

Fitch Ratings U.S. Public Finance 2013 Transition and Default Study

Special Report

Negative Rating Drift: Soft U.S. economic growth alongside state and local government budgetary constraints remained key factors pressuring U.S. public finance credit quality in 2013. A negative rating drift persisted as downgrades topped upgrades by a margin of 2 to 1, in line with 2012 and 2011 activity. As with the prior year, the share of ratings downgraded and upgraded, 5.2% and 2.6%, respectively, was modest. The majority of ratings — 92.1% — remained nearly the same year over year.

Defaults Linked to Detroit: The most significant credit event for local governments in 2013 was the July 18 bankruptcy filing by Detroit. Fitch considers this to be a landmark bankruptcy case given the paucity of such cases and the potential significance of treatment of various liabilities. The ultimate outcomes could be precedential and may confirm or challenge some basic premises that support credit ratings on municipal debt. The downgrade of Detroit's pension obligation certificates of participation (COPs), unlimited tax general obligation (ULTGO) and limited tax general obligation (LTGO) ratings to 'D' in 2013 comprised the year's defaults. The 2013 default rate was 0.09%. Fitch has recorded a total of 16 U.S. public finance defaults over the period 1999–2013, resulting in a long-term average annual default rate of 0.04%.

Rating Distribution: At year-end 2013, the U.S. public finance rating mix by broad category remained on par with 2012 levels; 'AAA', 13%; 'AA', 49%; 'A', 26%; 'BBB', 9%; and the remaining 3% speculative grade — 'BB' or lower.

Study Overview: This study analyzes the rating migration and default experience of Fitch-rated U.S. public finance securities. Issuing entities include states and their authorities; local governments, such as cities, counties, school districts and special districts; municipal enterprise systems, such as water and sewer districts, toll road authorities and airports; and private educational, cultural, senior living and healthcare organizations.

Related Research

[Fitch Ratings International Public Finance 2013 Transition and Default Study \(March 2014\)](#)

[Fitch Fundamentals Index — U.S. Index Trend Analysis 4Q13 \(January 2014\)](#)

Analysts

Charlotte L. Needham
+1 212 908-0794
charlotte.needham@fitchratings.com

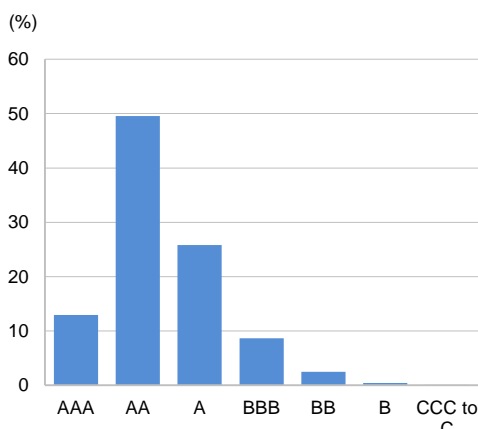
Vincent Barberio
+1 212 908-0505
vincent.barberio@fitchratings.com

Sarah B. Repucci
+1 212 908-0726
sarah.repucci@fitchratings.com

Mariarosa Verde
+1 212 908-0791
mariarosa.verde@fitchratings.com

Thomas McCormick
+1 212 908-0235
thomas.mccormick@fitchratings.com

Fitch U.S. Public Finance Ratings Distribution — 2013 Year-End



Source: Fitch.

Fitch-Rated U.S. Public Finance Default Rates

| Year | Number of Fitch-Rated Defaults | Default Rate (%) |
|------|--------------------------------|------------------|
| 1999 | 1 | 0.09 |
| 2000 | 0 | 0.00 |
| 2001 | 2 | 0.12 |
| 2002 | 1 | 0.05 |
| 2003 | 1 | 0.04 |
| 2004 | 0 | 0.00 |
| 2005 | 1 | 0.04 |
| 2006 | 0 | 0.00 |
| 2007 | 2 | 0.06 |
| 2008 | 1 | 0.03 |
| 2009 | 1 | 0.03 |
| 2010 | 1 | 0.03 |
| 2011 | 1 | 0.03 |
| 2012 | 1 | 0.03 |
| 2013 | 3 | 0.09 |

Source: Fitch.

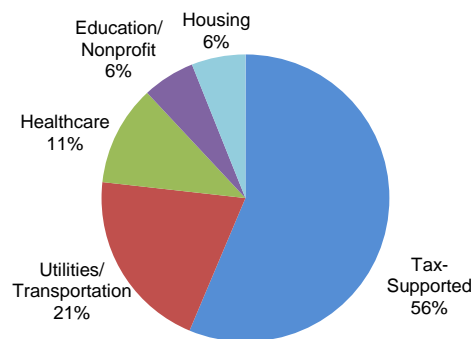
U.S. Public Finance Rating Activity 2013

The U.S. economic environment remained pressured in 2013 with soft economic growth, a modest recovery in the labor market and constrained state and local government finances. Fitch U.S. public finance downgrades exceeded upgrades by a margin of 2 to 1 for the third consecutive year. However, as with prior years, the absolute share of municipal ratings downgraded and upgraded was relatively low at 5.2% and 2.6%, respectively — similar to 2012 activity (4.9% and 2.4%). The vast majority of ratings — 92.1% — remained the same. Downgrades and upgrades discussed in this study refer to year over year rating activity.

