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The U.S. Municipal Bond Rating Scale:

Mapping to the Global Rating Scale And Assigning Global Scale Ratings to Municipal Obligations

Product of Moody's Public Finance Credit Committee[1]

Summary Opinion

To improve the transparency of U.S. long-term municipal bond ratings, Moody's is implementing a new analytical approach for mapping these ratings to the global scale used to rate all bonds outside of the U.S. public finance market. We are also expanding the availability of global scale ratings to include taxable municipal transactions sold both inside and outside the U.S., and to municipal bond sectors beyond tax-backed and water/sewer debt, such as healthcare, transportation, electric power, higher education, and certain subsectors of municipal housing.

In recent years, the lines separating the U.S. municipal market from other global markets have become increasingly blurred as growing numbers of "crossover" buyers invest in municipal bonds for various reasons. The market overlap is caused partly by U.S. municipalities issuing more debt in the taxable market, and partly by global investors who may not be subject to U.S. income taxes but are nevertheless purchasing municipal bonds for portfolio diversification and other purposes not linked to the debt's tax-exempt status.

In response to these developments, and in an effort to provide greater transparency about the meaning of our ratings, Moody's has spent the past five years refining our analytical approach for expressing the relationship between the U.S. municipal scale and the global rating scale. In our November 2002 publication, "Moody's U.S. Municipal Bond Rating Scale," we discussed the existence of a separate municipal bond rating scale that takes account of the much lower risk profile of the U.S. municipal sector as compared to the corporate sector. In April 2003, we announced that we would begin assigning cross-scale ratings called corporate equivalent ratings (CERs) to cross-border taxable transactions and obligations under swaps, for credits supported by broad based taxes and water and/or sewer revenues. Since then, we have assigned CERs to seven such obligations (listed in Appendix A).

This report presents our new approach to mapping from the municipal rating scale to the global scale. Our new methodology uses idealized municipal default rates by rating category, and a set of average loss severities upon default for each municipal sector. These default rates and loss severities are based on a combination of our analysis of historical defaults and near-defaults of municipal bonds, and our expectation of how various types of bonds are likely to perform in the future. The product of the default rate and the loss severity results in an expected loss value for each rating by sector. We then use the expected loss value of the municipal rating to map to its equivalent rating on the global scale.

1. *This report was sponsored by Moody's Public Finance Credit Committee, which sets policies that govern the rating process in Moody's Public Finance Group. The Committee was appointed by Moody's Credit Policy Committee to promote transparency and consistency in Public Finance rating practices. The membership of the Committee includes senior managers and analysts in the Public Finance Group, as well as representatives of Moody's Corporate, Structured Finance, and Credit Policy groups. For additional information on Moody's Credit Policy function, please email cpc@moodys.com.*

We will now use the term "**Global Scale Rating**" (GSR) instead of "Corporate Equivalent Rating" (CER) to refer to ratings of U.S. municipal obligations on the global scale. We are making this change because Moody's uses the global scale not just for corporate ratings, but for financial institution, sovereign and structured finance ratings internationally and for all subsovereign ratings outside the United States. We will continue to assign GSRs only upon the request of the issuer or with the issuer's consent, and only for obligations with a published rating on Moody's municipal rating scale.

Because many municipal investors and issuers place a high value on the fine gradations of risk provided by the municipal rating scale, Moody's will continue to use this scale for our core U.S. municipal ratings. At the same time, the metrics used in deriving global scale ratings will enable market participants to understand better the quantitative relationship between the municipal and global scales. Moody's will use these metrics in rating collateralized debt obligations (CDO) comprised of municipal obligations, and in analyzing the municipal exposures of financial guarantors (bond insurance companies) and managed funds. They will also be employed to analyze the U.S. municipal risks of commercial banks and other rated entities, and in the near future will be used when assigning joint-default analysis (JDA) ratings to obligations that have support from both a municipality and a letter-of-credit bank or other entity that is rated on the global scale.

To minimize the potential for confusion between Moody's U.S. municipal scale ratings and global scale ratings, we intend to implement a "U.S. municipal scale flag" that we will attach to all ratings on the municipal scale. With such a flag in place, market participants will be able to assume that any rating that does not display the flag is rated on the global scale. Tax-exempt bonds that have historically been rated on the global scale, including bonds supported by financial guarantors, letter of credit banks and other corporate guarantors, as well as certain housing, student loan and tobacco settlement bonds, will not display the municipal scale flag. Our short-term municipal ratings will also not display the flag, as these ratings are already calibrated to the global scale.

Meaning of U.S. Municipal Ratings

Unlike Moody's global scale ratings, which measure "expected loss" (default probability times loss given default), Moody's long-term municipal ratings measure the intrinsic ability and willingness of an entity to pay its debt service. In the investment grade categories, the municipal rating measures distance to distress – how likely an entity is to reach such a weakened financial condition that extraordinary support is needed in order to avert default. This extraordinary support typically is provided by another entity, usually a higher level of government, or by means of voter-enacted additions to governmental powers. Moody's considers extraordinary support to include any form of financial, legal or regulatory relief – *beyond routine or regular forms of ongoing support* – that is provided by an external entity or by the voters to assist a distressed municipal obligor in meeting its financial obligations. Routine support, such as regular operating subsidies from a state to a public university or school district, is incorporated into municipal ratings. The municipal rating also incorporates actions within an issuer's own power such as legislatively enacted tax increases, one-shot revenue sources, asset sales, and other similar measures.

The risk of default rises and the need for extraordinary support increases sharply when the rating falls below investment grade, and at that point the severity of potential loss becomes a more meaningful component of the rating. At rating levels below Baa3, Moody's municipal ratings do incorporate the probability of receiving extraordinary support. Credits that have not received extraordinary support but have some degree of fiscal stress, or have already received extraordinary support to avoid a default will generally be rated in the Ba or B categories, depending on the degree of fiscal distress and the likelihood that support will continue. If extraordinary support becomes a recurring, institutionalized feature of the credit situation, such as following the establishment of an emergency oversight board, the threat of default will be diminished and the rating may remain in the investment grade part of the scale. The rating levels of Caa and below will denote distressed credits that are in or near default, because extraordinary support is insufficient to prevent a default or has not been provided.

