0.05%	0.41%	0.15%	0.06%	50.83%
A2	0.14%	1.95%	5.16%	8.34%	8.58%	9.10%	4.03%	2.75%	1.40%	1.04%	0.48%	0.41%	0.82%	0.25%	0.59%	0.11%	0.10%	0.40%	0.16%	0.41%	0.10%	53.67%
A3	0.00%	2.16%	2.70%	6.53%	5.38%	8.32%	5.05%	3.66%	1.30%	1.63%	1.51%	0.26%	0.74%	0.47%	0.35%	0.02%	0.12%	0.47%	0.09%	0.12%	0.56%	58.57%
Baa1	0.44%	1.31%	2.30%	3.11%	8.77%	8.15%	4.84%	3.68%	1.31%	2.52%	0.12%	0.03%	0.29%	0.00%	0.63%	0.21%	0.32%	0.31%	0.08%	0.00%	0.29%	61.28%
Baa2	0.00%	0.67%	2.67%	2.44%	5.72%	3.51%	3.26%	4.06%	3.37%	2.36%	0.55%	1.85%	0.08%	0.69%	0.36%	0.32%	0.72%	0.32%	0.13%	0.13%	0.21%	66.57%
Baa3	0.00%	0.46%	0.43%	2.56%	4.49%	4.11%	2.73%	3.62%	3.68%	2.44%	1.06%	0.03%	0.52%	0.55%	1.24%	0.72%	0.98%	0.06%	0.12%	0.09%	0.17%	69.95%
Ba1	0.00%	0.00%	0.60%	1.24%	2.88%	3.52%	4.72%	1.01%	0.20%	0.60%	0.10%	1.44%	0.44%	0.40%	0.47%	0.00%	0.10%	0.50%	0.00%	0.00%	0.60%	81.17%
Ba2	0.00%	0.00%	0.00%	0.84%	1.73%	0.80%	0.37%	1.08%	4.45%	1.17%	0.23%	0.14%	0.00%	0.42%	0.33%	0.00%	0.00%	0.00%	0.19%	0.00%	0.00%	88.24%
Ba3	0.00%	0.00%	0.06%	0.95%	0.00%	0.30%	2.73%	0.59%	0.00%	2.68%	0.42%	0.00%	0.18%	0.00%	1.78%	0.00%	0.77%	2.85%	0.00%	0.30%	0.24%	86.15%
B1	0.00%	0.07%	0.00%	0.00%	0.07%	1.38%	0.00%	0.69%	0.65%	1.93%	0.72%	0.24%	2.48%	0.17%	0.00%	0.00%	0.69%	0.00%	0.00%	0.48%	0.21%	90.23%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.55%	3.49%	1.74%	1.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	92.39%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	1.00%	96.51%
Caa1	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%	0.00%	0.00%	0.00%	100.00%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.52%	0.00%	0.00%	1.79%	87.00%
Caa3	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%	0.00%	0.00%	0.00%	100.00%
Ca	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%	0.00%	0.00%	0.95%	99.05%
C	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%	0.00%	0.00%	6.70%	93.30%

Average Ten-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Insurance Companies

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	18.16%	2.74%	7.54%	1.78%	2.54%	3.43%	3.84%	6.65%	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%	53.32%
Aa1	8.27%	13.32%	1.54%	5.78%	2.93%	6.30%	13.69%	0.66%	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%	47.51%
Aa2	0.32%	0.55%	9.43%	8.29%	5.28%	9.20%	5.05%	3.05%	3.42%	0.73%	0.91%	0.00%	1.91%	0.00%	0.50%	0.00%	0.41%	0.00%	0.00%	0.36%	0.59%	50.00%
Aa3	0.00%	2.89%	0.46%	3.67%	8.33%	10.15%	5.66%	2.41%	0.88%	2.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	63.38%
A1	1.19%	0.06%	1.96%	0.83%	6.76%	17.55%	14.50%	2.39%	3.43%	3.00%	0.03%	0.00%	0.00%	0.00%	0.83%	1.28%	0.06%	0.73%	0.40%	0.00%	0.64%	44.37%
A2	0.00%	0.00%	0.32%	1.68%	7.21%	17.42%	17.13%	3.62%	4.80%	5.15%	1.00%	0.00%	0.00%	0.00%	0.00%	0.41%	0.59%	0.29%	0.00%	0.00%	0.00%	40.38%
A3	0.00%	0.32%	0.00%	0.03%	4.13%	5.11%	9.84%	10.13%	14.76%	4.92%	0.32%	0.00%	0.00%	0.00%	0.06%	0.35%	0.03%	0.00%	0.22%	0.00%	0.00%	49.78%
Baa1	0.00%	0.00%	0.28%	0.00%	2.91%	2.81%	3.09%	9.05%	12.89%	11.06%	2.20%	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.65%
Baa2	0.00%	0.00%	0.00%	0.92%	0.00%	1.90%	4.47%	5.00%	21.72%	7.29%	1.41%	0.00%	0.00%	0.00%	0.10%	0.53%	0.00%	0.00%	0.00%	0.00%	0.19%	56.46%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.08%	4.55%	15.75%	7.27%	1.14%	0.89%	1.96%	0.51%	0.19%	0.25%	0.63%	0.00%	0.32%	1.64%	0.00%	63.82%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19%	0.00%	11.40%	8.47%	7.77%	0.13%	0.00%	2.10%	0.96%	1.21%	0.38%	0.38%	0.64%	0.45%	0.00%	65.92%
Ba2	0.00%	0.00%	0.00%	0.98%	0.00%	0.00%	0.00%	2.95%	2.25%	9.55%	14.33%	0.56%	0.28%	3.65%	5.06%	0.84%	0.00%	0.00%	0.00%	0.00%	0.00%	59.55%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.24%	9.14%	1.90%	2.24%	0.00%	1.21%	0.69%	0.00%	0.86%	8.28%	0.34%	11.55%	0.00%	61.55%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.40%	11.40%	8.84%	3.49%	0.00%	3.02%	0.23%	0.93%	0.93%	0.00%	8.37%	0.00%	61.40%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.79%	0.00%	0.00%	0.00%	0.00%	1.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	95.62%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.28%	0.00%	0.00%	0.00%	0.00%	3.65%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.46%	0.00%	93.61%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.99%	4.48%	4.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	88.06%
Caa2	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%	0.98%	0.00%	0.00%	0.00%	0.00%	0.00%	3.93%	0.00%	95.08%
Caa3	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%	2.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	97.22%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.11%	0.00%	0.00%	0.00%	0.00%	4.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	84.00%
C																						

Average Ten-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

Sovereign

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	77.18%	6.69%	6.63%	3.76%	0.31%	1.99%	0.12%	0.37%	0.34%	1.65%	0.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%
Aa1	45.14%	29.74%	6.54%	6.26%	0.77%	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%	11.55%
Aa2	58.03%	6.42%	20.87%	0.46%	1.15%	0.00%	0.34%	0.34%	3.44%	0.00%	0.69%	1.03%	3.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.13%
Aa3	24.56%	10.80%	20.12%	32.54%	0.30%	0.59%	0.44%	1.63%	0.74%	5.18%	3.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A1	2.71%	3.13%	32.15%	4.18%	11.48%	10.44%	20.25%	0.00%	4.80%	0.00%	5.43%	0.00%	0.00%	0.00%	0.00%	0.00%	1.04%	0.00%	1.88%	0.00%	2.51%	0.00%
A2	5.35%	0.00%	15.33%	15.45%	9.98%	9.12%	8.15%	9.25%	2.68%	10.71%	4.38%	3.41%	0.49%	0.36%	0.00%	0.61%	0.12%	0.00%	2.68%	0.97%	0.97%	0.00%
A3	0.00%	4.53%	15.67%	10.88%	19.30%	13.73%	22.41%	6.09%	3.50%	2.33%	1.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa1	0.00%	0.00%	8.68%	18.73%	33.61%	15.70%	10.06%	7.99%	2.07%	2.48%	0.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	10.46%	4.63%	16.81%	7.03%	10.12%	20.75%	13.21%	9.09%	2.23%	1.03%	3.43%	0.00%	0.00%	1.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa3	0.00%	0.00%	0.00%	0.00%	8.35%	11.37%	6.24%	20.22%	10.66%	12.58%	7.34%	9.86%	5.13%	5.63%	2.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba1	0.00%	0.00%	0.00%	4.02%	11.29%	6.58%	4.61%	14.52%	6.67%	8.15%	19.73%	4.32%	3.04%	6.58%	2.36%	4.51%	3.63%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	1.83%	0.00%	7.94%	15.02%	15.63%	13.19%	13.19%	0.00%	14.77%	5.62%	4.40%	3.42%	0.12%	0.00%	1.22%	0.00%	3.66%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.20%	2.61%	10.44%	13.86%	5.82%	23.49%	6.43%	9.24%	3.21%	16.47%	3.82%	3.01%	0.40%	0.00%	0.00%	0.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.28%	6.23%	3.48%	5.94%	13.62%	24.64%	16.38%	12.46%	0.29%	1.59%	4.20%	1.88%	0.00%	0.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%	4.62%	12.14%	1.73%	1.16%	5.64%	16.91%	22.69%	14.02%	11.71%	0.72%	0.00%	0.00%	0.00%	8.38%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.22%	2.57%	30.23%	3.86%	5.14%	14.15%	10.93%	12.22%	5.47%	6.11%	0.00%	0.96%	5.14%	0.00%	0.00%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.03%	3.66%	0.00%	10.26%	25.64%	33.70%	3.30%	0.00%	0.00%	0.00%	19.41%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.46%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	26.98%	30.16%	25.40%	0.00%	0.00%	0.00%
Caa3	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%	91.67%	8.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.31%	0.00%	0.00%	0.00%	0.00%	0.00%	5.17%	13.79%	34.48%	0.00%	0.00%	0.00%	0.00%	0.00%	17.24%
C																						

Average Ten-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

International Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	47.99%	7.80%	6.37%	8.21%	0.88%	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%	28.75%
Aa1	10.97%	21.06%	17.60%	1.62%	0.00%	0.00%	2.28%	1.99%	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%	44.48%
Aa2	32.75%	9.62%	12.27%	2.04%	1.13%	0.21%	0.74%	0.18%	1.45%	0.70%	0.00%	0.81%	0.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.54%
Aa3	1.78%	16.37%	12.13%	7.84%	1.99%	6.84%	1.65%	1.30%	3.20%	2.43%	0.91%	1.73%	0.91%	1.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	39.06%
A1	2.68%	9.02%	12.66%	10.12%	18.65%	11.84%	2.82%	0.62%	0.76%	1.10%	1.38%	1.24%	0.00%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	26.91%
A2	5.94%	3.41%	18.53%	3.15%	11.28%	3.50%	11.01%	0.00%	4.46%	0.52%	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.59%
A3	0.00%	3.56%	37.01%	6.76%	1.78%	12.81%	15.30%	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%	22.78%
Baa1	0.00%	14.75%	16.59%	0.00%	0.00%	1.15%	11.29%	26.04%	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%	30.18%
Baa2	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%	0.00%	0.00%	0.00%	100.00%
Baa3	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%	0.00%	0.00%	0.00%	100.00%
Ba1	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%	0.00%	0.00%	0.00%	100.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	3.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	71.30%
Ba3	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%	20.27%	0.00%	0.00%	0.00%	0.00%	0.00%	79.73%
B1	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%	37.93%	20.26%	0.00%	0.00%	0.00%	5.17%	0.00%	36.64%
B2	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%	13.11%	6.56%	0.00%	0.00%	6.56%	0.00%	0.00%	73.77%
B3	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%	0.00%	0.00%	0.00%	100.00%
Caa1	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%	2.60%	4.33%	7.36%	3.90%	0.00%	0.00%	0.00%	81.82%
Caa2	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%	0.00%	0.00%	0.00%	100.00%
Caa3	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%	2.22%	1.11%	0.00%	0.00%	0.00%	0.00%	0.00%	96.67%
Ca	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%	6.21%	6.21%	12.42%	16.77%	6.83%	4.97%	0.00%	4.97%	41.61%
C	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%	0.00%	0.00%	0.00%	100.00%