The tax-supported sector, representing 56% of Fitch public finance security ratings at year end, led rating activity. Tax supported downgrades of 5.6% topped upgrades of 2.1%, a near repeat of the 5.8% and 1.4% rates recorded in 2012. Rating activity was generally muted across other public finance sectors (See Transition Rates by Sector beginning on page 14 of the *Appendix*.)

On a state-by-state basis, California produced the most downgrades, followed closely by Florida and Michigan. California also topped upgrades along with Texas. Among Fitch's U.S. public finance ratings, the states which led security counts at the end of 2013 were California (16%), Florida (15%) and Texas (11%). North Carolina and New York followed, each with 3.4%.

**Fitch U.S. Public Finance Ratings 2013
Year-End Distribution by Sector**



Source: Fitch.

2014 Outlook U.S. Public Finance

Fitch Ratings expects most U.S. public finance ratings to maintain stable outlooks in 2014. In addition, Fitch also anticipates that most rating actions in 2014 will be affirmations. The strengthening U.S. recovery should support general improvements in government revenues; however, all the sectors will continue to face varying degrees of fiscal, economic and regulatory uncertainty in 2014.

States will continue to manage budgets closely as the slow economic recovery supports revenue growth. Surprisingly strong results for many states, which benefited from taxpayer activity to avoid federal tax increases, allowed for further reserve replenishment in fiscal 2013. This leaves states in their strongest position since the financial crisis as they continue to face the uncertainties associated with developments at the federal level and other pressures. In aggregate, states have now had 14 consecutive quarters of revenue growth. This has led to demands on both the spending and taxing side of the equation. There are pressures to increase program funding following years of austerity, as well as pressures to lower taxes. Budget managers have been cautious so far.

The combination of slowly improving revenue growth and increased spending demands has constrained the local government sector despite the expected relative stability of ratings. The outlook for revenue performance has improved, but uncertainties remain, based on both revenue type and geographic location. The moderately expanding economy should translate into increases in most local tax revenues, although significant risks remain. Areas that have

Related Criteria
[Distressed Debt Exchange \(August 2013\)](#)

had a strong housing rebound and are dependent on property taxes may experience more robust growth. A reversal in momentum in housing prices could limit revenue growth.

Many local governments were able to achieve significant labor savings in recent years. Signs of labor's unwillingness to negotiate further concessions are on the increase. Fitch believes many governments will be challenged to address community needs, including capital spending, that have been deferred over the last few years. Benefit pressures and reform efforts will continue. Even with financial market recovery, benefit contributions will continue to put pressure on budgets.

Nonprofit hospitals and healthcare systems are facing accelerating industry pressures heading into 2014. However, Fitch expects most ratings to remain stable in the coming year, as the full operational and financial impacts of health reform will probably be experienced in the medium to long term, given the pace of implementation of the key provisions in the Affordable Care Act.

The outlook for the public utility sectors, including public power, water and sewer issuers, is stable. Strong sector characteristics, including autonomous rate-setting authority, the essentiality of service and reliable cash flow, should allow these issuers to retain a solid fiscal foundation. Modest economic growth, limited growth of household incomes and changes in consumption affect revenue growth in the utility sectors, presenting a challenging platform from which to manage long-term business, but most continue to exhibit sufficient financial flexibility.

The nonprofit colleges and universities sector outlook is stable, although lower rated, tuition-dependent institutions will face more pressure. The state housing agency sector is now broadly stable due to improved housing market fundamentals.

(For additional information see Fitch research *The Credit Outlook*, dated Jan. 21, 2014, and *2014 U.S. Public Finance Outlooks*, a compendium dated Jan. 15, 2014.)

2013 U.S. Public Finance Transition Rates

The 2013 one-year transition rates table at the top of page 4 provides rating movements across the major rating categories (from A to BBB) as opposed to the modifier level, which counts each notch change (A to A-) (modifier-level transition rates are available in the *Appendix* commencing on page 10). The vertical left-hand column identifies ratings outstanding at the beginning of 2013, while the horizontal axis offers information on the migration pattern of those ratings by year end. The diagonal, beginning with 'AAA' at 98.17% and followed by 'AA' at 97.88%, displays the relative stability of each rating category.

Of note, transitions in the 'BB', 'B' and 'CCC' to 'C' categories may be erratic due to their small sample sizes (only 3% of Fitch's U.S. public finance securities ratings at year-end 2013 were rated below investment grade). Therefore, minor rating changes between these categories can have a disproportionately large effect on their transition rates.

Fitch's U.S. public finance ratings in 2013, and over the long term since 1999, have exhibited a high level of rating stability with the vast majority of ratings remaining the same year-over-year. The stability rate in 2013 was 92.1%, on par with 92.7% recorded in 2012.

2013 Default Rate 0.09%

Fitch recorded three U.S. public finance defaults in 2013, up from a single default in 2012. All three defaults were related to Detroit, MI. The 2013 U.S. public finance annual default rate of 0.09% was up from the 0.03% recorded in 2012 and above the long-term average annual default rate of 0.04%.

Fitch U.S. Public Finance One-Year Transition Rates: 2013

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------|-------|-------|-------|-------|-------|--------|----------|-------|--------|
| AAA | 98.17 | 1.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.36 | 97.88 | 1.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 1.52 | 95.45 | 2.68 | 0.35 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 3.60 | 87.77 | 7.55 | 1.08 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 6.15 | 89.23 | 4.62 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 40.00 | 60.00 | 100.00 |

Source: Fitch.