Moody's uses a joint-default analysis (JDA) methodology for rating corporate, financial institution, subsovereign governments outside the U.S., and other obligors that may receive support from another entity in order to avoid default. For more information about JDA, please refer to "The Incorporation of Joint-Default Analysis into Moody's Corporate, Financial and Government Rating Methodologies" dated February 2005. Moody's has decided not to apply JDA to municipal ratings at this time. However, when Moody's transitions to apply its updated JDA methodology to letter of credit transactions that have joint support from a bank and a municipal credit, we intend to use the global scale ratings of municipal bonds as the rating input for such municipal credits.

Three recent examples vividly illustrate the provision of extraordinary support by a senior level of government in the U.S. municipal market. The first and most prominent is enactment of special federal and state measures to aid the Gulf Coast municipalities affected by Hurricane Katrina. A second illustration is the support that Aaa-rated Westchester County, New York has provided to the Westchester County Health Care Corporation (WCHHC, debt rated Ba2), a public benefit corporation spun off from the county in 1997 to provide essential health care services to residents and designed to operate independently of county subsidy. When WCHHC later experienced severe financial stress, Westchester County did not let the hospital default on its debt, but rather decided to provide direct financial subsidies to cover operating deficits, as well as funding of capital projects at the hospital. A third example of extraordinary support is the special line item appropriation by the Aa3-rated State of Connecticut to benefit the financially troubled St. Mary's Hospital in Waterbury (debt rated Ba3).

Moody's Definition of Default

Moody's definition of default includes three types of credit events:

1. A missed or delayed disbursement of interest and/or principal;
2. Bankruptcy, administration, legal receivership, or other legal blocks (perhaps by regulators) to the timely payment of interest and/or principal; or
3. A distressed exchange where: (i) the obligor offers debt holders a new security or package of securities that amount to a diminished financial obligation (such as debt with a lower coupon or par amount, lower seniority, or longer maturity); or (ii) the exchange had the apparent purpose of helping the obligor avoid default.

The definition of a default is intended to capture events that change the relationship between debt holders and the debt issuer from the relationship which was originally contracted and which subjects the bondholder to an economic loss. Technical defaults (covenant violations, etc.) are not included in Moody's definition of default. Secondary and tertiary defaults by a single obligor are reported only after the initial default event is believed to have been cured. This is to ensure that multiple defaults related to a single episode of credit distress are not over-counted.

Defaulted obligations that are enhanced by bond insurance or a letter of credit are not counted as defaults if they continue to be paid due to the credit enhancement.

General Obligation and Water/Sewer Sectors Have Superior Risk Profile

Since 1970, defaults of Moody's-rated general obligation (GO) and water and/or sewer (water/sewer) revenue municipal bonds have been extremely rare. Municipalities in severe financial distress usually receive some form of extraordinary support from another entity prior to a payment default. The Gulf Coast communities most severely affected by Hurricane Katrina provide a recent illustration of the occurrence of extraordinary support. Most of these municipalities are likely to avoid default because they have received, or will receive, extraordinary assistance from federal and state levels of government. Default risk for state and local governmental issuers has also diminished over time, as many high profile municipal defaults and near-defaults have led to governmental reforms that have reduced the overall likelihood of default for municipal borrowers. The New York City financial crisis of the 1970's led to the concept of a state-mandated oversight board that has become a common approach to fiscally stressed local units, and to the widespread adoption of Generally Accepted Accounting Principles by state and local governments. In the mid-1990s, the Orange County bankruptcy and other liquidity problems, stemming from certain investments in derivatives and Collateralized Mortgage Obligations, caused many states to tighten controls on investment of state and local funds.

In our November 2002 report, "Moody's Municipal Bond Rating Scale," Moody's provided guidance on the relationship between GO and water/sewer revenue municipal bond ratings and global scale ratings. We indicated that large, fiscally sound issuers in these sectors would likely map to a rating of Aaa or Aa on the global rating scale. In these sectors, issuers' taxing authority and monopolistic rate-setting powers generally allow them to maintain a healthy distance from distress. Even in the rare situations where a financially stressed issuer has reached the precipice of insolvency, the near-complete absence of defaults by Moody's-rated obligations over the past 37 years provides overwhelming evidence that distressed situations are almost always resolved prior to a default occurring.

Despite this strong track record, the form and timing of extraordinary support is still not easily predictable. Support for a municipality under stress typically results from political and policy negotiations that are not finalized until there is considerable concern that a payment default on debt service may occur. Therefore, in the past Moody's has not restricted its GO and water/sewer ratings on the municipal scale to the lowest risk rating categories of Aaa or Aa, but rather has employed the full investment grade rating scale from Aaa to Baa3, as well as occasional ratings below investment grade for credits in severe distress.

In light of the strong performance in the GO and water/sewer sectors relative to other municipal bonds, we have decided to recalibrate our municipal scale ratings in these sectors. Credits that are not experiencing stress will generally be rated A3 or higher, credits experiencing some stress will be rated in the Baa category, and credits that are experiencing significant stress and have a growing probability of default in the absence of extraordinary support will be rated below investment grade. This recalibration, which will occur over time, is likely to result in the upgrade of Baa-rated credits that are not currently experiencing stress, potentially up to 50% of GO and water/sewer bonds in the Baa category, into the A category. This transition will result in a more consistent application of the municipal scale across all municipal sectors, and therefore in a more accurate translation of these ratings from the municipal scale to the global scale.

Beyond Moody's 2002 Municipal Default Study: Risk Profile of Sectors Other than General Obligation and Water/Sewer

Many municipal credits are not backed by a GO or a water/sewer revenue pledge. These include issues backed by:

- special or limited taxes or lease pledges of municipal government issuers;
- public enterprises, such as airports, hospitals, housing agencies, transportation authorities, public universities, and public power systems;
- not-for-profit corporations such as private universities and hospitals;
- individual stand-alone financings, such as local multi-family housing, stadiums, and start-up toll roads.