Average Ten-Year Rating Transition Rates, by Alphanumeric Rating, 1983-2014

United States Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	59.09%	3.86%	2.72%	0.92%	0.52%	0.23%	0.15%	0.12%	0.08%	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	32.25%
Aa1	15.32%	44.76%	18.40%	3.38%	0.83%	0.43%	0.12%	0.04%	0.04%	0.02%	0.02%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.62%
Aa2	3.09%	7.23%	45.56%	7.98%	4.09%	1.47%	0.42%	0.12%	0.15%	0.07%	0.01%	0.01%	0.00%	0.01%	0.04%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	29.75%
Aa3	0.64%	4.75%	20.91%	38.87%	12.54%	2.29%	0.66%	0.16%	0.05%	0.05%	0.02%	0.01%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.03%
A1	0.52%	1.76%	7.12%	13.47%	33.32%	4.77%	1.25%	0.71%	0.27%	0.10%	0.05%	0.04%	0.02%	0.02%	0.02%	0.01%	0.02%	0.00%	0.00%	0.00%	0.00%	36.53%
A2	0.21%	0.19%	1.26%	3.48%	9.40%	23.66%	5.04%	1.85%	0.91%	0.27%	0.09%	0.10%	0.07%	0.01%	0.02%	0.02%	0.00%	0.02%	0.00%	0.00%	0.00%	53.39%
A3	0.10%	0.71%	2.57%	6.73%	12.05%	11.34%	16.33%	5.48%	0.95%	0.78%	0.45%	0.11%	0.14%	0.01%	0.00%	0.07%	0.02%	0.01%	0.00%	0.02%	0.00%	42.12%
Baa1	0.09%	0.15%	0.42%	0.62%	1.78%	3.31%	3.14%	22.16%	3.02%	0.71%	0.26%	0.17%	0.21%	0.06%	0.09%	0.03%	0.01%	0.01%	0.03%	0.02%	0.04%	63.67%
Baa2	0.13%	0.04%	0.17%	0.11%	0.57%	1.18%	0.78%	3.41%	20.34%	4.22%	0.64%	0.65%	0.15%	0.08%	0.10%	0.06%	0.01%	0.02%	0.01%	0.04%	0.01%	67.29%
Baa3	0.00%	0.09%	0.59%	0.55%	0.48%	1.23%	1.17%	2.91%	3.85%	12.10%	2.59%	1.47%	0.84%	0.37%	0.29%	0.49%	0.24%	0.25%	0.20%	0.16%	0.42%	69.74%
Ba1	0.28%	0.00%	1.44%	0.36%	0.79%	1.77%	1.33%	3.50%	6.80%	11.48%	3.18%	1.77%	0.73%	0.77%	1.47%	0.74%	0.59%	0.36%	0.33%	0.24%	0.09%	61.96%
Ba2	0.16%	0.01%	0.00%	0.14%	0.84%	0.95%	0.34%	1.67%	4.61%	3.28%	2.24%	16.40%	2.20%	0.48%	0.46%	0.16%	0.06%	0.65%	0.44%	0.29%	0.51%	64.11%
Ba3	0.00%	0.00%	0.00%	0.00%	0.75%	0.25%	2.07%	1.08%	7.88%	5.10%	2.53%	0.41%	3.90%	1.37%	1.00%	0.37%	0.79%	0.00%	0.00%	0.33%	0.50%	71.66%
B1	0.00%	0.00%	0.63%	1.33%	2.09%	0.00%	0.00%	0.00%	2.47%	5.33%	5.71%	3.36%	3.30%	1.84%	0.57%	0.63%	1.46%	0.70%	0.25%	1.14%	0.00%	69.16%
B2	0.00%	0.00%	0.18%	0.00%	0.89%	3.50%	0.43%	0.00%	1.81%	0.71%	0.57%	1.55%	0.59%	0.00%	15.92%	0.39%	1.10%	1.60%	0.64%	0.00%	1.60%	68.51%
B3	0.00%	0.00%	0.00%	0.00%	4.39%	0.00%	0.00%	0.00%	0.00%	1.52%	4.24%	0.00%	0.00%	0.00%	0.00%	4.85%	0.45%	0.45%	1.82%	3.33%	8.79%	70.15%
Caa1	0.00%	0.00%	0.00%	0.00%	5.02%	0.00%	0.00%	0.00%	0.00%	13.48%	0.00%	0.00%	6.58%	0.00%	0.00%	0.00%	0.00%	0.00%	5.33%	0.00%	18.18%	51.41%
Caa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.84%	0.00%	0.35%	2.42%	81.18%
Caa3	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%	4.61%	0.00%	19.41%	75.99%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	19.75%	0.00%	77.65%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.69%	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%	21.98%	70.33%

Ten-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

Issuers of Asset Backed Securities

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	3.50%	0.46%	0.34%	0.40%	0.81%	0.76%	1.25%	3.10%	1.49%	1.88%	1.69%	1.48%	2.52%	1.22%	1.16%	0.72%	0.79%	0.93%	0.79%	0.55%	0.24%	73.92%
Aa1	0.65%	3.76%	0.91%	0.39%	0.65%	1.04%	2.59%	2.20%	3.50%	3.24%	2.33%	1.55%	4.27%	2.85%	1.30%	1.04%	1.55%	0.78%	1.17%	1.94%	2.72%	59.59%
Aa2	0.56%	0.12%	0.87%	0.06%	0.53%	0.50%	1.27%	1.18%	1.02%	1.80%	2.57%	2.20%	2.85%	3.63%	2.57%	2.60%	2.57%	2.60%	2.39%	3.57%	5.15%	59.38%
Aa3	1.50%	0.70%	0.50%	1.80%	0.80%	0.70%	1.00%	0.50%	0.60%	0.50%	0.60%	0.50%	1.20%	1.30%	1.10%	1.00%	1.30%	1.50%	3.11%	2.81%	2.51%	74.45%
A1	0.45%	0.11%	0.45%	0.22%	1.01%	0.34%	0.78%	2.01%	0.67%	0.34%	0.11%	0.45%	0.22%	1.79%	0.56%	0.56%	1.12%	0.89%	1.68%	3.36%	5.26%	77.63%
A2	0.52%	0.10%	0.21%	0.13%	0.44%	1.51%	0.78%	0.78%	0.47%	0.89%	0.73%	0.65%	0.81%	1.36%	0.94%	1.59%	2.19%	1.91%	3.08%	7.00%	11.83%	62.05%
A3	0.98%	0.14%	0.21%	0.42%	0.56%	0.49%	1.12%	0.91%	0.35%	0.98%	0.63%	0.21%	0.49%	0.63%	0.49%	0.98%	0.63%	1.76%	2.81%	7.87%	17.98%	59.34%
Baa1	0.78%	0.17%	0.09%	0.69%	0.26%	0.87%	0.69%	1.04%	0.43%	0.52%	0.78%	0.35%	0.69%	1.04%	0.95%	0.43%	0.87%	1.04%	1.91%	7.90%	24.05%	54.43%
Baa2	0.26%	0.12%	0.09%	0.29%	0.40%	0.14%	0.26%	0.32%	0.98%	0.55%	0.46%	0.49%	0.46%	0.58%	0.43%	0.63%	0.52%	0.63%	1.93%	4.75%	20.45%	65.29%
Baa3	0.69%	0.29%	0.12%	0.00%	0.29%	0.41%	0.46%	0.81%	0.23%	1.27%	0.69%	0.46%	0.98%	0.69%	0.41%	0.93%	0.58%	0.64%	1.10%	4.17%	17.19%	67.59%
Ba1	1.54%	0.46%	0.46%	0.15%	1.69%	0.31%	0.31%	1.69%	1.69%	0.77%	1.08%	0.62%	0.62%	1.38%	0.15%	0.92%	0.62%	0.77%	1.38%	1.85%	9.23%	72.31%
Ba2	0.76%	0.09%	0.00%	0.00%	0.19%	0.38%	0.28%	0.19%	0.28%	0.76%	0.38%	1.52%	0.38%	0.66%	0.95%	0.85%	0.76%	0.76%	1.14%	3.03%	17.14%	69.51%
Ba3	0.55%	0.00%	0.55%	0.00%	0.18%	0.00%	0.00%	0.18%	0.37%	0.73%	0.91%	0.73%	0.37%	0.91%	1.46%	1.10%	1.83%	0.91%	2.56%	2.56%	11.33%	72.76%
B1	1.12%	0.37%	0.00%	0.37%	0.74%	0.00%	0.00%	0.00%	0.74%	1.12%	0.74%	0.00%	0.37%	5.95%	0.37%	1.49%	2.97%	2.23%	2.97%	1.86%	10.04%	66.54%
B2	0.59%	0.00%	0.39%	0.00%	0.00%	0.99%	0.00%	0.20%	0.20%	0.20%	0.39%	0.20%	0.00%	0.79%	1.18%	0.20%	1.78%	1.38%	1.97%	3.35%	19.33%	66.86%
B3	0.61%	0.00%	0.00%	0.00%	0.30%	0.00%	0.00%	0.30%	0.30%	0.30%	0.61%	0.61%	0.91%	1.82%	0.61%	2.42%	1.21%	3.94%	5.45%	3.64%	13.64%	63.33%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.70%	0.00%	0.00%	0.70%	0.00%	0.70%	0.00%	1.41%	0.00%	0.00%	2.11%	0.70%	1.41%	12.68%	11.97%	67.61%
Caa2	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	1.33%	0.00%	0.00%	0.00%	0.67%	0.00%	0.00%	0.67%	0.00%	2.67%	0.00%	5.33%	15.33%	73.33%
Caa3	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%	0.88%	0.88%	0.00%	0.00%	5.26%	2.63%	12.28%	78.07%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.35%	0.00%	0.35%	0.00%	0.00%	0.00%	0.35%	0.00%	0.70%	14.74%	10.53%	72.98%
C	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24%	0.24%	23.98%	75.30%

Ten-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

Corporate Issuers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	13.16%	2.63%	7.89%	21.05%	5.26%	5.26%	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%	44.74%
Aa1	0.00%	4.17%	8.33%	8.33%	0.00%	25.00%	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%	54.17%
Aa2	0.00%	7.14%	10.71%	3.57%	7.14%	21.43%	0.00%	3.57%	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%	46.43%
Aa3	0.00%	3.03%	0.00%	13.64%	12.12%	4.55%	15.15%	1.52%	3.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	46.97%
A1	0.00%	1.96%	0.98%	4.90%	19.61%	15.69%	7.84%	5.88%	1.96%	2.94%	0.98%	0.00%	0.98%	1.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	34.31%
A2	0.00%	0.00%	0.00%	1.45%	8.21%	15.94%	15.94%	10.63%	2.90%	0.97%	1.45%	0.00%	0.00%	0.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	42.03%
A3	0.00%	0.00%	0.00%	2.84%	4.26%	8.51%	13.83%	9.22%	10.99%	1.77%	1.77%	0.35%	0.00%	0.35%	0.71%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	45.04%
Baa1	0.00%	0.00%	0.00%	0.00%	2.55%	5.82%	10.18%	16.73%	8.73%	6.91%	1.45%	1.82%	1.09%	0.36%	0.00%	0.36%	0.00%	0.36%	0.36%	0.00%	0.00%	43.27%
Baa2	0.00%	0.00%	0.00%	0.33%	0.33%	2.32%	5.63%	11.26%	16.56%	7.62%	4.64%	1.99%	0.00%	0.33%	0.66%	0.33%	0.00%	0.66%	0.00%	0.00%	0.00%	47.35%
Baa3	0.42%	0.00%	0.42%	0.00%	0.00%	0.84%	3.80%	4.64%	13.50%	11.39%	3.80%	0.84%	1.27%	0.84%	2.11%	0.84%	0.00%	0.00%	0.42%	0.00%	0.00%	54.85%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	1.11%	1.11%	7.78%	13.33%	7.78%	2.22%	2.22%	1.11%	2.22%	1.11%	3.33%	1.11%	1.11%	0.00%	0.00%	0.00%	54.44%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	1.45%	0.72%	5.80%	6.52%	5.80%	3.62%	5.80%	4.35%	2.90%	4.35%	2.17%	0.72%	0.72%	0.00%	0.00%	0.00%	55.07%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.53%	0.53%	1.06%	1.06%	4.76%	3.70%	2.12%	5.29%	4.76%	1.06%	2.65%	1.06%	0.00%	0.00%	0.00%	0.00%	71.43%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.80%	1.20%	1.60%	2.80%	1.60%	2.00%	4.00%	1.60%	4.80%	1.60%	2.80%	0.40%	0.80%	0.00%	0.40%	73.60%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.86%	0.86%	0.29%	2.59%	3.46%	1.73%	2.31%	5.48%	3.46%	0.58%	0.58%	0.29%	0.00%	77.52%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.37%	0.34%	1.37%	1.03%	3.08%	2.74%	2.74%	2.74%	0.68%	0.00%	0.00%	0.00%	83.90%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.64%	0.00%	1.09%	0.00%	0.00%	0.55%	3.28%	1.64%	0.55%	0.00%	0.00%	0.00%	91.26%
Caa2	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%	0.91%	0.91%	2.73%	0.91%	0.00%	0.00%	0.91%	0.00%	93.64%
Caa3	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%	3.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	96.43%
Ca	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.38%	0.00%	0.00%	0.00%	2.38%	0.00%	0.00%	0.00%	0.00%	95.24%
C	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%	0.00%	0.00%	0.00%	100.00%