Fitch U.S. Public Finance Average Annual Transition Rates: 1999–2013

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------|-------|-------|-------|-------|-------|-------|----------|-------|--------|
| AAA | 98.70 | 1.25 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 1.55 | 96.80 | 1.60 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.01 | 6.28 | 92.18 | 1.36 | 0.11 | 0.05 | 0.01 | 0.00 | 100.00 |
| BBB | 0.00 | 0.09 | 6.35 | 90.19 | 2.73 | 0.55 | 0.05 | 0.05 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 6.68 | 86.85 | 4.59 | 1.46 | 0.42 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 3.97 | 7.94 | 77.78 | 7.14 | 3.17 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.14 | 78.57 | 14.29 | 100.00 |

Source: Fitch.

The most significant credit event for local governments in 2013 was the July 18 bankruptcy filing by Detroit (the city). Leading up to and following the city's filing; Fitch took several rating actions related to the city's outstanding tax-supported and utility revenue bond ratings. The bankruptcy filing represented the next stage in the examination and prioritization of the city's sizable long-term liabilities. Fitch considers this to be a landmark bankruptcy case given the paucity of such cases and the potential significance of treatment of various liabilities. The ultimate outcomes could be precedential and may confirm or challenge some basic premises that support credit ratings on municipal debt.

Fitch's rating on Detroit's ULTGO bonds, representing the city's general credit quality, has been below investment grade since January, 2009 and, prior to the default, had fallen 13 notches over the past 10 years. The decline reflected severe economic stress, resultant revenue stagnation, growing costs, weak financial management and political dysfunction.

In 2013, Fitch downgraded Detroit's ULTGO to 'C' from 'CCC' and its LTGO debt and pension obligation COPS to 'C' from 'CC' on June 14, 2013, citing imminent default. Three days later, after the city failed to make a debt service payment on its COPs, Fitch lowered that rating to 'D'.

Fitch U.S. Public Finance Average Cumulative Default Rates: 1999–2013

| (%) | One-Year | Two-Year | Three-Year | Four-Year | Five-Year | 10-Year |
|-------------------------|----------|----------|------------|-----------|-----------|---------|
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| A | 0.00 | 0.01 | 0.02 | 0.04 | 0.05 | 0.05 |
| BBB | 0.05 | 0.10 | 0.18 | 0.28 | 0.47 | 1.28 |
| BB | 0.39 | 2.01 | 3.38 | 4.31 | 4.43 | 5.26 |
| B | 2.78 | 4.48 | 4.07 | 3.54 | 3.74 | 5.71 |
| CCC to C | 11.76 | 13.79 | 19.61 | 24.00 | 27.91 | 44.00 |
| Investment Grade | 0.01 | 0.01 | 0.03 | 0.05 | 0.08 | 0.19 |
| Speculative Grade | 1.92 | 3.59 | 5.01 | 6.15 | 6.65 | 11.61 |
| All U.S. Public Finance | 0.04 | 0.08 | 0.11 | 0.15 | 0.18 | 0.35 |

Source: Fitch.

Fitch subsequently downgraded the ULTGO and LTGO ratings to 'D' upon Detroit's failure to make payment under the contractual terms of the bonds.

Fitch believes the recent Detroit plan of adjustment (the plan) filed with the Bankruptcy Court on Friday, Feb. 21, 2013, if confirmed, would set a troubling precedent in the municipal market. The plan not only classifies ULTGO bonds as "unsecured," but further degrades ULTGO value by giving other similarly classed unsecured creditors preferential treatment, including unfunded pension and retiree healthcare liabilities. The city's choice to treat ULTGO bonds as unsecured is particularly concerning, as they are backed by a separate property tax approved by the voters for the sole purpose of paying debt service on the bonds.

Historically by sector, healthcare has accounted for the majority of Fitch-rated defaults (10), with a healthcare sector average cumulative default rate of 0.22% across the period 1999–2013. The tax-supported average cumulative default rate was 0.02% for the period 1999–2013, consisting of the default of the Detroit securities in 2013; Toledo-Lucas County Port Authority, OH (Town Square at Levis Commons), which defaulted in 2012; and Yavapai County, AZ, Industrial Development Authority, which defaulted in 2009. Fitch registered a single higher education default when a student housing facility associated with Joliet Junior College, IL defaulted in 2005.

For a complete list of Fitch-rated U.S. public finance defaults over 1999–2013, please see page 8 of the *Appendix*.

Fitch Transition and Default Methodology

All Fitch publicly rated unenhanced U.S. public finance long-term ratings (see box in left margin) from 1999 through the present are included in Fitch's transition and default statistics. As of Dec. 31, 2013, Fitch rated more than 22,000 long-term unenhanced individual public finance issues. However, the par value and number of bonds issued by a small number of large and/or frequent issuers can be quite high relative to the median issuer. Therefore, for the purpose of this study, Fitch has employed a security rating derived by consolidating identical ratings on all public, unenhanced parity obligations. Fitch-rated U.S. public finance derived security ratings totaled 3,422 at year-end 2013.

Fitch employs a static pool approach in calculating default and transition data. The static pools, or cohorts, are created by grouping security ratings that are active and outstanding at the beginning of the year. For example, securities with ratings outstanding at the beginning of 1999 constitute the 1999 static pool or cohort, with the same true for the 2000, 2001 and additional cohorts. Securities newly rated by Fitch in any given year are included in the following year's cohort. For example, the performance of ratings initiated in mid-1999 would be followed as part of the 2000 and future cohorts. Ratings withdrawn midyear are excluded from subsequent cohorts, since they are no longer active.