Because these credits lack unlimited taxing power, usually depend to some degree on competitive market revenues, and have experienced some defaults, their ratings currently have a greater concentration in the lower rating categories (see Figure 1). In the future, Moody's will continue to use the full range of investment grade ratings, including the Baa category, for credits in these sectors that are not experiencing stress. Credits that are undergoing significant stress will typically be rated below investment grade.

Figure 1: Municipal Scale Rating Distribution for Selected Sectors[2]

Sector	Aaa	Aa	A	Baa	Below Baa
State General Obligation	15%	80%	4%	0%	0%
Local General Obligation	3%	23%	55%	19%	0% [3]
Airports	0%	13%	74%	14%	0%
Public Higher Education	2%	27%	67%	5%	0%
Hospitals	0%	13%	43%	31%	10%

Whereas only one Moody's-rated GO or water/sewer obligation experienced a payment default since 1970, and it quickly recovered in full, 40 other municipal obligations rated by Moody's have defaulted and, in most cases, experienced losses during that time. These defaults occurred across a variety of sectors including non-GO debt of local governments (4 defaults), public enterprises (2 defaults), not-for-profit corporations (18 defaults) and housing finance (16 defaults). Issuers in these sectors are more susceptible to defaults because they are exposed to market competition and lack the power to levy taxes or the monopolistic rate-setting power of essential service utilities. Also, while some financially stressed entities in these sectors have received extraordinary governmental support to avert default, due to their perceived essential role in the community, in other cases their roles have not been viewed as essential by senior levels of government, and support has not been provided. Figure 2 provides a list of all Moody's-rated defaults since 1970; further detail on the individual defaults is presented in Appendix B.

We have not included data on defaults of non-Moody's rated debt, because our primary goal is to analyze the performance of Moody's municipal ratings and their relation to Moody's global scale ratings. However, we have studied non-rated defaults and near-defaults to learn more about the performance of credits under stress including both default frequency and loss severity. We believe that our results are not skewed by the exclusion of unrated debt, most of which would be rated below investment grade, where our default rates increase sharply. We also realize that the mere presence of a rating can lower the incidence of default, because an issuer and its senior levels of government may provide additional protections in the course of the rating process in order to achieve an investment grade rating, and may take actions to avoid default on rated debt that they would not take for unrated debt. Therefore, market participants should exercise caution in applying the default rates presented in this report to debt that has not been rated by Moody's, since the incentives to avoid default may be weaker.

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2. *For obligors with multiple ratings on different security pledges (senior, subordinated, etc.), the percentages are based on the obligor's highest rating.*
3. *0.003% of local government GO's are rated below Baa.*

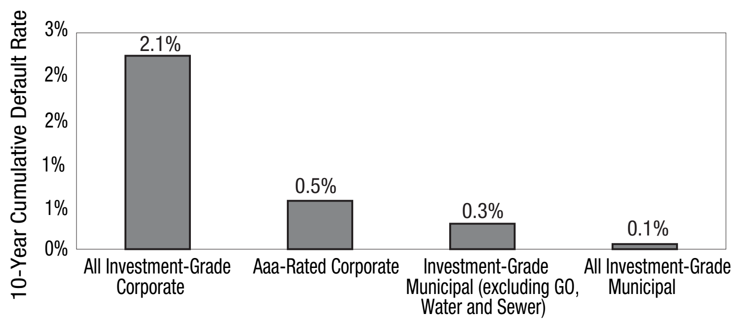
Figure 2. Moody's-Rated Municipal Defaults 1970-2006, By Sector

Sector	Sub-Sector and Number of Defaults	Defaults (in order of default date)
GENERAL OBLIGATION AND WATER/ SEWER ENTERPRISE: 1 default	**General Obligation: 1 default** 1970-2000: 1 default 2001-2006: 0 defaults	**1970-2000:** 1. Baldwin County (AL) (payment default was cured within 15 days)
STATE AND LOCAL GOVERNMENT AND PUBLIC ENTERPRISES-OTHER 6 defaults	**Non-GO Obligations of State and Local Governments: 4 defaults** 1970-2000: 3 defaults 2001-2006: 1 default	**1970-2000:** 1. Belfield– Special Assessment Bonds (ND) 2. Polk County – Sports Facility Revenue Bonds (IA) 3. Orange County – Pension Obligation (CA) **2001-2006:** 4. Cicero Local Development Corporation – Annual Lease Appropriation Bonds Series 2001A (NY)
	Electric Power: 2 defaults 1970-2000: 2 defaults 2001-2006: 0 defaults	**1970-2000:** 1. Washington Public Power Supply System (now Energy Northwest) (WA) 2. Vanceburg Electric System – Greenup Hydro Project (KY)
NOT-FOR-PROFIT CORPORATIONS 18 defaults	**Private Universities and Other Not-for-Profits: 1 default** 1970-2000: 1 defaults 2001-2006: 0 defaults	**1970-2000:** 1. Marine Military Academy (TX)
	Not-for Profit Healthcare: 17 defaults 1970-2000: 10 defaults 2000-2006: 7 defaults	**1970-2000:** 1. Midlands Community Hospital (NE) 2. Hilton Head Hospital (SC) 3. Choate-Symmes Hospitals (MA) 4. Downtown Hospital Association, d/b/a Downtown General Hospital (TN), 5. Metropolitan Hospital (PA) 6. Northwest General Hospital (MI) 7. Michigan Health Care Corporation (MI) 8. Allegheny Health and Education Research Foundation (PA) 9. Boston Regional Medical Center (MA) 10. Greater Southeast Healthcare System (MD) **2001-2006:** 11. Citizens General Hospital (PA) 12. Genesee Hospital (NY) 13. Metro Health Center (PA) 14. St. Francis Medical Center (PA) 15. Mercy Hospital and Medical Center (IL) 16. National Benevolent Association (MO) 17. Fort Worth Osteopathic Hospital (TX)
HOUSING FINANCE 16 defaults	**State and Local Housing (Unaffiliated): 16 defaults** 1970-2000: 2 defaults 2001-2006: 14 defaults	**1970-2000:** 1. Connecticut Housing Authority Mortgage Revenue Bonds (New Haven FHA Insured Projects) (CT) 2. Tarrant County Housing Finance Corporation (TX) **2001-2006:** 3. Nebraska Investment Finance Authority – Section 8 Moderate Rehabilitation Program, Yorkshire Development Project (NE) 4. Indianapolis Economic Development Authority, Phoenix, IN (Meadows Project – Section 8) (IN) 5. Travis County Housing Finance Corporation – Lakeview Apartments (TX) 6. Tarrant County Housing Finance Corporation – Fair Oaks Apartments (TX) 7. Magnolia Park Housing Foundation, LLC – Magnolia Park Apartments (GA) 8. Tarrant County Housing Finance Corporation – Westridge Apartments (TX) 9. Maricopa County IDA – Bay Club at Mesa Cove Project (AZ) 10. Capital Trust Agency – River Bend Apartments (FL) 11. Tarrant County Housing Finance Corporation – Crossroads Apartments (TX) 12. South Carolina Jobs-Economic Development Authority – Legacy at Anderson Project (SC) 13. Texas State Affordable Housing Corporation – Ashton Place and Woodstock Apartments Project (TX) 14. American Opportunities Foundation – River Falls Project (CO) 15. Lee County Industrial Development Authority – Legacy at Lehigh Project (FL) 16. Greenville Housing Finance LLC – Cameron Crossing I and II Projects (CA)
TOTAL: 41 defaults	**1970-2000: 19 defaults 2001-2006: 22 defaults**	