Ten-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

Financial Institutions, Brokers and Dealers

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	20.00%	8.57%	8.57%	2.86%	2.86%	2.86%	2.86%	0.00%	0.00%	0.00%	0.00%	0.00%	2.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	48.57%
Aa1	2.70%	8.11%	2.70%	2.70%	0.00%	10.81%	5.41%	5.41%	5.41%	0.00%	0.00%	0.00%	5.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	51.35%
Aa2	0.00%	2.17%	1.09%	13.04%	6.52%	13.04%	1.09%	4.35%	7.61%	1.09%	1.09%	0.00%	0.00%	0.00%	2.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	46.74%
Aa3	0.00%	2.17%	3.80%	2.72%	8.15%	11.96%	3.26%	6.52%	3.80%	3.80%	1.09%	0.00%	1.63%	0.00%	0.00%	0.54%	0.00%	0.00%	0.00%	0.00%	0.00%	50.54%
A1	0.00%	0.76%	0.00%	1.52%	7.58%	4.55%	4.55%	1.52%	5.30%	0.76%	1.52%	0.76%	0.00%	2.27%	0.00%	0.76%	0.76%	0.00%	0.76%	0.00%	0.00%	66.67%
A2	0.00%	0.00%	0.00%	4.21%	8.42%	5.26%	5.26%	7.37%	5.26%	3.16%	2.11%	0.00%	4.21%	0.00%	1.05%	0.00%	0.00%	2.11%	0.00%	0.00%	0.00%	51.58%
A3	0.00%	0.00%	0.00%	3.70%	3.70%	7.41%	6.17%	4.94%	2.47%	2.47%	2.47%	1.23%	2.47%	1.23%	2.47%	0.00%	1.23%	2.47%	0.00%	0.00%	0.00%	55.56%
Baa1	0.00%	0.00%	0.00%	0.00%	6.25%	4.17%	8.33%	2.08%	6.25%	2.08%	0.00%	0.00%	2.08%	0.00%	2.08%	0.00%	4.17%	2.08%	0.00%	0.00%	0.00%	60.42%
Baa2	0.00%	0.00%	0.00%	0.00%	4.26%	0.00%	4.26%	2.13%	4.26%	12.77%	0.00%	4.26%	2.13%	0.00%	0.00%	0.00%	2.13%	0.00%	0.00%	0.00%	2.13%	61.70%
Baa3	0.00%	0.00%	0.00%	0.00%	4.76%	0.00%	0.00%	14.29%	0.00%	9.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	71.43%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	66.67%
Ba2	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%	5.26%	0.00%	0.00%	0.00%	0.00%	5.26%	0.00%	0.00%	89.47%
Ba3	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%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	75.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.09%	0.00%	0.00%	0.00%	18.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	72.73%
B2	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%	0.00%	0.00%	0.00%	100.00%
B3	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%	0.00%	0.00%	0.00%	100.00%
Caa1	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%	0.00%	0.00%	0.00%	100.00%
Caa2																						
Caa3	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%	0.00%	0.00%	0.00%	100.00%
Ca																						
C																						

Ten-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

Insurance Companies

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	25.00%	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%	62.50%
Aa1	0.00%	11.11%	0.00%	11.11%	0.00%	0.00%	33.33%	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%	0.00%	44.44%
Aa2	0.00%	0.00%	0.00%	11.11%	0.00%	0.00%	0.00%	0.00%	11.11%	0.00%	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.67%
Aa3	0.00%	0.00%	0.00%	13.33%	20.00%	6.67%	0.00%	0.00%	0.00%	6.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	53.33%
A1	0.00%	0.00%	0.00%	0.00%	5.26%	15.79%	21.05%	0.00%	21.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.26%	0.00%	0.00%	0.00%	0.00%	0.00%	31.58%
A2	0.00%	0.00%	0.00%	0.00%	0.00%	17.39%	26.09%	0.00%	4.35%	4.35%	0.00%	0.00%	0.00%	0.00%	0.00%	4.35%	0.00%	0.00%	0.00%	0.00%	0.00%	43.48%
A3	0.00%	0.00%	0.00%	0.00%	0.00%	13.64%	2.27%	13.64%	4.55%	6.82%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	59.09%
Baa1	0.00%	0.00%	0.00%	0.00%	5.26%	0.00%	5.26%	10.53%	21.05%	5.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	52.63%
Baa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%	47.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	47.06%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.33%	29.17%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.83%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%
Ba2	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%	0.00%	0.00%	0.00%	100.00%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	75.00%
B1	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%	0.00%	0.00%	0.00%	100.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	80.00%
B3	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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	80.00%
Caa1																						
Caa2																						
Caa3																						
Ca																						
C																						

Ten-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

Sovereign

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	70.00%	15.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	5.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%	50.00%	50.00%	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%
Aa2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%	66.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A1	0.00%	12.50%	25.00%	0.00%	25.00%	12.50%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%
A2	0.00%	0.00%	14.29%	14.29%	28.57%	14.29%	0.00%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A3	0.00%	0.00%	14.29%	14.29%	0.00%	14.29%	28.57%	14.29%	14.29%	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%
Baa1	0.00%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	33.33%	33.33%	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%
Baa2	0.00%	0.00%	0.00%	14.29%	14.29%	0.00%	14.29%	14.29%	14.29%	0.00%	0.00%	0.00%	14.29%	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Baa3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	40.00%	0.00%	20.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	16.67%	16.67%	0.00%	0.00%	33.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%	14.29%	0.00%	0.00%	14.29%	28.57%	0.00%	0.00%	0.00%	0.00%	28.57%	0.00%	0.00%	0.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%	0.00%	14.29%	14.29%	28.57%	14.29%	0.00%	0.00%	0.00%	14.29%
B3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	25.00%	25.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Caa1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	16.67%	0.00%	0.00%	0.00%	33.33%	16.67%	16.67%	0.00%	0.00%	0.00%	16.67%
Caa2																						
Caa3																						
Ca																						
C																						

Ten-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

International Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	58.82%	17.65%	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%	0.00%	23.53%
Aa1	0.00%	33.33%	0.00%	16.67%	0.00%	0.00%	0.00%	16.67%	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%
Aa2	12.50%	25.00%	6.25%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	0.00%	6.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.50%
Aa3	5.88%	11.76%	5.88%	0.00%	0.00%	0.00%	0.00%	0.00%	11.76%	5.88%	5.88%	11.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	41.18%
A1	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	12.50%	0.00%	12.50%	12.50%	12.50%	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	12.50%
A2	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	33.33%	0.00%	16.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
A3	0.00%	0.00%	50.00%	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%	0.00%	50.00%
Baa1																						
Baa2	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%	0.00%	0.00%	0.00%	100.00%
Baa3	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%	0.00%	0.00%	0.00%	100.00%
Ba1	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%	0.00%	0.00%	0.00%	100.00%
Ba2	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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	66.67%
Ba3	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%	0.00%	0.00%	0.00%	100.00%
B1																						
B2	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%	0.00%	0.00%	0.00%
B3																						
Caa1	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%	50.00%	0.00%	0.00%	0.00%	0.00%	50.00%
Caa2	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%	0.00%	0.00%	0.00%	100.00%
Caa3																						
Ca	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%	50.00%	25.00%	0.00%	25.00%	0.00%
C	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%	0.00%	0.00%	0.00%	100.00%

Ten-year transition rates, by Alphanumeric Rating, cohort ending December 31, 2014 (i.e., Jan 1, 2005 cohort)

United States Public Finance

	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3	Ca	C	WR
Aaa	29.60%	5.46%	1.18%	0.21%	0.21%	0.07%	0.07%	0.28%	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%	62.93%
Aa1	10.24%	43.03%	13.41%	2.90%	0.63%	0.45%	0.36%	0.00%	0.36%	0.18%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	28.35%
Aa2	0.79%	7.26%	47.06%	8.30%	2.53%	0.76%	0.38%	0.13%	0.28%	0.06%	0.00%	0.00%	0.03%	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	32.39%
Aa3	0.13%	2.01%	19.68%	33.55%	8.04%	2.24%	1.00%	0.65%	0.16%	0.23%	0.06%	0.06%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	31.99%
A1	0.06%	0.35%	3.95%	13.19%	32.31%	5.53%	1.43%	0.88%	0.29%	0.15%	0.23%	0.03%	0.06%	0.09%	0.06%	0.03%	0.06%	0.00%	0.00%	0.00%	0.00%	41.32%
A2	0.06%	0.00%	1.43%	5.23%	18.32%	16.06%	3.03%	1.10%	0.66%	0.61%	0.61%	0.06%	0.17%	0.00%	0.00%	0.06%	0.11%	0.11%	0.00%	0.00%	0.00%	52.42%
A3	0.18%	0.00%	0.82%	1.54%	6.17%	8.35%	10.44%	2.72%	2.00%	1.00%	1.09%	0.09%	0.36%	0.00%	0.00%	0.00%	0.00%	0.09%	0.09%	0.00%	0.00%	65.06%
Baa1	0.30%	0.15%	0.15%	0.44%	1.63%	4.89%	5.93%	7.11%	4.30%	1.19%	0.59%	0.30%	0.44%	0.30%	0.00%	0.15%	0.00%	0.00%	0.15%	0.00%	0.00%	72.00%
Baa2	0.00%	0.00%	0.22%	0.44%	0.44%	1.32%	2.87%	3.53%	7.73%	2.65%	1.55%	1.32%	0.44%	0.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.22%	77.04%
Baa3	0.00%	0.00%	0.50%	0.00%	0.00%	0.25%	1.00%	2.50%	2.50%	5.50%	3.25%	1.50%	0.50%	0.00%	0.00%	1.00%	0.25%	0.25%	0.25%	0.00%	0.50%	80.25%
Ba1	2.00%	0.00%	0.00%	0.00%	0.00%	2.00%	4.00%	0.00%	0.00%	4.00%	2.00%	2.00%	0.00%	0.00%	2.00%	0.00%	0.00%	2.00%	2.00%	2.00%	0.00%	76.00%
Ba2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.27%	2.27%	2.27%	2.27%	4.55%	4.55%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.27%	0.00%	79.55%
Ba3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.33%	3.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.33%	90.00%
B1	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%	0.00%	0.00%	0.00%	100.00%
B2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	91.67%
B3	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%	0.00%	14.29%	0.00%	85.71%
Caa1	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%	0.00%	0.00%	0.00%	100.00%
Caa2	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%	0.00%	0.00%	25.00%	75.00%
Caa3	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%	0.00%	0.00%	0.00%	100.00%
Ca	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%	0.00%	9.09%	0.00%	90.91%
C	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%	0.00%	0.00%	20.00%	80.00%

Default Rates by Initial Rating (1993-2014)

Issuers of Asset Backed Securities

	1-yr	3-yr	10-yr
Aaa	0.35%	5.13%	24.83%
Aa	1.02%	26.86%	45.16%
A	2.05%	26.19%	54.63%
Baa	4.47%	28.44%	65.39%
Ba	5.64%	29.37%	63.33%
B	1.09%	18.69%	73.19%
Caa	2.00%	14.05%	91.53%
Ca-C	3.24%	21.89%	

Default Rates by Initial Rating (1983-2014)

Short Term Issuers of Asset Backed Securities

	1-yr	3-yr	10-yr
P-1	0.16%	0.76%	2.48%
P-2	0.00%	0.00%	0.00%
P-3	0.00%	0.00%	0.00%
NP			

Corporate Issuers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.37%
A	0.00%	0.24%	1.34%
Baa	0.00%	0.51%	4.95%
Ba	0.20%	5.15%	24.55%
B	0.83%	10.06%	42.91%
Caa-C	1.07%	14.61%	53.36%

Financial Institutions, Brokers and Dealers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%
A	0.00%	0.39%	5.15%
Baa	0.00%	0.70%	3.84%
Ba	0.56%	1.98%	13.15%
B	1.20%	7.30%	29.85%
Caa-C	0.00%	0.00%	

Default Rates by Initial Rating (1983-2014)