Fitch's continuing data enhancement efforts may result in slightly different statistics than in previously published studies. Therefore, this most recent study supersedes all prior versions. In addition, comparisons with earlier Fitch public finance transition and default studies should be viewed in the context of the differing methodologies, whether rating movements were analyzed across the broad rating categories or at both the modifier and flat levels.

Transition Rates

In order to calculate one-year transition rates, Fitch examines the performance of ratings outstanding at the beginning and end of a calendar year. Withdrawn ratings are excluded from

Parameters of the Fitch U.S. Public Finance Default Rate

- Statistical data captured in this study is based on all Fitch publicly rated, unenhanced U.S. public finance issues by use of a security rating derived by consolidating identical ratings on all parity obligations.
- Short-term ratings, credit supported, or enhanced and private ratings were excluded from the study.
- One-year default rates were calculated by dividing the number of defaulted securities by the number of outstanding rated securities at the beginning of each respective year.

the transition table calculations, since they do not fit this criterion; namely, that the ratings are outstanding over a full year or over the full period under observation.

Security ratings may reside in multiple static pools as long as their ratings are outstanding at the beginning and end of the year or multiple-year horizons under observation. For example, the annual performance of a security rating initiated in 1999, therefore outstanding at the beginning of 2000 and withdrawn in 2004, would be included in the 2000, 2001, 2002 and 2003 static pools. The rating's performance over multiple-year horizons would also be included in the two-year, three-year and four-year transition rates for each of the cohorts noted but excluded from five-year transition rates, since the rating was withdrawn in year five and was not outstanding for five full years as part of any cohort.

In all, Fitch's U.S. public finance transition data contains 15 static pools or cohorts from 1999–2013, allowing for 15 unique one-year transition rates, 14 two-year transition rates and so forth.

The rating transitions outlined in this study represent a distinct historical period and may not represent future rating migration patterns. Transition rates are influenced by a number of factors, including macroeconomic variables and credit conditions. The statistics presented in this report document the performance of Fitch-rated U.S. public finance securities. It is useful to examine the performance of Fitch's ratings on a relative scale within each rating category. In addition, it is important to point out that, while transition matrices are presented at both the modifier and flat levels in this study, all other statistical analysis was conducted at the modifier level, unless noted otherwise.

Default Rates

Fitch's default rates are calculated on a security basis, as opposed to dollar amounts. First, defaults are examined by year for each static pool and individual rating category. For example, if 25 securities defaulted in 2002 and the 2002 static pool consisted of 2,000 rated securities, the resulting annual default rate for all rated securities in 2002 would be 1.3%. If 10 of these defaults consisted of defaults on securities rated 'BB' at the beginning of the year and the 'BB' cohort at the beginning of the year totaled 500, the 'BB' 2002 default rate would be 2% (10/500).

From these annual default rates, Fitch derives average annual default rates by weighting each cohort's default rates by the number of ratings outstanding in the given cohort relative to the number of total ratings outstanding for all cohorts. In other words, following the example above, the 2002 'BB' annual default rate of 2% might be followed by a 2003 'BB' annual default rate of 1%. A straight average of these two rates would ignore potential differences in the size of the two cohorts. Rather, weighting the results based on the relative number of 'BB' ratings outstanding in 2002 and 2003 gives greater emphasis to the results of the 'BB' cohort with the most observations.

The same technique is used to calculate average default rates over multiple-year horizons. For example, the two-year default rate for the 2002 'BB' rating pool would be averaged with the two-year default rate for the 2003 'BB' rating pool by weighting the default rates by the relative size of each pool.

Withdrawn Ratings

With regard to withdrawn ratings, U.S. public finance long-term rated securities are included in the static pool data until the ratings are withdrawn and are then excluded from future static pools.

Fitch's Definition of Default — U.S. Public Finance

Default on a U.S. Public Finance security is defined as one of the following:

- Failure to make a payment of principal and/or interest under the contractual terms of the rated obligation.
- The bankruptcy filings, administration, receivership, liquidation or other winding-up or cessation of the business of an issuer/obligor.
- The distressed debt exchange (DDE) of an obligation, where creditors were offered securities with diminished structural or economic terms compared with the existing obligation.

Appendix

Fitch U.S. Public Finance Average Cumulative Default Rates: 1999–2013

| (%, Modifier Level) | One-Year | Two-Year | Three-Year | Four-Year | Five-Year | 10-Year |
|-------------------------|----------|----------|------------|-----------|-----------|---------|
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| A+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| A | 0.00 | 0.00 | 0.02 | 0.05 | 0.06 | 0.13 |
| A- | 0.00 | 0.03 | 0.06 | 0.10 | 0.12 | 0.00 |
| BBB+ | 0.00 | 0.00 | 0.07 | 0.15 | 0.24 | 0.54 |
| BBB | 0.00 | 0.07 | 0.07 | 0.08 | 0.34 | 0.51 |
| BBB- | 0.18 | 0.29 | 0.53 | 0.79 | 1.02 | 3.69 |
| BB+ | 0.00 | 0.00 | 1.67 | 1.35 | 2.44 | 10.34 |
| BB | 0.53 | 2.99 | 4.70 | 6.20 | 5.50 | 3.85 |
| BB- | 1.33 | 6.06 | 5.36 | 8.33 | 7.69 | 0.00 |
| B+ | 2.27 | 4.76 | 2.63 | 2.70 | 2.78 | 7.69 |
| B | 2.53 | 2.78 | 2.94 | 1.69 | 1.72 | 0.00 |
| B- | 4.76 | 10.00 | 11.76 | 11.76 | 15.38 | 33.33 |
| CCC to C | 11.76 | 13.79 | 19.61 | 24.00 | 27.91 | 44.00 |
| Investment Grade | 0.01 | 0.01 | 0.03 | 0.05 | 0.08 | 0.19 |
| Speculative Grade | 1.92 | 3.59 | 5.01 | 6.15 | 6.65 | 11.61 |
| All U.S. Public Finance | 0.04 | 0.08 | 0.11 | 0.15 | 0.18 | 0.35 |

Source: Fitch.