Because there is a greater history of payment defaults in the sectors outside of GO and water/sewer, there is sometimes the inclination to assume that these sectors have default and loss experiences comparable to corporate credits at the same rating level. However, our analysis clearly shows that the default rates experienced in these sectors are significantly lower than those experienced by Moody's-rated corporate bonds, and are far closer to the rates for other municipal bonds than for corporates (see Figure 3). In fact, **the 10-year cumulative default rate for all investment grade Moody's-rated municipal bond issuers, excluding GO and water/sewer revenue bonds, stands at 0.2883%, which is lower than the 0.0.5208% rate for Aaa-rated corporate bonds**. Indeed, only in the Baa and below rating categories do municipal bond issuers (excluding GO and water/sewer) have a default rate that is higher than the corporate Aaa rate.

Figure 3. Comparative 10-Year Default Rates of Moody's Investment Grade Bonds

Default Rates of Investment Grade Municipals (Excluding GO, Water/Sewer) are Far Below Corporate Defaults Rates



Default Rates of Investment Grade Municipals (Excluding GO and Water & Sewer) are Far Below Corporate Defaults Rates

Figures 4 through 6 provide the 1970-2006 cumulative default rates for Moody's rated Corporate (Figure 4), Municipal (Figure 5), and Municipal (excluding GO and Water/Sewer) debt (Figure 6). Due to the relative infrequency of municipal defaults, there are some anomalies in the municipal default statistics, discussed below on page 9 under "Idealized Probability of Default Rates for Municipal Bonds."

Figure 4. Average Cumulative Issuer-Weighted Global Corporate Default Rates, Moody's-Rated Only, 1970-2006[4]

Time Horizon (in years)

Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.0000%	0.0000%	0.0000%	0.0262%	0.0995%	0.1725%	0.2508%	0.3346%	0.4243%	0.5208%
Aa	0.0078%	0.0187%	0.0423%	0.1060%	0.1774%	0.2600%	0.3432%	0.4158%	0.4637%	0.5225%
A	0.0207%	0.0950%	0.2205%	0.3443%	0.4720%	0.6141%	0.7588%	0.9249%	1.1054%	1.2870%
Baa	0.1815%	0.5063%	0.9295%	1.4342%	1.9384%	2.4515%	2.9592%	3.4515%	4.0164%	4.6366%
Ba	1.2049%	3.2192%	5.5685%	7.9575%	10.2153%	12.2376%	14.0052%	15.7072%	17.3910%	19.1176%
B	5.2361%	11.2958%	17.0435%	22.0544%	26.7936%	30.9811%	34.7708%	37.9836%	40.9239%	43.3426%
Caa-C	19.4758%	30.4940%	39.7172%	46.9039%	52.6218%	56.8095%	59.9378%	63.2672%	66.2791%	69.1778%
Invt-Grade	0.0685%	0.2052%	0.3961%	0.6202%	0.8483%	1.0855%	1.3209%	1.5573%	1.8143%	2.0885%
Speculative-Grade	4.5655%	9.0684%	13.3030%	16.9809%	20.2886%	23.1009%	25.5044%	27.6095%	29.5639%	31.3680%
All Rated	1.4815%	2.9337%	4.2752%	5.4196%	6.4137%	7.2496%	7.9578%	8.5749%	9.1545%	9.6999%

4. *Figure 4 provides cumulative default rates for all corporate debt obligations, by rating category. For instance, obligations rated in the Baa category had a default rate of of 0.1815% within one year of the initial rating date, 0.5063% within two years, etc.*

Figure 5. Average Cumulative Issuer-Weighted Municipal Default Rates, Moody's-Rated Only 1970-2006[5]

Time Horizon (in years)

Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Aa	0.0327%	0.0348%	0.0370%	0.0396%	0.0424%	0.0455%	0.0490%	0.0528%	0.0570%	0.0617%
A	0.0097%	0.0119%	0.0154%	0.0193%	0.0217%	0.0250%	0.0272%	0.0296%	0.0314%	0.0323%
Baa	0.0635%	0.0725%	0.0807%	0.0897%	0.0974%	0.1048%	0.1130%	0.1205%	0.1256%	0.1349%
Ba	1.4152%	1.5590%	1.6243%	1.6986%	1.7836%	1.9787%	2.2084%	2.4095%	2.5647%	2.6547%
B	5.8550%	7.7081%	9.3205%	10.6397%	11.5998%	11.8625%	11.8625%	11.8625%	11.8625%	11.8625%
Caa-C	15.8449%	16.5785%	16.5785%	16.5785%	16.5785%	16.5785%	16.5785%	16.5785%	16.5785%	16.5785%
Invt.-Grade	0.0279%	0.0322%	0.0368%	0.0419%	0.0459%	0.0503%	0.0543%	0.0583%	0.0613%	0.0651%
Speculative-Grade	2.4189%	2.8044%	3.0773%	3.3252%	3.5371%	3.7392%	3.9281%	4.0922%	4.2181%	4.2906%
All Municipals	0.0491%	0.0572%	0.0645%	0.0720%	0.0779%	0.0840%	0.0896%	0.0950%	0.0989%	0.1032%