Insurance Companies

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	3.57%
A	0.00%	0.00%	1.35%
Baa	0.00%	0.00%	2.17%
Ba	0.00%	3.33%	16.63%
B	0.00%	6.06%	6.06%
Caa-C	0.00%	0.00%	

Sovereign

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%
A	0.00%	0.00%	0.00%
Baa	0.00%	0.00%	0.00%
Ba	0.00%	3.13%	21.43%
B	3.33%	7.54%	20.23%
Caa-C	0.00%	0.00%	0.00%

International Public Finance

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%
A	0.00%	0.00%	0.00%
Baa	0.00%	0.00%	0.00%
Ba	11.52%	14.47%	14.47%
B	0.00%	5.56%	69.64%
Caa-C	0.00%	20.00%	100.00%

United States Public Finance

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.05%
A	0.00%	0.03%	0.20%
Baa	0.00%	0.12%	1.24%
Ba	0.00%	2.97%	13.38%
B	11.11%	11.11%	11.11%
Caa-C	0.00%	0.00%	0.00%

Default Rates by Initial Rating (1983-2014)

Short Term Municipal MIG

	1 yr	3 yr	10 yr
MIG 1	0.00%	0.00%	0.62%
MIG 2	0.00%	5.56%	5.56%
MIG 3	0.00%		
SSG			

Short Term Municipal

	1 yr	3 yr	10 yr
P-1	0.00%	0.00%	0.00%
P-2	0.00%	0.00%	0.00%
P-3			
NP			

Short Term Corporate Commercial Paper

	1 yr	3 yr	10 yr
P-1	0.00%	0.06%	0.61%
P-2	0.31%	0.72%	0.98%
P-3	0.00%	0.00%	0.00%
NP	0.00%	0.00%	4.17%

Default Rates by Initial Alphanumeric Rating (1993-2014)

Issuers of Asset Backed Securities

	1-yr	3-yr	10-yr
Aaa	0.35%	5.13%	24.83%
Aa1	0.41%	32.94%	51.97%
Aa2	1.21%	20.66%	38.46%
Aa3	1.36%	33.14%	51.48%
A1	1.22%	33.30%	52.65%
A2	2.15%	20.50%	48.77%
A3	2.48%	33.66%	68.42%
Baa1	3.78%	37.04%	75.70%
Baa2	3.95%	23.78%	60.72%
Baa3	5.87%	30.45%	66.03%
Ba1	11.33%	46.73%	74.71%
Ba2	4.16%	25.24%	60.32%
Ba3	1.21%	14.49%	54.67%
B1	0.76%	19.48%	67.75%
B2	1.58%	17.59%	74.48%
B3	0.35%	20.32%	75.31%
Caa1	3.01%	8.23%	100.00%
Caa2	1.30%	18.07%	90.55%
Caa3	1.82%	14.90%	100.00%
Ca-C	3.24%	21.89%	

Default Rates by Initial Alphanumeric Rating (1983-2014)

Corporate issuers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	2.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.46%	0.96%
A2	0.00%	0.00%	2.08%
A3	0.00%	0.30%	0.89%
Baa1	0.00%	0.53%	3.32%
Baa2	0.00%	0.44%	5.99%
Baa3	0.00%	0.57%	5.49%
Ba1	0.67%	1.88%	12.75%
Ba2	0.25%	3.40%	13.84%
Ba3	0.00%	7.30%	35.21%
B1	1.01%	9.21%	41.32%
B2	0.78%	9.22%	41.30%
B3	0.72%	11.58%	46.23%

Caa1	0.41%	12.47%	52.63%
Caa2	1.67%	19.19%	57.18%
Caa3	5.07%	24.29%	
Ca	7.89%	7.89%	38.94%
C	0.00%	0.00%	100.00%

Default Rates by Initial Alphanumeric Rating (1983-2014)

Financial Institutions, Brokers and Dealers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.56%	2.22%
A2	0.00%	0.60%	4.85%
A3	0.00%	0.00%	8.12%
Baa1	0.00%	0.00%	5.20%
Baa2	0.00%	1.09%	3.82%
Baa3	0.00%	1.28%	1.28%
Ba1	0.00%	2.17%	17.33%
Ba2	1.89%	1.89%	5.39%
Ba3	0.00%	1.72%	14.06%
B1	1.09%	4.04%	27.54%
B2	2.33%	17.92%	
B3	0.00%	5.26%	
Caa1	0.00%	0.00%	100.00%
Caa2	0.00%	0.00%	0.00%
Caa3			
Ca			
C			

Default Rates by Initial Alphanumeric Rating (1983-2014)

Insurance Companies

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	4.35%
Aa3	0.00%	0.00%	4.76%
A1	0.00%	0.00%	0.00%
A2	0.00%	0.00%	0.00%
A3	0.00%	0.00%	4.55%
Baa1	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	0.00%
Baa3	0.00%	0.00%	5.26%
Ba1	0.00%	0.00%	0.00%
Ba2	0.00%	10.00%	10.00%
Ba3	0.00%	0.00%	35.71%
B1	0.00%	20.45%	20.45%
B2	0.00%	0.00%	
B3	0.00%	0.00%	
Caa1	0.00%	0.00%	
Caa2	0.00%	100.00%	100.00%
Caa3			
Ca			
C			

Default Rates by Initial Alphanumeric Rating (1983-2014)

Sovereign

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.00%	0.00%
A2	0.00%	0.00%	0.00%
A3	0.00%	0.00%	0.00%
Baa1	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	0.00%
Baa3	0.00%	0.00%	0.00%
Ba1	0.00%	0.00%	12.50%
Ba2	0.00%	9.09%	30.74%
Ba3	0.00%	0.00%	19.19%
B1	0.00%	6.67%	22.22%
B2	14.29%	14.29%	28.57%
B3	0.00%	0.00%	0.00%

Caa1	0.00%	0.00%	0.00%
Caa2			
Caa3			
Ca			
C			

Default Rates by Initial Alphanumeric Rating (1983-2014)

International Public Finance

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.00%	0.00%
A2	0.00%	0.00%	0.00%
A3	0.00%	0.00%	0.00%
Baa1	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	
Baa3	0.00%	0.00%	
Ba1	0.00%	0.00%	
Ba2	21.43%	28.57%	28.57%
Ba3	11.11%	11.11%	
B1	0.00%	7.69%	100.00%
B2	0.00%	0.00%	33.33%
B3	0.00%	0.00%	
Caa1	0.00%	0.00%	0.00%
Caa2	0.00%	0.00%	
Caa3			
Ca	0.00%	50.00%	100.00%
C	0.00%	0.00%	0.00%

Default Rates by Initial Alphanumeric Rating (1983-2014)

United States Public Finance

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.10%
A1	0.00%	0.06%	0.25%
A2	0.00%	0.00%	0.19%
A3	0.00%	0.00%	0.00%
Baa1	0.00%	0.00%	0.36%
Baa2	0.00%	0.08%	0.50%
Baa3	0.00%	0.69%	7.93%
Ba1	0.00%	8.36%	21.60%
Ba2	0.00%	0.00%	4.76%
Ba3	0.00%	0.00%	30.00%
B1	0.00%	0.00%	0.00%
B2	0.00%	0.00%	0.00%
B3	99.98%	100.00%	100.00%
Caa1	0.00%	0.00%	0.00%
Caa2			
Caa3	0.00%	0.00%	0.00%
Ca			
C			

1 ,3 and 10-year Default Rates (Jan 1, 2014 cohort for 1-year horizon; Jan 1, 2012 cohort for 3-year horizon; Jan 1, 2005 cohort for 10-year horizon)

Issuers of Asset Backed Securities

	1-yr	3-yr	10-yr
Aaa	0.00%	0.39%	3.06%
Aa	0.00%	0.20%	17.56%
A	0.03%	0.26%	42.75%
Baa	0.00%	0.43%	58.76%
Ba	0.02%	1.76%	50.73%
B	0.18%	6.58%	69.33%
Caa	5.97%	36.54%	79.50%
Ca-C	0.20%	4.62%	32.31%

1, 3 and 10-year Default Rates (Jan 1, 2014 cohort for 1-year horizon; Jan 1, 2012 cohort for 3-year horizon; Jan 1, 2005 cohort for 10-year horizon)

Short Term Issuers of Asset Backed Securities

	1-yr	3-yr	10-yr
P-1	0.00%	0.00%	3.06%
P-2	0.00%	0.00%	
P-3	0.00%	0.00%	
NP			

Corporate Issuers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%
A	0.00%	0.00%	0.44%
Baa	0.00%	0.00%	1.92%
Ba	0.00%	0.48%	11.69%
B	0.19%	3.66%	26.32%
Caa-C	7.38%	24.51%	59.41%

Financial Institutions, Brokers and Dealers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.68%	2.06%
A	0.40%	0.00%	11.29%
Baa	0.44%	3.51%	10.38%
Ba	0.00%	6.78%	0.00%
B	2.60%	8.23%	34.67%
Caa-C	5.00%	72.92%	100.00%

Insurance Companies

	1 yr	3 yr	10 yr
Aaa			0.00%
Aa	0.00%	0.00%	10.59%
A	0.00%	0.00%	6.09%
Baa	0.00%	1.20%	0.00%
Ba	0.00%	0.00%	10.00%
B	0.00%	0.00%	14.29%
Caa-C	0.00%	14.29%	

1, 3 and 10-year Default Rates (Jan 1, 2014 cohort for 1-year horizon; Jan 1, 2012 cohort for 3-year horizon; Jan 1, 2005 cohort for 10-year horizon)

Sovereign

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%
A	0.00%	0.00%	9.09%
Baa	0.00%	4.35%	0.00%
Ba	0.00%	0.00%	0.00%
B	4.00%	11.54%	17.65%
Caa-C	0.00%	50.00%	0.00%

International Public Finance

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.00%
A	0.00%	0.00%	0.00%
Baa	0.00%	0.00%	
Ba	0.00%	0.00%	0.00%
B	0.00%	0.00%	0.00%
Caa-C	0.00%	100.00%	100.00%

United States Public Finance

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa	0.00%	0.00%	0.01%
A	0.00%	0.02%	0.11%
Baa	0.00%	0.25%	2.14%
Ba	0.00%	3.30%	8.34%
B	0.00%	10.07%	58.46%
Caa-C	0.00%	17.30%	17.04%

1, 3 and 10-year Default Rates (Jan 1, 2014 cohort for 1-year horizon; Jan 1, 2012 cohort for 3-year horizon; Jan 1, 2005 cohort for 10-year horizon)

Short Term Municipal MIG

	1 yr	3 yr	10 yr
MIG 1	0.00%	0.00%	0.00%
MIG 2	0.00%	0.00%	0.00%
MIG 3	0.00%		0.00%
SSG			

Short Term Municipal

	1 yr	3 yr	10 yr
P-1	0.00%	0.00%	0.00%
P-2	0.00%	0.00%	0.00%
P-3			
NP			

Short Term Corporate Commercial Paper

	1 yr	3 yr	10 yr
P-1	0.00%	0.00%	0.65%
P-2	0.00%	0.00%	0.00%
P-3	0.00%	0.00%	0.00%
NP	0.00%	0.00%	5.71%

1, 3 and 10-year Default Rates by Alphanumeric Rating (Jan 1, 2014 cohort for 1-year horizon; Jan 1, 2012 cohort for 3-year horizon; Jan 1, 2005 cohort for 10-year horizon)

Issuers of Asset Backed Securities

	1-yr	3-yr	10-yr
Aaa	0.00%	0.39%	3.06%
Aa1	0.00%	0.11%	11.71%
Aa2	0.00%	0.25%	19.38%
Aa3	0.00%	0.23%	15.94%
A1	0.00%	0.13%	28.22%
A2	0.00%	0.30%	41.37%
A3	0.06%	0.34%	51.84%
Baa1	0.00%	0.21%	58.04%
Baa2	0.00%	0.30%	59.38%
Baa3	0.00%	0.77%	57.80%
Ba1	0.00%	1.06%	38.25%
Ba2	0.00%	1.48%	55.54%
Ba3	0.05%	2.78%	55.33%
B1	0.07%	4.25%	56.55%
B2	0.22%	5.30%	76.11%
B3	0.23%	9.16%	69.54%
Caa1	3.22%	22.75%	80.98%
Caa2	7.43%	40.58%	77.74%
Caa3	6.85%	42.00%	78.73%
Ca-C	0.20%	4.62%	32.31%