Fitch U.S. Public Finance Three-Year Default Statistics

| (%) | AAA | AA | A | BBB | BB | B |
|--|------|------|------|------|------|------|
| Ten-Year Average of Three-Year Cumulative Default Rates — Major Rating Categories | | | | | | |
| 2002–2011 | 0.00 | 0.00 | 0.03 | 0.09 | 3.18 | 3.42 |

Most Recent Three-Year Cumulative Default Rates — Major Rating Categories

| | | | | | | |
|------|------|------|------|------|------|-------|
| 2011 | 0.00 | 0.00 | 0.00 | 0.00 | 6.67 | 10.00 |
| 2010 | 0.00 | 0.00 | 0.08 | 0.00 | 1.85 | 0.00 |

| (%) | AAA | AA+ | AA | AA- | A+ | A | A- | BBB+ | BBB | BBB- | BB+ | BB | BB- | B+ | B | B- |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Ten-Year Average of Three-Year Cumulative Default Rates — Modifier Level | | | | | | | | | | | | | | | | |
| 2002–2011 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.07 | 0.00 | 0.09 | 0.25 | 1.73 | 4.03 | 6.12 | 0.00 | 3.03 | 11.76 |

Most Recent Three-Year Cumulative Default Rates — Modifier Level

| | | | | | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|-------|------|
| 2011 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.25 | 10.00 | 0.00 | 0.00 | 11.11 | 0.00 |
| 2010 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Source: Fitch.

Fitch-Rated^a U.S. Public Finance Defaults 1999–2013

| Year | Issuer Name, State | Rating at Beginning of Year | Sector |
|-------------|---|------------------------------------|--------------------------------------|
| 1999 | Boston Regional Medical Center, MA | B+ | Hospital |
| 2001 | Citizens General Hospital, PA | BBB- | Hospital |
| | South Fulton Medical Center, Inc., GA | C | Hospital |
| 2002 | Greater Southeast Healthcare System, DC | C | Hospital |
| 2003 | National Benevolent Association, MO | BBB- | Continuing Care Retirement Community |
| 2005 | Joliet Junior College, IL | C | Higher Education |
| 2007 | Pascack Valley Hospital Association, NJ | B- | Hospital |
| | Valley Health System, CA | BB- | Hospital |
| 2008 | St. Francis Health Care Centre, OH | CCC | Hospital |
| 2009 | Yavapai County Industrial Development Authority, AZ | B | Tax-Supported |
| 2010 | Valley Health System, CA | C | Hospital |
| 2011 | Northern Berkshire Health Systems, MA | B | Hospital |
| 2012 | Toledo-Lucas County Port Authority, OH | BB | Special District Special Tax |
| 2013 | Detroit Retirement Systems Funding Trust, MI | CC | Tax-Supported |
| | Detroit, MI, General Obligation — Limited Tax | CC | Tax-Supported |
| | Detroit, MI, General Obligation — Unlimited Tax | CCC | Tax-Supported |

^aFitch rating at the beginning of the year or initial rating.
Source: Fitch.

Fitch U.S. Public Finance One-Year Transition Rates: 2013

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------|-------|-------|-------|-------|-------|--------|----------|-------|--------|
| AAA | 98.17 | 1.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.36 | 97.88 | 1.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 1.52 | 95.45 | 2.68 | 0.35 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 3.60 | 87.77 | 7.55 | 1.08 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 6.15 | 89.23 | 4.62 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 40.00 | 60.00 | 100.00 |

Source: Fitch.