Figure 6. Average Cumulative Issuer-Weighted Municipal Default Rates, Moody's-Rated Only, Excluding GO and Water/Sewer Revenue, 1970-2006[6]

Time Horizon (in years)

Rating	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
Aa	0.1503%	0.1573%	0.1654%	0.1747%	0.1855%	0.1979%	0.2122%	0.2286%	0.2477%	0.2747%
A	0.0422%	0.0512%	0.0653%	0.0811%	0.0912%	0.1053%	0.1148%	0.1255%	0.1334%	0.1386%
Baa	0.3213%	0.3604%	0.3966%	0.4374%	0.4732%	0.5080%	0.5472%	0.5843%	0.6096%	0.6671%
Ba	6.2150%	6.5634%	6.7303%	6.9309%	7.1734%	7.7607%	8.4735%	9.1285%	9.6739%	10.2315%
B	17.4490%	21.5881%	25.4095%	28.7767%	31.4609%	32.2712%	32.2712%	32.2712%	32.2712%	32.2712%
Caa-C	22.8956%	23.8690%	23.8690%	23.8690%	23.8690%	23.8690%	23.8690%	23.8690%	23.8690%	23.8690%
Invt.-Grade	0.1268%	0.1434%	0.1621%	0.1831%	0.1998%	0.2186%	0.2362%	0.2540%	0.2675%	0.2883%
Speculative-Grade	8.7522%	9.6510%	10.3232%	10.9712%	11.5614%	12.1611%	12.7469%	13.2881%	13.7405%	14.1993%
All Muni's (excl. GO & Wtr/Swr)	0.2174%	0.2491%	0.2783%	0.3088%	0.3335%	0.3598%	0.3841%	0.4076%	0.4253%	0.4490%

Not-for-Profit Healthcare Rated on Municipal Scale

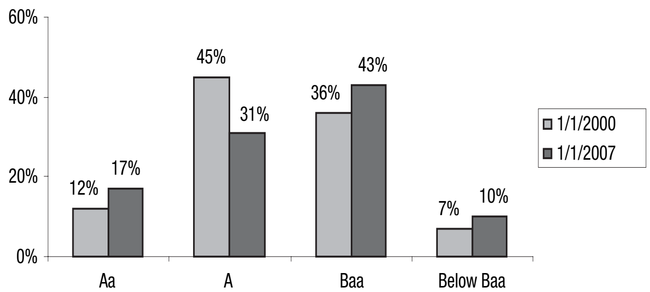
Since over 80% of the 41 Moody's-rated municipal defaults since 1970 are concentrated in the not-for-profit healthcare and housing sectors, an obvious question is whether these ratings are truly calibrated to the same rating scale as other municipal bonds. The answer to this question lies not only in the empirical default rates, but also in the fundamental characteristics of each sector.

In the not-for-profit healthcare sector, which had 17 Moody's-rated defaults over the past 37 years, there were numerous other instances (including the two cited above on page 2) in which default was avoided through support from a municipal or state government. While the public, not-for-profit and private sectors each have a role in providing healthcare services in the United States, there is a strong overarching governmental role in ensuring that essential healthcare services are available to the population. The decision to provide support to an individual troubled hospital credit depends on a constellation of factors including the proximity of alternative providers, type of population served by the hospital, and degree of political support to keep the hospital open.

5. *Figure 5 provides cumulative default rates for all municipal debt obligations, by rating category. For instance, obligations rated in the Baa category had a default rate of 0.0635% within one year of the initial rating date, 0.0725% within two years, etc.*
6. *Figure 6 provides cumulative default rates for municipal debt obligations (excluding general obligation and water & sewer revenue bonds), by rating category. For instance, obligations rated in the Baa category had a default rate of 0.3213% within one year of the initial rating date, 0.3604% within two years, etc.*

Due to the availability of governmental support in many cases, we have determined that not-for-profit healthcare bonds are properly rated on the municipal rating scale. However, healthcare ratings are likely to continue to be lower on average and more heavily distributed across the lower end of the municipal rating scale compared to other sectors. The proportion of healthcare credits rated below Baa3 has increased over time (as show in Figure 7), as the Balanced Budget Act of 1997 and worsening competitive conditions increased the financial stress in this sector and raised the number of defaults since 2000, reinforcing the somewhat higher vulnerability of certain obligors in this sector. Over the same period, many larger and higher rated issuers have achieved large gains in operating efficiencies and have picked up market share at the expense of smaller lower-rated issuers.

Figure 7. Not-for-Profit Healthcare Rating Distribution in 2000 and 2007[7]



Municipal Housing Sector Includes Credits Rated on Both Municipal and Global Scales

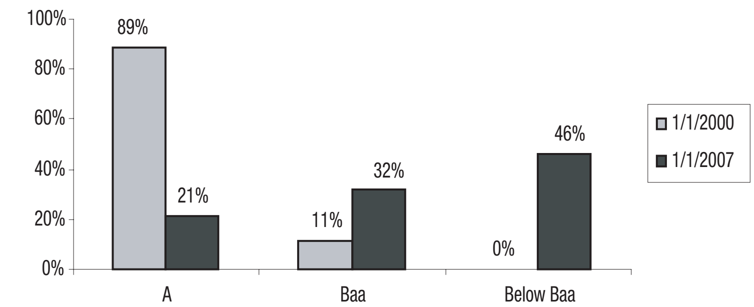
Municipal housing is a diverse sector that includes credits rated on both the municipal and the global scales. Issuers in the municipal housing sector include actively managed state and local housing finance agencies as well as passive conduit issuing authorities. The actively managed housing finance agencies clearly fit the profile of issuers rated on the municipal scale; even though many of their bonds are "limited obligations" that do not have legal recourse to the agencies' general funds, the agencies have demonstrated their intent to take actions in support of their managed debt. When a project within a state housing agency program has financial difficulties, the agency generally intervenes to work out the problem and prevent the non-performing project from adversely affecting the bond program and its rating. Similarly, while stand-alone privatized student housing transactions are issued by conduit issuers, these projects are directly or indirectly affiliated with the sponsoring institution of higher education, and are appropriately rated on the municipal scale.