1, 3 and 10-year Default Rates by Alphanumeric Rating (Jan 1, 2014 cohort for 1-year horizon; Jan 1, 2012 cohort for 3-year horizon; Jan 1, 2005 cohort for 10-year horizon)

Corporate Issuers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.00%	0.00%
A2	0.00%	0.00%	0.00%
A3	0.00%	0.00%	0.95%
Baa1	0.00%	0.00%	1.52%
Baa2	0.00%	0.00%	1.29%
Baa3	0.00%	0.00%	3.37%
Ba1	0.00%	0.00%	10.01%
Ba2	0.00%	0.00%	7.88%
Ba3	0.00%	1.42%	15.42%
B1	0.00%	2.26%	20.07%
B2	0.63%	5.01%	28.62%
B3	0.00%	3.41%	28.78%
Caa1	2.30%	10.76%	53.62%
Caa2	7.67%	35.46%	63.22%
Caa3	34.97%	48.75%	
Ca	43.13%	89.87%	61.62%
C	50.00%	85.71%	100.00%

Financial Institutions, Brokers and Dealers

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	1.96%
Aa3	0.00%	1.12%	2.57%
A1	1.56%	0.00%	10.63%
A2	0.00%	0.00%	9.39%
A3	0.00%	0.00%	13.73%
Baa1	0.00%	4.80%	15.43%
Baa2	0.00%	4.50%	4.76%
Baa3	1.28%	0.00%	8.33%
Ba1	0.00%	11.31%	0.00%
Ba2	0.00%	5.48%	0.00%
Ba3	0.00%	4.95%	0.00%
B1	0.00%	11.11%	20.00%
B2	6.47%	9.21%	
B3	0.00%	0.00%	100.00%

Caa1	7.69%	66.67%	
Caa2	0.00%	70.00%	
Caa3	0.00%		100.00%
Ca		100.00%	
C			

Insurance Companies

	1 yr	3 yr	10 yr
Aaa			0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	37.50%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.00%	6.67%
A2	0.00%	0.00%	7.69%
A3	0.00%	0.00%	5.00%
Baa1	0.00%	0.00%	0.00%
Baa2	0.00%	2.78%	0.00%
Baa3	0.00%	0.00%	0.00%
Ba1			0.00%
Ba2	0.00%	0.00%	
Ba3	0.00%	0.00%	25.00%
B1	0.00%		
B2	0.00%	0.00%	25.00%
B3	0.00%	0.00%	0.00%
Caa1	0.00%	25.00%	
Caa2	0.00%	0.00%	
Caa3			
Ca			
C			

1, 3 and 10-year Default Rates by Alphanumeric Rating (Jan 1, 2014 cohort for 1-year horizon; Jan 1, 2012 cohort for 3-year horizon; Jan 1, 2005 cohort for 10-year horizon)

Sovereign

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.00%	12.50%
A2	0.00%	0.00%	14.29%
A3	0.00%	0.00%	0.00%
Baa1	0.00%	0.00%	0.00%
Baa2	0.00%	0.00%	0.00%
Baa3	0.00%	7.69%	0.00%
Ba1	0.00%	0.00%	0.00%
Ba2	0.00%	0.00%	0.00%
Ba3	0.00%	0.00%	0.00%
B1	0.00%	0.00%	14.29%
B2	0.00%	0.00%	14.29%
B3	16.67%	42.86%	33.33%
Caa1	0.00%	0.00%	0.00%
Caa2			
Caa3			
Ca		100.00%	
C			

International Public Finance

	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.00%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.00%	0.00%
A2	0.00%	0.00%	0.00%
A3		0.00%	0.00%
Baa1	0.00%	0.00%	
Baa2	0.00%	0.00%	
Baa3	0.00%	0.00%	
Ba1	0.00%	0.00%	
Ba2	0.00%	0.00%	0.00%
Ba3	0.00%	0.00%	
B1	0.00%	0.00%	
B2		0.00%	0.00%
B3	0.00%	0.00%	

Caa1	0.00%		
Caa2	0.00%	100.00%	
Caa3			
Ca			100.00%
C	0.00%		

United States Public Finance			
	1 yr	3 yr	10 yr
Aaa	0.00%	0.00%	0.00%
Aa1	0.00%	0.00%	0.00%
Aa2	0.00%	0.00%	0.03%
Aa3	0.00%	0.00%	0.00%
A1	0.00%	0.00%	0.17%
A2	0.00%	0.00%	0.00%
A3	0.00%	0.17%	0.11%
Baa1	0.00%	0.00%	0.63%
Baa2	0.00%	0.41%	1.64%
Baa3	0.00%	0.54%	5.54%
Ba1	0.00%	0.00%	10.67%
Ba2	0.00%	0.00%	5.41%
Ba3	0.00%	15.79%	4.76%
B1	0.00%	16.67%	100.00%
B2	0.00%	0.00%	28.00%
B3	0.00%	5.88%	
Caa1	0.00%	16.67%	
Caa2	0.00%	46.67%	0.00%
Caa3	0.00%		
Ca	0.00%	0.00%	0.00%
C	0.00%	0.00%	0.00%

Moody's Investors Service ("MIS")

Exhibit 2

Procedures and Methodologies Used to Determine Credit Ratings

1. **Credit Rating Process**

Below we describe the various steps in our credit rating process. These descriptions reflect the general process for all of MIS's published credit ratings, and some aspects of our detailed processes may vary in different rating groups or jurisdictions. In these descriptions, we use the term "Issuer" to mean any entity - regardless of whether it is a structured product, a corporation, a sovereign country or a municipality - that issues debt, a credit commitment or debt-like securities, or which has other obligations to make payments.

a. Initiation of a Rating Relationship with MIS

A credit rating relationship generally is initiated when the Issuer requests a credit rating from MIS. Generally, MIS enters into a rating agreement with the Issuer, whereby the Issuer undertakes to provide MIS with pertinent financial reports and other information. The Issuer also undertakes to pay to MIS the relevant fees.

In addition, as a publisher of opinions about credit, MIS reserves the right to assign credit ratings on an unsolicited basis. (See discussion of unsolicited credit ratings below.)

b. Information Used in the Credit Rating Process

The analyst or analysts assigned to a particular Issuer or obligation ("Lead Analyst") begins the credit analysis by assembling relevant information on the Issuer or obligation. This information may come from public sources or from the Issuer or the Issuer's agent in meetings or other communications with the Lead Analyst. See further discussion below in the section on Interacting with the Management of an Issuer.

This information may be supplemented with information generated by MIS or obtained from the market or other third-party sources, including macroeconomic and sector-specific data. MIS uses various third-party vendors to provide data and other information that is used in the credit rating process, covering areas such as utility regulation, chemical prices, commercial real estate prices and rents, and forecasts and analysis of a particular country's economic trends. The information used in assigning credit ratings in any individual sector is discussed in that sector's credit rating methodology.

We also use third-party vendors to assist with data entry-related activities. In addition, third-party vendors are sometimes used to assist in developing analytical software used in monitoring and analyzing credits. Generally, these

vendors enter into service agreements with MIS containing confidentiality provisions and other undertakings to safeguard non-public information that MIS may provide to them in the course of their work.

Before using data provided by an Issuer or its agent, MIS generally will investigate and obtain reasonable verification of key factual elements using an independent source, including by comparison to other information that comes from sources that are independent of the Issuer.

MIS adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MIS considers to be reliable including, when appropriate, independent third-party sources. However, MIS is not an auditor and cannot in every instance obtain independent verification or validation of information received in the rating process.

c. Interacting with the Management of an Issuer

When interacting with Issuers, it is the Lead Analyst's responsibility to gather analytical information in a thorough and comprehensive way. Analysts are encouraged to have frank discussions with Issuers, or their agents or representatives, about their ratings, including credit strengths and weaknesses and trends in their industries. As Lead Analysts pursue relevant lines of inquiry and explain to the Issuer why the information is relevant and how it is to be used, they also cite our confidentiality policies (see references to policies in Exhibit 3).

In most jurisdictions, Issuers historically have been able, but not obliged, to provide to credit rating agencies nonpublic information, such as strategic and financial plans and projections, legal documents, priority of claims and collateral characteristics. Issuers may choose to discuss topics that are confidential in nature, or to provide documents that are not public but contain important insight into the Issuer's strategic and financial plans and goals. This information is incorporated into the Issuer's rating as applicable, even though the information itself is held in confidence. To the extent that the information provides MIS with a deeper understanding of an Issuer's strategies and plans, it also helps to set the context for evaluating changes that may occur in the future and may have an impact on the creditworthiness of the Issuer and other members of an industry.

While MIS invites Issuers to participate in the credit rating process for all published credit ratings, ultimately, each Issuer determines the degree to which it shares information beyond what generally is available to the public. It has been our experience that Issuers generally welcome the opportunity to discuss their organizations, companies or transactions with us.

Most Issuers operate in good faith and provide reliable information to the securities markets and to MIS, and we rely on Issuers and their agents to do so. Nevertheless, our analysts seek to exercise skepticism with respect to an Issuer's claims and use available sources to investigate and obtain independent verification of such information. If we believe we have inadequate information to provide an informed credit rating to the market, we will exercise our editorial discretion and decline to assign a credit rating, or, if we already have a credit rating outstanding, withdraw that credit rating (see below for a discussion of our credit rating withdrawal policy). On occasion, Issuers have chosen not to participate in the credit rating process, and therefore the information used to develop the credit rating generally is limited to publicly available information. In such cases we identify those Issuers in accordance with the

MIS policy on Designating Issuers that Do Not Participate in the Credit Rating Process (see the section below on Unsolicited Credit Ratings). In accordance with our policies attached below, if applicable, we will designate a credit rating as "non-participating" or "unsolicited" in the credit rating announcement.

As discussed in Exhibits 6 and 7, MIS recognizes that the "issuer pays" model creates a potential conflict of interest that must be effectively managed. One important measure we have adopted in this regard is to prohibit analysts from discussing fees or payment matters with Issuers or their agents. Such matters are handled by a separate group within MIS (the Commercial Group), whose personnel do not have any involvement in determining or monitoring credit ratings or developing or approving credit rating methodologies.

d. Rating Committee Process

Once information has been gathered, the Lead Analyst will analyze the Issuer or obligation and apply the relevant MIS credit rating methodologies, which may include consideration of both quantitative and qualitative factors (discussed in greater detail below). The Lead Analyst will formulate his or her recommendation for consideration by a rating committee.

Rating committees are a critical mechanism in promoting the quality, consistency and integrity of our credit rating process. MIS's credit ratings are determined only through rating committees, by a majority vote of the rating committee's members, and not by any individual analyst. The composition of a rating committee varies based on the nature and complexity of the credit rating being assigned, but typically includes the following: the Chair, who acts as the moderator of the committee; the Lead Analyst, who presents his or her recommendation and the analysis supporting it; and other participants, including senior-level personnel, specialists or support analysts, as deemed appropriate.

Rating committees convened to determine credit ratings for which the Lead Analyst is based in the European Union should be comprised of a majority of voting members who were not directly involved in the preparation of the rating committee memorandum and related materials. For these purposes it is assumed that such involvement will usually be limited to the Lead Analyst and any Associate Analysts or other support staff working under the direction of the Lead Analyst.

The rating committee Chair encourages broad-based participation from all rating committee members, regardless of seniority, and the expression of dissenting views. The Chair also determines if committee attendees possess sufficient depth and breadth of expertise to allow the rating committee to be properly constituted.

At the conclusion of rating committee discussions, the Lead Analyst makes a rating recommendation. All rating committee participants eligible to vote are expected to vote and each voting member is entitled to one vote, with all votes carrying equal weight. Voting begins with the Lead Analyst, and votes are then solicited from other rating committee participants. The Chair has the authority to suspend the proceedings if he or she believes that the rating committee would benefit from further discussion, additional information, or broader participation used to make the credit decision before concluding.

Rating committee composition, deliberations and voting results are kept confidential and limited to MIS employees.

e. Informing the Issuer of the Credit Rating Outcome and Disseminating the Credit Rating Announcements

Once a rating committee reaches a decision and the appropriate external communications have been drafted regarding a credit rating action, the Lead Analyst typically contacts the Issuer or its designated agent to inform them of the credit rating. In so doing, the Lead Analyst explains the rationale for the credit rating and the key factors which the rating committee considered in arriving at its opinion. Prior to public release of the credit rating, MIS communicates its credit rating decision only to the Issuer and/or its designated agent. Where feasible and appropriate, MIS also may provide the Issuer or its agent with a draft of the credit rating announcement so that they can review the draft to verify that it does not contain any inaccurate or non-public information. The Issuer may agree or disagree with the credit rating outcome, but if the credit rating opinion relates to an existing published credit rating, the opinion will be made public unless the Issuer or its designated agent provides us with relevant new information justifying reconsideration of the rating decision (see discussion below regarding Credit Rating Appeals). If MIS is not able to inform the Issuer or its agent of a credit rating prior to publication, MIS will inform them as soon as practicable after publication, and generally will explain the reason for the delay.