Fitch U.S. Public Finance Transition Rates: 1999–2013

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|---------------------------|-------|-------|-------|-------|-------|-------|----------|-------|--------|
| Average Annual | | | | | | | | | |
| AAA | 98.70 | 1.25 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 1.55 | 96.80 | 1.60 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.01 | 6.28 | 92.18 | 1.36 | 0.11 | 0.05 | 0.01 | 0.00 | 100.00 |
| BBB | 0.00 | 0.09 | 6.35 | 90.19 | 2.73 | 0.55 | 0.05 | 0.05 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 6.68 | 86.85 | 4.59 | 1.46 | 0.42 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 3.97 | 7.94 | 77.78 | 7.14 | 3.17 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.14 | 78.57 | 14.29 | 100.00 |
| Average Two-Year | | | | | | | | | |
| AAA | 97.68 | 2.18 | 0.11 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 3.30 | 93.92 | 2.59 | 0.17 | 0.01 | 0.01 | 0.00 | 0.00 | 100.00 |
| A | 0.01 | 12.41 | 84.86 | 2.32 | 0.27 | 0.09 | 0.03 | 0.01 | 100.00 |
| BBB | 0.00 | 0.29 | 12.35 | 81.07 | 4.97 | 1.08 | 0.13 | 0.11 | 100.00 |
| BB | 0.00 | 0.00 | 0.26 | 12.96 | 73.28 | 8.20 | 2.91 | 2.38 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 10.10 | 15.15 | 63.64 | 5.05 | 6.06 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.65 | 76.74 | 18.60 | 100.00 |
| Average Three-Year | | | | | | | | | |
| AAA | 96.82 | 3.01 | 0.10 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 5.35 | 91.08 | 3.28 | 0.26 | 0.01 | 0.02 | 0.00 | 0.00 | 100.00 |
| A | 0.01 | 18.28 | 78.00 | 3.13 | 0.40 | 0.12 | 0.03 | 0.02 | 100.00 |
| BBB | 0.00 | 0.57 | 17.79 | 73.25 | 6.36 | 1.58 | 0.24 | 0.21 | 100.00 |
| BB | 0.00 | 0.00 | 0.66 | 17.94 | 62.79 | 10.30 | 3.99 | 4.32 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 14.81 | 23.46 | 50.62 | 4.94 | 6.17 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.78 | 69.44 | 27.78 | 100.00 |
| Average Four-Year | | | | | | | | | |
| AAA | 96.47 | 3.42 | 0.04 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 7.85 | 88.36 | 3.57 | 0.21 | 0.01 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.01 | 24.26 | 71.23 | 3.80 | 0.43 | 0.19 | 0.04 | 0.05 | 100.00 |
| BBB | 0.00 | 0.85 | 22.99 | 66.16 | 7.22 | 1.90 | 0.54 | 0.34 | 100.00 |
| BB | 0.00 | 0.00 | 1.27 | 19.92 | 57.20 | 13.56 | 2.12 | 5.93 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 23.08 | 29.23 | 33.85 | 7.69 | 6.15 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.23 | 58.06 | 38.71 | 100.00 |
| Average Five-Year | | | | | | | | | |
| AAA | 95.78 | 4.09 | 0.09 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 9.33 | 86.25 | 4.13 | 0.27 | 0.01 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.01 | 27.53 | 67.37 | 4.23 | 0.51 | 0.26 | 0.04 | 0.05 | 100.00 |
| BBB | 0.00 | 1.16 | 26.61 | 60.69 | 8.03 | 2.28 | 0.64 | 0.60 | 100.00 |
| BB | 0.00 | 0.00 | 2.75 | 21.98 | 53.85 | 11.54 | 3.30 | 6.59 | 100.00 |
| B | 0.00 | 0.00 | 1.89 | 30.19 | 28.30 | 22.64 | 9.43 | 7.55 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.85 | 50.00 | 46.15 | 100.00 |
| Average 10-Year | | | | | | | | | |
| AAA | 93.80 | 6.09 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 20.24 | 75.35 | 4.18 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.03 | 45.32 | 48.37 | 4.87 | 0.93 | 0.26 | 0.16 | 0.06 | 100.00 |
| BBB | 0.00 | 3.48 | 37.19 | 42.54 | 11.82 | 1.74 | 0.87 | 2.36 | 100.00 |
| BB | 0.00 | 0.00 | 22.00 | 26.00 | 30.00 | 12.00 | 0.00 | 10.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 33.33 | 8.33 | 8.33 | 33.33 | 16.67 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.38 | 84.62 | 100.00 |

Source: Fitch.

Fitch U.S. Public Finance Transition Rates at the Modifier Level: 1999–2013 (Continued)

(%, Modifier Level)

| | AAA | AA+ | AA | AA- | A+ | A | A- | BBB+ | BBB | BBB- | BB+ | BB | BB- | B+ | B | B- | CCC to C | D | Total |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------|--------|
| Average Ten-Year | | | | | | | | | | | | | | | | | | | |
| AAA | 93.80 | 4.67 | 1.09 | 0.33 | 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 | 100.00 |
| AA+ | 43.36 | 42.83 | 5.66 | 5.84 | 1.77 | 0.53 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 24.91 | 37.13 | 27.74 | 6.90 | 2.55 | 0.28 | 0.35 | 0.07 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA- | 2.50 | 20.30 | 46.24 | 24.06 | 4.56 | 1.43 | 0.45 | 0.27 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A+ | 0.08 | 3.44 | 24.22 | 44.19 | 21.19 | 2.54 | 2.95 | 0.90 | 0.33 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 0.94 | 6.78 | 27.36 | 27.62 | 18.70 | 13.89 | 1.80 | 0.86 | 0.51 | 0.17 | 0.17 | 0.34 | 0.09 | 0.26 | 0.00 | 0.34 | 0.17 | 100.00 |
| A- | 0.00 | 0.00 | 1.37 | 15.98 | 25.55 | 20.90 | 19.26 | 6.69 | 3.14 | 3.55 | 1.37 | 1.23 | 0.27 | 0.00 | 0.55 | 0.00 | 0.14 | 0.00 | 100.00 |
| BBB+ | 0.00 | 0.00 | 0.00 | 4.50 | 11.11 | 21.32 | 19.82 | 23.12 | 10.81 | 4.20 | 3.30 | 0.60 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 100.00 |
| BBB | 0.00 | 0.00 | 1.01 | 3.36 | 6.71 | 12.08 | 14.09 | 17.45 | 14.43 | 11.07 | 7.05 | 2.68 | 5.03 | 0.00 | 2.01 | 0.67 | 1.34 | 1.01 | 100.00 |
| BBB- | 0.00 | 0.00 | 0.00 | 0.00 | 1.16 | 0.58 | 13.87 | 17.92 | 13.29 | 19.08 | 12.14 | 4.05 | 5.20 | 0.00 | 2.31 | 1.16 | 1.73 | 7.51 | 100.00 |
| BB+ | 0.00 | 0.00 | 0.00 | 0.00 | 7.14 | 14.29 | 7.14 | 0.00 | 0.00 | 14.29 | 0.00 | 14.29 | 0.00 | 7.14 | 0.00 | 14.29 | 0.00 | 21.43 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 0.00 | 6.67 | 3.33 | 6.67 | 0.00 | 13.33 | 23.33 | 6.67 | 23.33 | 6.67 | 0.00 | 0.00 | 3.33 | 0.00 | 6.67 | 100.00 |
| BB- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 33.33 | 0.00 | 0.00 | 0.00 | 0.00 | 16.67 | 0.00 | 16.67 | 0.00 | 33.33 | 0.00 | 0.00 | 0.00 | 100.00 |
| B+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.50 | 0.00 | 0.00 | 12.50 | 12.50 | 0.00 | 0.00 | 50.00 | 12.50 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 100.00 |
| B- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 100.00 |
| CCC to 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 | 15.38 | 84.62 | 100.00 |