The conduit housing sector includes a variety of stand-alone single-family and multifamily mortgage credits that do not have an interested or affiliated municipal sponsor. Many of these ratings are based on credit enhancement or mortgage insurance from U.S. government and government-sponsored enterprise programs, including the Federal Housing Administration (FHA), United States Department of Agriculture (USDA), Government National Mortgage Agency (Ginnie Mae), Federal National Mortgage Agency (Fanny Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac), and are therefore rated on the same scale as these enhancement providers, i.e. the global scale.

Other conduit, passively managed housing credits do not enjoy the support of these federal and government-sponsored agency enhancement programs. These include affordable housing bonds and tax credits, Section 8 subsidized housing, military housing, and whole loan local single family pools. Most of the housing defaults since 1970 have been concentrated in the affordable housing sector, and in none of these instances has a state or local government stepped in to provide support for a failing housing transaction. Because of the absence of expected support, and because these credits carry true real estate risk, it may be fair to suggest that these credits should be rated on the global rating scale. However, these bonds have traditionally been rated in the context of other municipal financings. In fact, the affordable housing and Section 8 sectors have experienced dramatic downgrades recently in response to their inability to achieve expected financial performance targets in the weak rental housing market of recent years, and relatively high incidence of default compared to other municipal credits (see Figure 8). Therefore, we have concluded that it is appropriate to continue rating these credits on the municipal rating scale.

7. *The increase in the proportion of Aa ratings reflects the merger and consolidation of many individual hospitals into larger, stronger systems during this timeframe.*

Figure 8. Affordable Housing Rating Distribution in 2000 and 2007[8]



Idealized Probability of Default Rates for Municipal Bonds

Moody's has developed a table of idealized Probability of Default (PD) rates, provided in Figure 9, which can be used to assign a quantitative value to the default risk of municipal ratings. The PD rates are based upon both historical data and Moody's prospective views on default rates in the municipal sector. The rates in our idealized municipal default table are considerably higher than actual defaults over the past 37 years for several reasons. We have taken account of historical default rates prior to 1970, albeit with a recognition that many legal and systematic protections for bondholders that are common today did not exist at that time. We also have considered that future periods may not enjoy the level of economic growth that we have had over the most recent 37-year period. In addition, our rates take into account the recent growth of many sectors such as not-for-profit organizations and municipal project financings, which do not have a long track record through multiple economic cycles and can deteriorate precipitously due to a combination of policy and market forces such as the healthcare sector experienced after 1997. For comparative purposes, Moody's idealized corporate default rates are provided in Figure 10. Please refer to Appendix C for a more detailed explanation of the derivation of the municipal idealized default table.

Figure 9. Moody's Municipal Idealized 10-Year Cumulative Probability of Default (PD) Rates[9]

Time Horizon (in years)

	1	2	3	4	5	6	7	8	9	10
Aaa	0.0001%	0.0002%	0.0007%	0.0018%	0.0029%	0.0040%	0.0052%	0.0066%	0.0082%	0.0100%
Aa1	0.0002%	0.0011%	0.0035%	0.0074%	0.0109%	0.0147%	0.0189%	0.0235%	0.0287%	0.0350%
Aa2	0.0005%	0.0027%	0.0086%	0.0156%	0.0226%	0.0296%	0.0369%	0.0449%	0.0545%	0.0665%
Aa3	0.0009%	0.0058%	0.0181%	0.0311%	0.0437%	0.0563%	0.0698%	0.0837%	0.1006%	0.1230%
A1	0.0018%	0.0117%	0.0370%	0.0598%	0.0826%	0.1044%	0.1284%	0.1518%	0.1813%	0.2214%
A2	0.0035%	0.0226%	0.0717%	0.1114%	0.1508%	0.1883%	0.2293%	0.2677%	0.3171%	0.3875%
A3	0.0142%	0.0549%	0.1318%	0.1976%	0.2672%	0.3331%	0.4063%	0.4758%	0.5563%	0.6588%
Baa1	0.0365%	0.1135%	0.2270%	0.3365%	0.4460%	0.5554%	0.6770%	0.7987%	0.9203%	1.0541%
Baa2	0.0772%	0.2133%	0.3767%	0.5446%	0.7171%	0.8941%	1.0938%	1.2934%	1.4704%	1.6338%
Baa3	0.1687%	0.4218%	0.6870%	0.9562%	1.2254%	1.4865%	1.7396%	1.9967%	2.2378%	2.4507%
Ba1	0.3402%	0.7900%	1.2241%	1.6425%	2.0649%	2.4442%	2.7610%	3.0856%	3.3984%	3.6761%
Ba2	0.6372%	1.4173%	2.1158%	2.7775%	3.4351%	3.9906%	4.3705%	4.7626%	5.1670%	5.5141%
Ba3	1.3161%	2.5807%	3.6860%	4.5852%	5.5547%	6.3182%	6.8474%	7.3579%	7.8263%	8.2712%
B1	2.6155%	4.6833%	6.4717%	7.7403%	9.0089%	9.9981%	10.6911%	11.3059%	11.8703%	12.4068%
B2	4.8989%	7.9846%	10.6393%	12.4045%	14.1698%	15.4971%	16.4276%	17.2076%	17.9397%	18.6102%
B3	9.2945%	13.2858%	16.8212%	19.2288%	21.6364%	23.3561%	24.7959%	26.0597%	27.0195%	27.9154%
Caa1	14.2411%	19.0362%	23.4642%	26.6105%	29.7525%	31.9261%	33.9078%	35.7690%	37.4198%	39.0815%
Caa2	21.8856%	27.3571%	32.8285%	36.9362%	41.0356%	43.7713%	46.5070%	49.2427%	51.9784%	54.7141%
Caa3	48.3995%	54.1123%	59.2770%	62.8763%	66.2737%	68.4472%	70.5537%	72.5992%	74.5886%	76.5998%