Credit ratings are communicated to the general public free of charge via credit rating announcements that are published on our website, www.moodys.com, and are distributed to major financial newswires.

In the European Union and South Africa, prior to the public dissemination of a credit rating, the Lead Analyst or his or her designee is required to inform the Issuer or its agent of the credit rating and the principal grounds on which the credit rating is based. The notification shall take place during working hours in the time zone where the Issuer or its agent is located, and at least one full working day must elapse in the country where the Issuer or its agent is domiciled before the publication takes place. During this time period the Issuer or its agent is provided with the opportunity to review the draft credit rating announcement and draw MIS's attention to factual errors and inadvertent disclosure of confidential information. If the Issuer or its agent does not respond within the full working day after the notification, the Lead Analyst, or his or her designee, may then release the credit rating announcement; if MIS receives a written response from the Issuer or its agent to proceed before the full working day has expired, MIS still must wait for one full working day to elapse before MIS can release and publish the credit rating announcement.

f. Credit Rating Appeals

Appeals of credit rating decisions are rare. However, where appropriate, MIS will delay the publication of a credit rating action in order to assess the relevance of new material information that has been received from the Issuer or its agent. If the Lead Analyst and rating committee Chair believe the new information may reasonably lead the rating committee to reconsider the credit rating conclusion, the rating committee will be reconvened to consider the impact of the information on the credit rating. This process, known as an external appeal, is available only where the Issuer can provide MIS, within a limited timeframe, with material information not previously available or considered that MIS believes is relevant to its credit assessment. MIS believes that the appeal process is an important part of our ability to provide timely and well-informed credit ratings. Appeals from Issuers should be distinguished

from MIS's internal appeal process (described in the next paragraph), in which a member of the rating committee or certain other MIS employees can request a reconsideration of the rating committee decision.

MIS's internal appeal process provides that, before the credit rating outcome is disseminated to the public, a member of the rating committee or certain other MIS employees (such as a managing director or a credit officer) can formally lodge an "internal appeal" of the committee's decision. If an internal appeal is granted, a new rating committee will be formed to consider the appeal.

g. Monitoring of Credit Ratings

With the exception of those credit ratings which are clearly identified as point-in-time ratings, once a credit rating has been published, MIS will monitor that credit rating, as deemed appropriate, on an ongoing basis and will modify the credit rating as necessary in response to changes in our opinion of the creditworthiness of the Issuer or issue. All monitored credit ratings are reviewed at least once every twelve months, with the exception of Sovereign credit ratings, which are reviewed at least every six months.

MIS generally utilizes the same credit rating methodologies to monitor credit ratings as it uses to assign initial credit ratings[1]. In monitoring credit ratings, analysts may review public information as well as non-public information provided by the Issuer or its agent through periodic meetings or other means. For comments on use of such information, please refer to Section b above.

When credit rating methodologies (including quantitative tools) are revised, the updated credit rating methodology is applied to all credit ratings. Credit ratings likely to be affected by the credit rating methodology change are either changed concurrently with the credit rating methodology change announcement or are placed on review. The reviews are generally completed within six months of the announcement of the updated credit rating methodology.

MIS also utilizes a variety of monitoring processes, with the involvement of rating groups and the Credit Policy group. One such monitoring process is the portfolio review which many rating groups undertake on an annual basis to review the currency and consistency of credit ratings within a peer group. Portfolio reviews also offer a means of identifying common credit trends and assessing their potential credit rating implications, as well as promoting consistency in our credit analysis. In conducting a portfolio review, a senior-level group from both within and outside of a given industry rating team assesses the credit quality of all MIS-rated Issuers constituting an industry sector or sub-sector in a region. Where the portfolio review concludes that individual credit ratings may not be appropriately positioned, those credit ratings will be promptly referred to a rating committee.

In structured finance, monitoring is performed either by the applicable rating group's Lead Analysts or by dedicated monitoring analysts. MIS has dedicated analytical staff for monitoring the performance of existing transactions in certain asset types, such as commercial mortgage and collateralized debt obligation transactions. Monitoring

---

1 Models or criteria may vary between initial rating assignments and surveillance, but only to the extent that different credit-relevant information may be available at different points in the life of a security or issuer. For example, delinquency data may only exist with the passage of time and so may only be relevant for surveillance - and not for the assignment of initial ratings. Threshold criteria for a rating change can also vary somewhat between new and seasoned transactions because the remaining period over which risks can be realized may shorten and the general level of uncertainty may diminish over time with seasoning.

includes qualitative approaches as well as quantitative approaches, such as filtering tools that allow the monitoring staff to compare actual asset performance against the performance expected at the time of the last credit rating action. MIS has published a number of reports describing our monitoring approaches for specific structured finance asset classes.

Our U.S. public finance rating group has a team of monitoring analysts dedicated to the systematic monitoring of local government credit ratings. As in sectors outside of local governments, we use technology and quantitative methods to assist the analysts in identifying Issuers whose credit profiles may no longer be consistent with their current credit ratings and outlooks. We track a number of indicative variables covering local economic conditions, demographics, and fiscal balances. This quantitative analysis helps identify credit ratings that merit a more intensive review, which may take the form of a rating committee and could lead to a credit rating or outlook change. MIS has published a report that outlines the framework used to assess the impact of macro-level trends on U.S. local government ratings. In U.S. public finance, surveillance tools may use threshold filtering to assist in identifying ratings that require additional review based on performance.

h. Withdrawal of Credit Ratings

If MIS believes we have inadequate information to provide an informed credit rating to the market, we will exercise our editorial discretion and will either refrain from assigning a credit rating or withdraw an outstanding credit rating. In addition, and as described in our policy provided below, MIS may withdraw a credit rating under other limited circumstances, including: if the Issuer defaults, enters bankruptcy, is liquidated or restructures its debt; if the Issuer becomes the subject of a corporate reorganization; when the credit rating methodology used to assign the credit rating is no longer applicable due to a reduction in the size of the collateral pool; when the rated obligation is no longer outstanding or, in certain cases, its principal balance is fully written down to zero because of credit loss recognitions; or for business reasons unrelated to these situations.

i. Unsolicited Credit Ratings

Unsolicited credit ratings are classified based on whether they were provided by an MIS credit rating affiliate in the EU, an MIS credit rating affiliate in Japan, or an MIS credit rating affiliate elsewhere in the world. The processes by which such determinations are made in these jurisdictions, as well as the manner in which the unsolicited nature of such ratings are disclosed in these jurisdictions, are set forth in the Policy for Designating Unsolicited Ratings outside the European Union and Japan, the Policy for Designating Unsolicited Credit Ratings in the European Union, and the MJKK and MSFJ Policy for Designating Unsolicited Credit Ratings, respectively.

Other aspects of the credit rating process described above are applicable to both unsolicited credit ratings and solicited credit ratings. We also have provided below our Policy for Designating Non-Participating Rated Entities.

2. **Relevant Credit Rating Process Policies**

The following policies can be found on our website via the web addresses listed below.

- Policy for Designating Unsolicited Credit Ratings outside the European Union and Japan, December 8, 2014 http://www.moodys.com/nrsro_sp13379

- Policy for Designating Unsolicited Credit Ratings in the European Union, October 6, 2014 http://www.moodys.com/nrsro_sp13360

- Policy for Designating Non-Participating Rated Entities, October 6, 2014 http://www.moodys.com/nrsro_sp13358

- Policy for Withdrawal of Credit Ratings, October 6, 2014 http://www.moodys.com/nrsro_sp13418

- MJKK Policy for Designating Issuers that Do Not Participate in the Rating Process, October 1, 2010 http://www.moodys.com/nrsro_sp27530

- MJKK Policy for Designating Unsolicited Credit Ratings, December 1, 2013 http://www.moodys.com/nrsro_sp27531

3. **Credit Rating Methodologies and Models**

MIS's methodological approaches to determining credit ratings encompass an evaluation of both qualitative and quantitative factors. Many of these credit rating methodologies include references to quantitative tools and "models," which are analytical tools used to infer the implications of sets of assumptions in a consistent, rigorous manner. Since every model contains simplifying assumptions and, by construction, may exclude many credit-relevant factors, individual rating committees rely on models as tools to varying degrees, depending on the facts and circumstances in the sector and of the particular Issuer. Current versions of MIS credit rating methodologies, which are updated periodically, along with descriptions of models (if any) they employ can be found on our website via the web address: http://www.moodys.com/researchandratings/methodology/003006001/rating-methodologies/methodology/003006001/4294966628/4294966848/0/0/-/0/-/-/en/global/rr

The ratings group for assigning credit ratings in any particular sector is responsible for proposing the credit rating methodology it will employ. New credit rating methodologies and proposed changes to existing credit rating methodologies undergo a robust approval process managed by the Credit Policy group, whose head reports directly to the MIS Chief Executive Officer. The Credit Policy group is also responsible for regularly assessing the appropriateness of existing credit rating methodologies, including any key assumptions they employ, and for verifying the accuracy of the computer code of credit rating models and credit rating scorecards that have been developed by MIS for use in the ratings process for multiple transactions.

Some quantitative tools used in the structured finance sector are relatively quantitative in nature in that they attempt to model collateral loss probability distributions under various simplifying assumptions, cash flow allocations under each of the potential collateral loss scenarios, and, together, derive mathematically expected loss rates on various securities. Other quantitative tools, in particular many of those used within the fundamental sectors, are relatively qualitative in nature, embedding financial ratio credit scores and judgment in scorecards that serve as

guides for discussion in rating committees and bear a somewhat imprecise relationship to actual credit rating outcomes. However, credit rating methodologies suggest quantitative and qualitative information for consideration as inputs to rating committee deliberations.

The following paragraphs provide a high-level description of the qualitative and quantitative factors that are broadly considered relevant in each of the sectors for which MIS is registered as an NRSRO. These descriptions should not be considered exhaustive or mandatory for each credit rating published in the individual sectors. Furthermore, not all of the enumerated factors will be deemed relevant by an individual rating committee, and within individual sub-sectors additional factors may also be considered. The MIS rating methodologies include additional factors that might be considered relevant by a rating committee when issuing a credit rating in a given sector.

a. Financial Institutions, Brokers or Dealers

Relevant qualitative factors may include: management quality; key entity risks; the impact of economic and industry outlook on lending policy and criteria; product development; risk measurement and management tools; credit risk review and controls; and/or reach and influence of regulatory authorities. MIS also considers the likelihood and quality of external forms of support including parental support and, for banks, systemic support. Relevant quantitative factors may include: profitability; portfolio diversification by geography, region, industry, product, and portfolio granularity; actual amount of non-performing loans; loan-loss provisioning requirements; loan-loss coverage levels; actual losses; loss expectancy and recent trends; type and impact of relevant portfolio stress tests (e.g., potential increases in interest rates or unemployment rates); loan-to-value ("LTV") overview by valuation at inception and LTV limits in the case of property lending; overview of off-balance sheet risks; projected business growth; capital ratios (Tier 1, tangible common equity) and trends; composition of risk-weighted assets (e.g., 20% risk weight, 50% risk weight, etc.); and/or quality of capital by type (e.g., Tier 1, Tier 2, etc.), instrument (e.g., subordinated debt, hybrid, innovative / non-innovative, etc.) and currency.

b. Insurance Companies

Relevant qualitative factors are tailored to the specific type of insurer (e.g., life, property/casualty, mortgage, financial guaranty, etc.) and may include: strategy, market position, brand and distribution; product focus; ease of access to capital; management quality, governance and risk management; accounting policy and disclosure; and/or the sovereign and regulatory environment.

Relevant quantitative factors are also specific to the type of insurer and may include: portfolio diversification (by geography, product/risk type, and distribution channel); asset quality (as reflected by, for example, the proportion of high risk investments and reinsurance assets); capital adequacy (as measured by capital ratios appropriate for the type of insurer and including estimates of catastrophe risk); profitability (as reflected by, for example, returns on equity, loss and expense ratios, and earnings volatility); financial flexibility (as indicated by coverage and leverage ratios); reserve adequacy (as implied by ratio analysis and actuarial analysis); and/or liquidity risk (assessing asset and liability matching).

c. Corporate Issuers

Relevant qualitative factors may include: industry sector(s); key markets; market position(s); business mix; geographical diversity; business strategy; size of company; barriers to entry; competitive advantages; growth opportunities; financial policy; management quality; risk management; capital structure and structural considerations; liquidity and debt maturity analysis; analysis of salient features of the security; legal structure; ownership considerations; corporate governance; and the sovereign and regulatory environment.