Source: Fitch.

Fitch U.S. Public Finance Default Rates by Cohort

| (%, Modifier Level) | One-Year 2013 Cohort | Three-Year 2011 Cohort | Ten-Year 2004 Cohort |
|---------------------|-------------------------|---------------------------|-------------------------|
| AAA | 0.00 | 0.00 | 0.00 |
| AA+ | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 0.00 | 0.00 |
| AA- | 0.00 | 0.00 | 0.00 |
| A+ | 0.00 | 0.00 | 0.00 |
| A | 0.00 | 0.00 | 0.56 |
| A- | 0.00 | 0.00 | 0.00 |
| BBB+ | 0.00 | 0.00 | 0.00 |
| BBB | 0.00 | 0.00 | 0.00 |
| BBB- | 0.00 | 0.00 | 1.30 |
| BB+ | 0.00 | 6.25 | 7.69 |
| BB | 0.00 | 10.00 | 0.00 |
| BB- | 0.00 | 0.00 | 0.00 |
| B+ | 0.00 | 0.00 | 0.00 |
| B | 0.00 | 11.11 | 0.00 |
| B- | 0.00 | 0.00 | 33.33 |
| CCC to C | 30.00 | 0.00 | 33.33 |

Source: Fitch.

Fitch Education and Nonprofit Sector Transition Rates

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------------------------------|--------|--------|-------|-------|--------|--------|----------|--------|--------|
| One-Year: 2013 | | | | | | | | | |
| AAA | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 1.85 | 90.74 | 7.41 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 0.00 | 67.44 | 25.58 | 6.98 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Annual: 1999–2013 | | | | | | | | | |
| AAA | 99.49 | 0.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.65 | 98.05 | 1.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.18 | 5.29 | 92.42 | 2.12 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 2.61 | 89.86 | 6.38 | 1.16 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 3.33 | 93.33 | 3.33 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 80.00 | 20.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 100.00 |

Source: Fitch.

Fitch Healthcare Sector Transition Rates

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------------------------------|------|-------|-------|-------|-------|--------|----------|-------|--------|
| One-Year: 2013 | | | | | | | | | |
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 97.14 | 2.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 0.69 | 95.83 | 3.47 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 4.03 | 91.94 | 4.03 | 0.00 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 4.55 | 81.82 | 13.64 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 100.00 |
| Average Annual: 1999–2013 | | | | | | | | | |
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 97.99 | 2.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 1.16 | 95.41 | 3.43 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 2.29 | 93.58 | 3.47 | 0.52 | 0.00 | 0.13 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 3.60 | 89.60 | 5.60 | 0.80 | 0.40 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 10.34 | 81.03 | 3.45 | 5.17 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 83.33 | 16.67 | 100.00 |

Source: Fitch.

Fitch Healthcare Sector Average Cumulative Default Rates: 1999–2013

| (%) | One-Year | Two-Year | Three-Year | Four-Year | Five-Year |
|-------------------------------|----------|----------|------------|-----------|-----------|
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BBB | 0.13 | 0.27 | 0.45 | 0.66 | 0.91 |
| BB | 0.37 | 2.02 | 4.19 | 6.04 | 7.89 |
| B | 4.55 | 4.69 | 4.92 | 3.39 | 3.57 |
| CCC to C | 15.38 | 30.43 | 42.86 | 55.00 | 61.11 |
| Investment Grade | 0.05 | 0.11 | 0.17 | 0.26 | 0.36 |
| Speculative Grade | 2.19 | 4.48 | 7.07 | 9.20 | 11.06 |
| All Healthcare Sector Ratings | 0.22 | 0.46 | 0.72 | 0.95 | 1.17 |

Source: Fitch.

Fitch Tax Exempt Housing Sector Transition Rates

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------------------------------|-------|--------|--------|--------|--------|-------|----------|------|--------|
| One-Year: 2013 | | | | | | | | | |
| AAA | 98.97 | 1.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Annual: 1999–2013 | | | | | | | | | |
| AAA | 99.61 | 0.29 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 5.17 | 94.30 | 0.53 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 0.36 | 99.16 | 0.36 | 0.12 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 1.15 | 0.00 | 96.55 | 1.15 | 1.15 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 6.67 | 93.33 | 0.00 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 50.00 | 50.00 | 0.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Source: Fitch.