8. *Rating of highest-rated tranche for multi-tranche transactions.*
9. *Figure 9 provides proposed idealized cumulative probability of default (PD) rates for municipal debt obligations, by rating category. For instance, municipal obligations rated in the Ba1 category have an idealized PD of 3.6761% within ten years of the initial rating date.*

Figure 10. Moody's Corporate Idealized 10-Year Cumulative Probability of Default (PD) Rates[10]

Time Horizon (in years)

	1	2	3	4	5	6	7	8	9	10
Aaa	0.0001%	0.0002%	0.0007%	0.0018%	0.0029%	0.0040%	0.0052%	0.0066%	0.0082%	0.0100%
Aa1	0.0006%	0.0030%	0.0100%	0.0210%	0.0310%	0.0420%	0.0540%	0.0670%	0.0820%	0.1000%
Aa2	0.0014%	0.0080%	0.0260%	0.0470%	0.0680%	0.0890%	0.1110%	0.1350%	0.1640%	0.2000%
Aa3	0.0030%	0.0190%	0.0590%	0.1010%	0.1420%	0.1830%	0.2270%	0.2720%	0.3270%	0.4000%
A1	0.0058%	0.0370%	0.1170%	0.1890%	0.2610%	0.3300%	0.4060%	0.4800%	0.5730%	0.7000%
A2	0.0109%	0.0700%	0.2220%	0.3450%	0.4670%	0.5830%	0.7100%	0.8290%	0.9820%	1.2000%
A3	0.0389%	0.1500%	0.3600%	0.5400%	0.7300%	0.9100%	1.1100%	1.3000%	1.5200%	1.8000%
Baa1	0.0900%	0.2800%	0.5600%	0.8300%	1.1000%	1.3700%	1.6700%	1.9700%	2.2700%	2.6000%
Baa2	0.1700%	0.4700%	0.8300%	1.2000%	1.5800%	1.9700%	2.4100%	2.8500%	3.2400%	3.6000%
Baa3	0.4200%	1.0500%	1.7100%	2.3800%	3.0500%	3.7000%	4.3300%	4.9700%	5.5700%	6.1000%
Ba1	0.8700%	2.0200%	3.1300%	4.2000%	5.2800%	6.2500%	7.0600%	7.8900%	8.6900%	9.4000%
Ba2	1.5600%	3.4700%	5.1800%	6.8000%	8.4100%	9.7700%	10.7000%	11.6600%	12.6500%	13.5000%
Ba3	2.8100%	5.5100%	7.8700%	9.7900%	11.8600%	13.4900%	14.6200%	15.7100%	16.7100%	17.6600%
B1	4.6800%	8.3800%	11.5800%	13.8500%	16.1200%	17.8900%	19.1300%	20.2300%	21.2400%	22.2000%
B2	7.1600%	11.6700%	15.5500%	18.1300%	20.7100%	22.6500%	24.0100%	25.1500%	26.2200%	27.2000%
B3	11.6200%	16.6100%	21.0300%	24.0400%	27.0500%	29.2000%	31.0000%	32.5800%	33.7800%	34.9000%
Caa1	17.3816%	23.2341%	28.6386%	32.4788%	36.3137%	38.9667%	41.3854%	43.6570%	45.6718%	47.7000%
Caa2	26.0000%	32.5000%	39.0000%	43.8800%	48.7500%	52.0000%	55.2500%	58.5000%	61.7500%	65.0000%
Caa3	50.9902%	57.0088%	62.4500%	66.2420%	69.8212%	72.1110%	74.3303%	76.4853%	78.5812%	80.7000%

Loss Given Default (Severity of Loss) for Municipal Sectors

Because of the varying potential for recovery following default, Moody's expects the average loss given default (LGD) to vary across the sectors in municipal finance. Actual experience indicates that the average LGD for GO and water/sewer bonds should be extremely low, and that average LGDs for the municipal sectors outside the GO and water/sewer sectors lie somewhere between the corporate loss experience (which averages 50% to 55%) and the near-zero losses resulting from GO or water/sewer sector defaults.

The legal enforceability of the GO pledge ensures a high rate of recovery for GO bonds. Since Chapter 9 of the Bankruptcy Code does not provide for the 'liquidation' of a municipality or instrumentality of the state, it is extremely likely that the bondholders of GO unlimited tax bonds or water/sewer revenue bonds would enjoy a full or nearly full recovery of any defaulted bond payments over time. This is due to the need for renewed capital market access by the issuer, and likely resumption of debt service payments made from government tax revenues or service fees received by the defaulting bond issuer. Municipalities provide essential public services and cannot "go out of business" and cease operations.

In the event of a default on general obligation debt, bondholders can seek a writ of *mandamus*. The writ, ordered by a court, directs the appropriate governmental official to levy and collect taxes to pay debt service or to make required debt service payments from other available funds of the municipality. The ability to invoke *mandamus* provides strong assurance that the LGD of general obligation bonds will be extremely low. In many jurisdictions, water/sewer authorities can place a lien on real property if fees are not paid, giving these debt issuers powerful "tax-like" abilities to compel payment from their customers and assure revenue flow to pay debt service on their bonds.

In addition to general obligation bonds, state and local governments issue a wide array of debt obligations with narrower security pledges. These include debt secured by lease obligations; taxes other than property taxes including income, sales, gasoline, and cigarette taxes; and special assessment and tax increment bonds. Governments often issue non-GO debt because there are legal restrictions on the amount and permitted usage of general obligation debt, or in order to finance certain projects with debt that is more closely linked to the use of proceeds. Examples of the uses of non-GO debt include financing highways with gasoline tax bonds, or funding infrastructure improvements in a particular section of a city with special assessments levied only within that district. Although the issuers of these bonds are governmental entities, they have pledged a limited pool of revenue or assets and therefore expected LGD is generally higher than for GO debt.