Relevant quantitative factors may include: level of sales or assets; growth rates; profitability ratios; leverage ratios; coverage ratios; capitalization ratios; cash flow ratios; liquidity measures; industry specific key indicator ratios; off-balance sheet adjustments; working capital management indicators; capital expenditure levels (both maintenance and development); extraordinary/exceptional items; and/or financing flows, including dividends, foreign currency exposure and accounting effects.

d. Issuers of Asset-Backed Securities

Relevant qualitative factors may include: geographical location of assets; details of the relevant insolvency regime; bankruptcy remoteness of the special purpose entity; tax implications of the structure; integrity of the legal structure; quality of servicing employed; quality of any relevant asset management; the origination practices of the seller; presence or absence of third party guarantors; credit quality characteristics of underlying assets; and/or credit factors relevant for the industry sector.

Relevant quantitative factors may include: level of over-collateralization; quantity of excess spread on assets; size and structure of tranching of the bonds; interest rates; value of the reserve fund; availability, amount and details of liquidity; degree and level of amortization of the debt and payment priority; economic analyses; and/or historical performance of the relevant asset class for the sponsor and the sector.

In providing credit ratings for securities or money market instruments backed by an asset-backed pool or as part of any asset-backed or mortgage-backed securities transaction, MIS forms an opinion on a specific transaction by analyzing its legal structure and sources of credit protection, as well as the credit risk characteristics of the collateral pool backing the securitization. To evaluate the risk characteristics of the underlying collateral pool, MIS considers data from a wide variety of public sources and information provided by the securitization's sponsor. MIS' credit opinion is based on its own independent analysis.

e. Issuers of Government Securities, Municipal Securities or Securities Issued by a Foreign Government

Relevant qualitative factors may include: willingness to pay public debt (track record, political tolerance for public defaults); tax tolerance; political dynamics and institutional stability; government structure; quality of financial management (budgetary, capital and strategic planning, timely implementation of strategies in response to changing circumstances); institutional and public policy frameworks; track record in relation to social and political stability; all forms of solidarities (inter-generational, central government-local governments, central government-publicly owned enterprises and local governments-local government enterprises); assessment of political commitments (fiscal adjustment, price stability); and/or potential social tensions.

Relevant quantitative factors may include: factors reflecting the economic base (structure of the economy, investment rate, saving rate, GDP, GDP per capita, percentage change in real GDP, inflation record, openness of the economy, trends of personal income and wealth, employment growth, unemployment rate and diversity of economic activity by industry); demographic trends (such as population growth, age distribution, and geographic concentration); financial operations (such as revenue structure, growth and diversity, expense structure, including fixed cost trends, trend of budget surplus or deficit, size and liquidity of financial reserves); and/or factors that help assess the sustainability of public debt (such as stock of general government debt, off-balance sheet liabilities, debt of overlapping governments paid from the same base, future liabilities such as pension and healthcare costs, composition of the debt in terms of currency, maturity, interest-rate sensitivity, size of assets that can be mobilized to repay the debt nature of public spending and degree of leverage relative to tax base or resource base).

For U.S. municipal securities issued by entities that operate in competitive markets, such as hospitals, universities, and airports, additional factors may include the Issuer's market share, pricing power within its market, degree of governmental support, and quality of management and governance.

Moody's Investors Service ("MIS")

Exhibit 3

Policies to Prevent the Misuse of Material, Nonpublic Information

MIS has the following policies to prevent the misuse of material, nonpublic information. These policies can be found on our website via the web addresses[i] listed below.

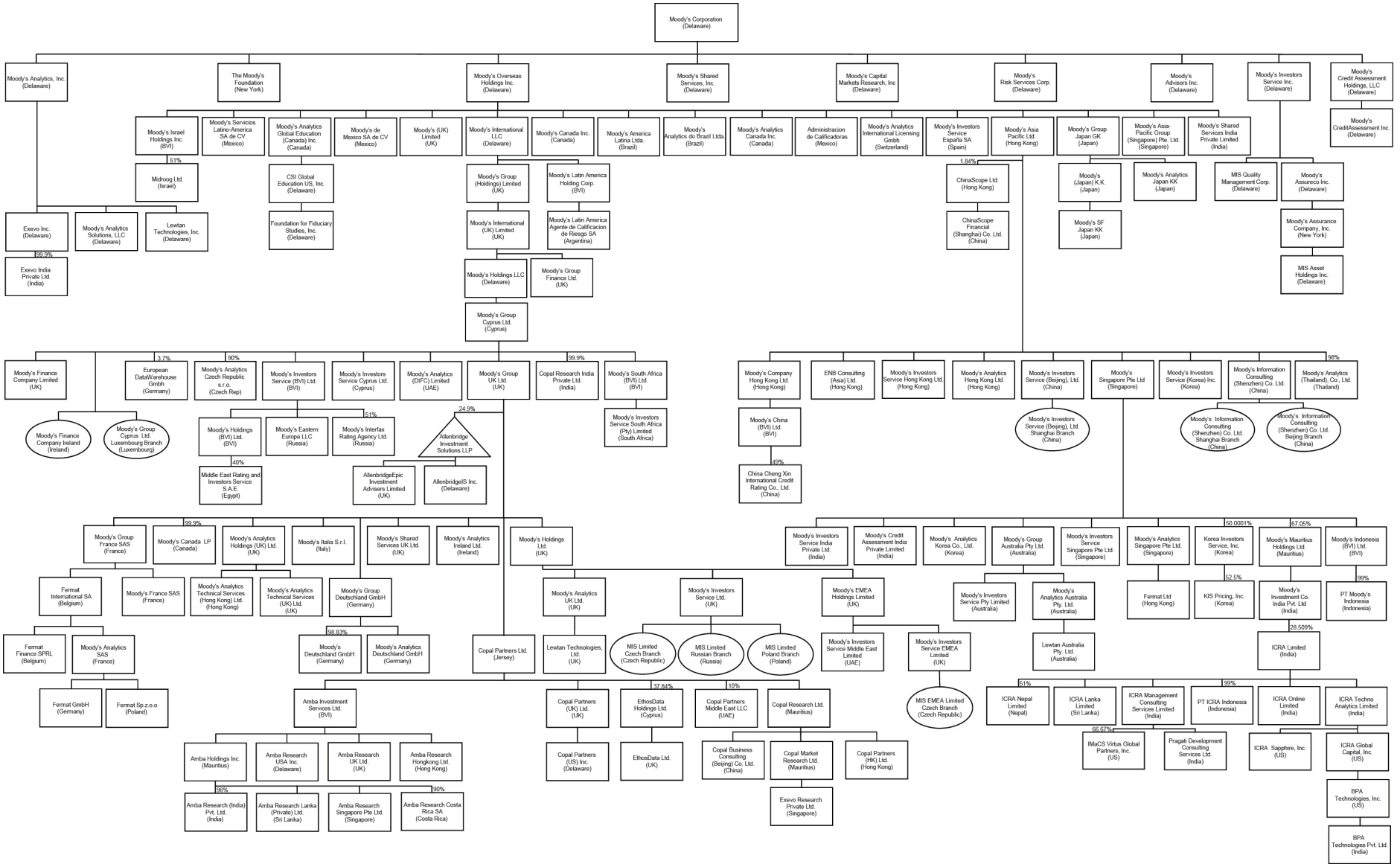
1. Moody's Corporation Code of Business Conduct (October 2014)
   http://www.moodys.com/nrsro_sp11410
2. Moody's Investors Service Code of Professional Conduct (December 2014)
   http://www.moodys.com/nrsro_sp11557
3. Policy for Securities Trading (October 6, 2014)
   http://www.moodys.com/nrsro_sp13431
4. Moody's Corporation Code of Ethics for Chief Executive and Senior Financial Officers (February 24, 2004)
   http://www.moodys.com/nrsro_sp12862
5. Moody's Corporation Policy Regarding the Independence of Ratings and Disclosure of Affiliations of Moody's Directors and Shareholders with Rated Entities (September 30, 2014)
   http://www.moodys.com/nrsro_sp21844
6. Policy for Material Non-public Information (July 14, 2014)
   http://www.moodys.com/nrsro_sp13415
7. Policy on Communication of Public Rating Actions (June 3, 2013)
   http://www.moodys.com/nrsro_sp14058
8. MIS – MA Separation Policy (December 8, 2014)
   http://www.moodys.com/nrsro_sp13372

i The URL provided will refer to the most recent version of the policy.

Moody's Corporation

Exhibit 4a

Global Legal Structure as of December 31, 2014

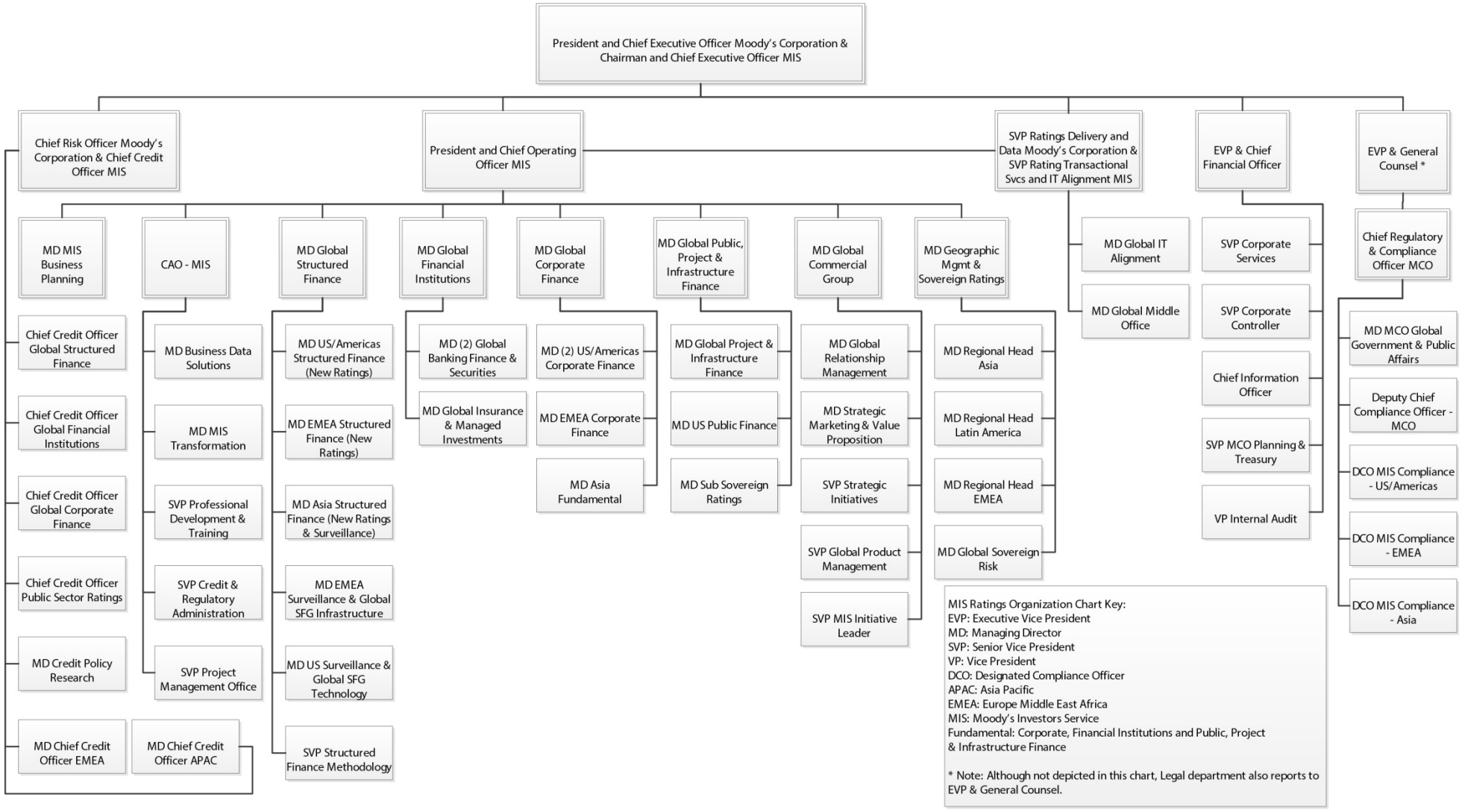


† An oval indicates a branch. A triangle indicates a partnership.