Fitch Utilities/Transportation Sector Transition Rates

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------------------------------|--------|-------|-------|-------|-------|-------|----------|------|--------|
| One-Year: 2013 | | | | | | | | | |
| AAA | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.57 | 97.70 | 1.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 1.48 | 97.04 | 1.48 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 4.76 | 90.48 | 4.76 | 0.00 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 20.00 | 80.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Annual: 1999–2013 | | | | | | | | | |
| AAA | 98.43 | 1.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 1.86 | 96.25 | 1.80 | 0.07 | 0.03 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 6.15 | 93.17 | 0.49 | 0.06 | 0.12 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.32 | 6.41 | 90.87 | 1.60 | 0.64 | 0.16 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 8.33 | 86.11 | 4.17 | 1.39 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 11.11 | 0.00 | 88.89 | 0.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 100.00 |

Source: Fitch.

Fitch Tax-Supported Transition Rates

| (%) | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|----------------------------------|-------|-------|-------|-------|-------|--------|----------|-------|--------|
| One-Year: 2013 | | | | | | | | | |
| AAA | 97.00 | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.35 | 97.79 | 1.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 2.04 | 94.39 | 2.81 | 0.77 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 4.60 | 90.80 | 4.60 | 0.00 | 0.00 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 5.56 | 94.44 | 0.00 | 0.00 | 0.00 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.00 | 75.00 | 100.00 |
| Average Annual: 1999–2013 | | | | | | | | | |
| AAA | 98.25 | 1.70 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 1.35 | 96.98 | 1.61 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 8.16 | 90.31 | 1.30 | 0.16 | 0.04 | 0.02 | 0.00 | 100.00 |
| BBB | 0.00 | 0.06 | 11.24 | 86.50 | 1.77 | 0.37 | 0.06 | 0.00 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 17.07 | 73.17 | 3.66 | 4.88 | 1.22 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 4.00 | 12.00 | 56.00 | 24.00 | 4.00 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 23.53 | 58.82 | 17.65 | 100.00 |

Source: Fitch.

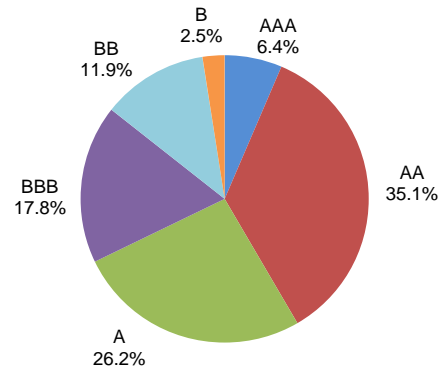
Fitch Tax-Supported Average Cumulative Default Rates: 1999–2013

| (%) | One-Year | Two-Year | Three-Year | Four-Year | Five-Year |
|----------------------------------|-----------------|-----------------|-------------------|------------------|------------------|
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| A | 0.00 | 0.01 | 0.04 | 0.07 | 0.08 |
| BBB | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 |
| BB | 1.15 | 5.80 | 7.14 | 6.67 | 0.00 |
| B | 3.70 | 9.52 | 5.56 | 7.14 | 7.14 |
| CCC to C | 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Investment Grade | 0.00 | 0.00 | 0.02 | 0.03 | 0.05 |
| Speculative Grade | 3.62 | 5.61 | 5.81 | 5.63 | 1.64 |
| All Tax-Supported Sector Ratings | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 |

Source: Fitch.

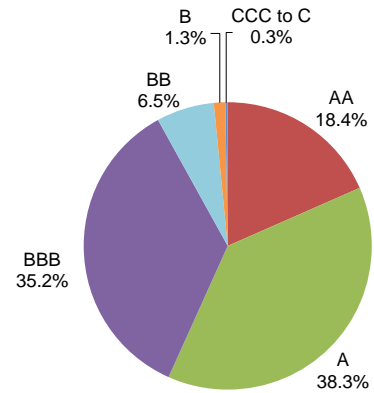
Fitch U.S. Public Finance Rating Mix by Sector — 2013 Year End

Education/Nonprofit Rating Mix



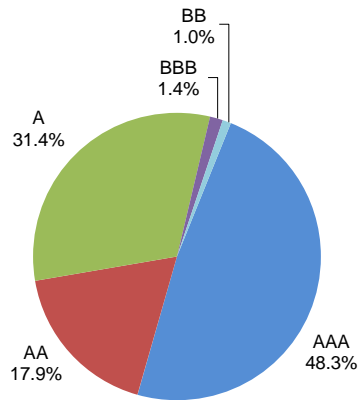
Source: Fitch.

Healthcare Rating Mix



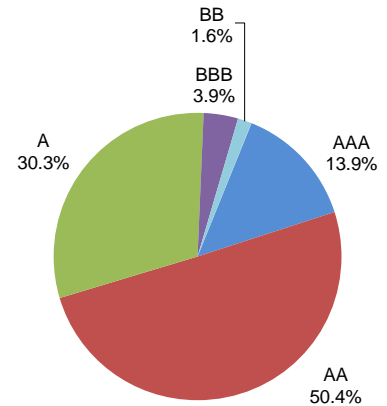
Source: Fitch.

Tax-Exempt Housing Rating Mix



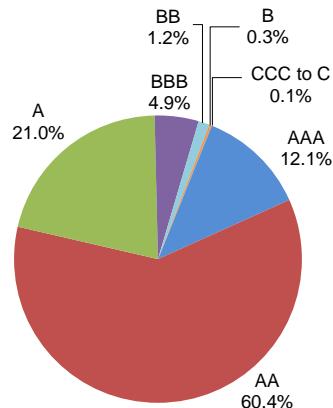
Source: Fitch.

Utilities/Transportation Rating Mix



Source: Fitch.

Tax-Supported Rating Mix



Source: Fitch.

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