†† Unless otherwise indicated, a parent company owns 100% of a subsidiary.

Exhibit 4b

Organizational Chart as of December 31, 2014



Moody's Investors Service ("MIS")

Exhibit 5

Code of Ethics

MIS has the following policies establishing standards of ethical behavior for its employees. These policies can be found on our website via the web addresses[i] listed below.

1 Moody's Corporation Code of Business Conduct (October 2014)
http://www.moodys.com/nrsro_sp11410

2 Moody's Investors Service Code of Professional Conduct (December 2014)
http://www.moodys.com/nrsro_sp11557

3. Moody's Corporation Code of Ethics for Chief Executive and Senior Financial Officers (February 24, 2004)
http://www.moodys.com/nrsro_sp12862

4. Moody's Corporation Anti-Bribery and Anti-Corruption Policy (December 2, 2013)
http://www.moodys.com/nrsro_sp21200

5. Compensation of MIS Designated Compliance Officer (December 8, 2014)
http://www.moodys.com/nrsro_sp21865

6. Email Monitoring Policy (December 8, 2014)
http://www.moodys.com/nrsro_sp14123

i The URL provided will refer to the most recent version of the policy.

Moody's Investors Service ("MIS")

Exhibit 6

Conflicts of Interest Related to the Issuance of Credit Ratings

MIS has identified the following types of conflicts of interest related to the issuance of credit ratings:

1. MIS is paid by issuers or underwriters to determine credit ratings with respect to securities or money market instruments they issue or underwrite.
2. MIS is paid by obligors to determine credit ratings of the obligors.
3. MIS is paid by investors to determine credit ratings with respect to securities or money market instruments.
4. In addition to credit ratings, MIS provides other services, including but not limited to Rating Assessment Services and Indicative Assessment Services, to issuers or obligors that may be subject to a credit rating by MIS. MIS is paid for these other services by the requesting issuer or obligor.
5. MIS allows persons within MIS to directly own securities or money market instruments of, or have other direct ownership interests in, obligors or issuers subject to a credit rating determined by MIS as long as they do not participate in or otherwise influence the credit rating.
6. MIS allows persons within MIS to have business relationships that are more than arms length ordinary course business relationships with obligors or issuers subject to a credit rating determined by MIS as long as they do not participate in or otherwise influence the credit rating.
7. Members of the Board of Directors of Moody's Corporation (the parent of MIS) may be affiliated with obligors or issuers subject to a credit rating determined by MIS.
8. MIS may issue credit ratings covering, and/or requested by, entities which may have significant shareholdings (5% or more of outstanding shares) in Moody's Corporation (MCO), MIS's parent company.
9. MIS has a non-rating affiliate named Moody's Analytics. Customers of Moody's Analytics may be parties to whom MIS provides credit rating services.
10. Moody's Corporation, and/or its affiliates, may engage underwriters or investment bankers in connection with acquisitions, joint ventures and/or the sale by Moody's Corporation of debt or other securities. Moody's Corporation also has commercial relationships with numerous corporations from which it purchases goods or services (e.g., utilities, travel, technology hardware or software, office supplies, etc.). The parties with which Moody's Corporation has such business relationships may be entities about which, or to which, MIS provides credit ratings.

Moody's Investors Service ("MIS")

Exhibit 7

Policies to Address and Manage Conflicts of Interest

MIS has the following policies to address and manage conflicts of interest related to the issuance of credit ratings. These policies can be found on our website via the web addresses[1] listed below.

1. Moody's Corporation Code of Business Conduct (October 2014)
   http://www.moodys.com/nrsro_sp11410
2. Moody's Corporation Policy Regarding the Independence of Ratings and Disclosure of Affiliations of Moody's Directors and Shareholders with Rated Entities (September 30, 2014)
   http://www.moodys.com/nrsro_sp21844
3. Moody's Corporation Code of Ethics for Chief Executive and Senior Financial Officers (February 24, 2004)
   http://www.moodys.com/nrsro_sp12862
4. Moody's Investors Service Code of Professional Conduct (December 2014)
   http://www.moodys.com/nrsro_sp11557
5. Policy for Ancillary and Other Permissible Services (September 9, 2013)
   http://www.moodys.com/nrsro_sp13347
6. Policy for Securities Trading (October 6, 2014)
   http://www.moodys.com/nrsro_sp13431
7. MIS – MA Separation Policy (December 8, 2014)
   http://www.moodys.com/nrsro_sp13372
8. Policy Banning Recommendations Associated with Credit Ratings (June 3, 2013)
   http://www.moodys.com/nrsro_sp13375
9. Policy for Receipt, Review and Retention of External Complaints (December 8, 2014)
   http://www.moodys.com/nrsro_sp24556
10. Policy on Conflict of Interest Certification (December 8, 2014)
    http://www.moodys.com/nrsro_sp15644

[1] The URL provided will refer to the most recent version of the policy.

11. Policy for Fee Discussions (June 3, 2013)
    http://www.moodys.com/nrsro_sp13355
12. Policy for Solicitation or Acceptance of Money, Gifts, Favors, or Entertainment (June 3, 2013)
    http://www.moodys.com/nrsro_sp13436
13. Policy for Designating Non-Participating Rated Entities (October 6, 2014)
    http://www.moodys.com/nrsro_sp13358
14. Post Employment Policy (June 3, 2013)
    http://www.moodys.com/nrsro_sp14811
15. Policy for Designating Unsolicited Credit Ratings Outside the European Union and Japan (December 8, 2014)
    http://www.moodys.com/nrsro_sp13379
16. Policy for Analyst Rotation (December 2, 2013)
    http://www.moodys.com/nrsro_sp13994
17. Policy for Material Non-Public Information (July 14, 2014)
    http://www.moodys.com/nrsro_sp13415
18. Policy for Withdrawal of Credit Ratings (October 6, 2014)
    http://www.moodys.com/nrsro_sp13418
19. Annual Report of MIS Designated Compliance Officer (November 23, 2010)
    http://www.moodys.com/nrsro_sp12866
20. Compensation of MIS Designated Compliance Officer (December 8, 2014)
    http://www.moodys.com/nrsro_sp21865
21. Independence of MIS Compliance Department (December 8, 2014)
    http://www.moodys.com/nrsro_sp12867
22. Credit Rating Refusal Policy (August 16, 2010)
    http://www.moodys.com/nrsro_sp21843
23. Policy Governing Access to AccuRate, RAST, Phoenix and PeopleSoft Financials (September 9, 2013)
    http://www.moodys.com/nrsro_sp13330
24. Outside Business Interest Policy (December 8, 2014)
    http://www.moodys.com/nrsro_sp25705
25. Policy Prohibiting Sales and Marketing Activity by Credit Rating Personnel (January 14, 2013)
    http://www.moodys.com/nrsro_sp19376

26. MIS Policy on SEC Rule 17g-5(a)(3) (December 8, 2014)
http://www.moodys.com/nrsro_sp15408

27. Policy on Not Maintaining Credit Ratings on Issuers From Whom MIS receives 10% of its Annual Billings (December 22, 2011)
http://www.moodys.com/nrsro_sp17093

28. Outsourcing Policy (December 2, 2013)
http://www.moodys.com/nrsro_sp24231

29. Moody's Corporation Anti-Bribery and Anti-Corruption Policy (December 2, 2013)
http://www.moodys.com/nrsro_sp21200

Moody's Investors Service ("MIS")

Exhibit 8

Information Regarding Credit Analysts and Credit Analyst Supervisors

MIS has several levels of credit analyst and the typical qualifications, including education and work experience, which MIS requires when hiring credit analysts are described below. For this discussion we have combined credit analyst roles into three groups: junior level credit analysts, senior level credit analysts, and credit analyst supervisors. While the qualifications shown below represent MIS's typical requirements when hiring for each of these analytical levels, they do not represent minimum requirements. MIS may hire personnel, or promote personnel, based on other qualifications that MIS deems acceptable. In addition, in some areas of MIS, analysts may assume differing levels of responsibilities than analysts in other areas with similar experience.

Junior Level Credit Analysts

Junior level analysts typically provide support and research assistance to more senior analysts. This may include working on analytical and statistical projects, assisting in writing various reports, sourcing and analyzing information and assisting in the development of rating recommendations and in monitoring of ratings.

A bachelor's degree typically is required, preferably in Finance, Economics, Accounting, or Computer Science. In addition, a master's or other advanced degree in Finance, Economics or a related field, or a professional qualification such as Chartered Financial Analyst or Certified Public Accountant, is preferred. At least two years of prior work experience in areas such as financial or investment analysis typically is required, along with exposure to areas such as research, economics, statistics and quantitative modeling.

Senior Level Credit Analysts

Senior level analysts typically function as lead analysts for portfolios of credits, with responsibility for rating and monitoring credits, managing relationships with investors, intermediaries, underwriters, issuers and media, writing research reports, and leading conferences.

A master's or other advanced degree in Finance, Economics or a related field typically is required, and a professional qualification such as Chartered Financial Analyst or Certified Public Accountant is preferred. At least four years of prior work experience in financial or investment analysis, including credit analysis and familiarity with the relevant business sector, typically is required.

Credit Analyst Supervisors

Supervisory analysts typically manage team(s) of rating analysts and administrative staff. They are responsible for ensuring the quality, transparency and timeliness of ratings and research. They represent Moody's at a senior level with issuers, investors, intermediaries and other market participants.

A master's or other advanced degree in Finance, Economics or a related field typically is required, and a professional qualification such as Chartered Financial Analyst or Certified Public Accountant is preferred. At least 15 years of prior work experience in credit analysis or portfolio management typically are required, including demonstrated ability to lead senior credit analysts.

The total number of credit analysts and credit analyst supervisors as of December 31, 2014 and still employed on January 28, 2015 is as follows:[1]

Total number of credit analysts: 1297

Total number of credit analyst supervisors: 189

[1] MIS determined credit analysts ("Analysts") to be those individuals who participated in the credit rating process but who were not supervisors. Credit analyst supervisors ("Supervisors") were those Analysts who participated in the credit rating process, were the most junior level MD's (aka Team Managing Directors) or with titles below who had at least one Analyst reporting to him or her. Within MIS, the hierarchy of relevant titles for supervisors (in order of increasing seniority) is: Vice President – Senior Analyst ("VP-SA"); Vice-President – Senior Analyst / Manager; Vice President – Senior Credit Officer ("VP-SCO"); Vice-President – Senior Credit Officer / Manager; Senior Vice President ("SVP"); Senior Vice-President / Manager; AMD ("Associate Managing Director"); and TMD ("Team Managing Director"). A TMD's role is primarily to supervise Analysts. The role of an Associate Analyst, Analyst, Assistant Vice President / Analyst, VP-SA, VP-SCO or SVP is primarily the production of credit ratings, although they may also be responsible for performance evaluations of, and/or the review of securities trades by, Analysts who report to them.

Moody's Investors Service ("MIS")

Exhibit 9

Information Regarding Designated Compliance Officer

The Designated Compliance Officer for MIS is James P. Bodovitz, who is employed by MIS on a full-time basis. Mr. Bodovitz's employment history and post-secondary educational background are presented below.

EMPLOYMENT HISTORY

Moody's Investors Service
October 2011 – Present
New York, New York
Designated Compliance Officer

The AIG Advisor Group
February 2007 – October 2011
New York, New York
Chief Risk Officer (July 2008 – October 2011)
Senior Regulatory Counsel
Senior Vice President, Chief Compliance Officer, Royal Alliance Associates, Inc. (February 2007 – February 2010)

Park Avenue Securities LLC / Guardian Life Insurance Company of America
May 2004 – February 2007
New York, New York
Senior Vice President, Chief Compliance Officer (PAS)
Second Vice President (Guardian)

AXA Advisors, LLC / AXA Financial, Inc.
December 1996 – April 2004
New York, New York
Senior Vice President & General Counsel (AXA Advisors) (Dec. 1999 – April 2004)
Vice President, National Compliance Office (AXA Financial)

United States Securities And Exchange Commission
January 1993 - November 1996
New York, New York
Branch Chief, Branch of Broker-Dealer Enforcement

Shearman & Sterling
October 1984 – November 1992
Associate Attorney

POST-SECONDARY EDUCATION:

University of Southern California Law Center, J.D., June 1984

Moody's Investors Service
7 World Trade Center at
250 Greenwich Street
New York, New York 10007

MOODY'S
INVESTORS SERVICE