10. *Figure 10 provides Moody's corporate idealized cumulative probability of default (PD) rates, by rating category. For instance, corporate obligations rated in the Ba1 category have an idealized PD of 9.4% within ten years of the initial rating date.*

Holders of revenue bonds backed by the credit of not-for-profit hospitals, private colleges, housing authorities and other enterprises often rely only on an unsecured general pledge or on a limited pool of pledged revenues or assets, for recovery upon default. Security pledges can include a pledge of some or all revenues of the enterprise, as well as a mortgage on some or all of the enterprise's real property and other assets. The value of the pledged collateral at the time of default will ultimately drive the amount of recovery bondholders will receive. Unlike the GO and water/sewer revenue bond issuers, such entities can liquidate after default, and may cease to exist or undergo a change of organizational form. Recovery is then limited to the distribution of the liquidated value of the collateral pledged to specific classes of bondholders, with any remaining value (after certain other required distributions) available to unsecured holders.

Figure 11 identifies a range of average LGD rates by each of the municipal sector types: (1) general obligation and water/sewer enterprises; (2) state and local government and public enterprises-other; (3) not-for profit corporations and (4) limited-recourse housing and enterprise financings, and for sub-sectors within each category. The range of LGD assumptions for each grouping is based on the limited available recovery data for actual defaults in each subsector, as well as Moody's analysts' expectations of average loss for various categories of credits.

Because of the potential for ambiguity in mapping individual obligations to a particular sub-sector, Moody's will convene a rating committee to determine the correct sub-sector and associated severity for each individual obligation in order to map from the municipal scale to the global scale. Also, the assignment of municipal sub-sectors to a specific loss severity level may change from time to time as fundamental credit characteristics for sub-sectors undergo change. Public universities, for example, are evolving to be more independent of state governments, becoming much more market-driven and increasingly financing projects only loosely linked to their original public policy mission of providing access to affordable education. Even within the current rubric, we may classify some public university borrowings in a higher LGD category.

Figure 11. Average Loss Given Default (LGD) Rates for Municipal Sectors

Sector	Type of Obligation	Loss Given Default
State and Local Government and Public Enterprise: General Obligation and Water/Sewer Enterprise		**5-10% Range**
	State Government General Obligation	5%
	Local Government (including Instrumentalities, Territories and Commonwealths) General Obligation	10%
	Water/Sewer Enterprise	10%
	State Revolving Fund	10%
State and Local Government and Public Enterprise: Other		**10-30% range**
	State Lease Obligation[11] and Special Tax	10%
	Local Government (including Instrumentalities, Territories and Commonwealths) Lease Obligation[11] and Special Tax	15%
	Mass Transit	15%
	Higher Education – Public	15%
	Airport/Port General Revenue	15%
	Toll Roads and Bridges – Established	15%
	Housing – Affiliated/Actively Managed	15%
	Electric and Gas – Transmission only	15%
	Electric and Gas – Generation and Joint Power Authority	30%
	Solid Waste/Resource Recovery	30%
	Parking Enterprise	30%
	Lottery Revenue	30%
	Special Assessment/Tax Increment — Established	30%
	Government-Affiliated Projects[12]	30%
Not-for-Profit Corporation		**45-55% range**
	Higher Education – Private	45%
	Hospitals (Not-for-Profit) including Multi-state Hospital Systems	45%
	Other Not-for-Profit	45%
	Long-term Care/Senior Living	55%
Limited Recourse Project Financing		**45-55% range**
	Military Housing	45%
	Toll Roads and Bridges – Start-up	55%
	Special Assessment/Tax Increment – Start-Up ("dirt bonds")	55%
	Charter Schools	55%
	Housing – Conduit/Not Actively Managed	55%
	Airport/Port Special Facility	55%
	Hotel/Convention Center	55%
	Stadiums and Other Projects	55%

11. *Includes leases used by state and local governments as a regular method of financing essential purpose projects. Other leases will be assigned to the appropriate category based on the sector of the issuer, degree of essentiality of the financing and other relevant factors.*
12. *Includes municipal project financings such as convention centers and stadiums with significant government involvement and oversight, demonstrated for example by direct governmental funding of a portion of project costs.*

Mapping Municipal Ratings to the Global Scale

Once the default rate and the expected severity of loss for a particular obligation are known, the mapping from the municipal scale to the global scale is a fairly straightforward exercise. The probability of default (PD), derived from the ten-year idealized municipal default table (provided in Figure 9) for the applicable rating category, is multiplied by the loss given default (LGD) (based on type of obligation), to derive a 10-year expected loss rate. We then find the 10-year idealized global scale expected loss rate (provided in Figure 12) closest to the 10-year expected loss rate of the municipal security to map to a global scale rating.

Figure 12. Moody's Global Rating Scale Idealized 10-Year Expected Loss Rates[13]

Time Horizon (in years)

	1	2	3	4	5	6	7	8	9	10
Aaa	0.0000%	0.0001%	0.0004%	0.0010%	0.0016%	0.0022%	0.0029%	0.0036%	0.0045%	0.0055%
Aa1	0.0003%	0.0017%	0.0055%	0.0116%	0.0171%	0.0231%	0.0297%	0.0369%	0.0451%	0.0550%
Aa2	0.0007%	0.0044%	0.0143%	0.0259%	0.0374%	0.0490%	0.0611%	0.0743%	0.0902%	0.1100%
Aa3	0.0017%	0.0105%	0.0325%	0.0556%	0.0781%	0.1007%	0.1249%	0.1496%	0.1799%	0.2200%
A1	0.0032%	0.0204%	0.0644%	0.1040%	0.1436%	0.1815%	0.2233%	0.2640%	0.3152%	0.3850%
A2	0.0060%	0.0385%	0.1221%	0.1898%	0.2569%	0.3207%	0.3905%	0.4560%	0.5401%	0.6600%
A3	0.0214%	0.0825%	0.1980%	0.2970%	0.4015%	0.5005%	0.6105%	0.7150%	0.8360%	0.9900%
Baa1	0.0495%	0.1540%	0.3080%	0.4565%	0.6050%	0.7535%	0.9185%	1.0835%	1.2485%	1.4300%
Baa2	0.0935%	0.2585%	0.4565%	0.6600%	0.8690%	1.0835%	1.3255%	1.5675%	1.7820%	1.9800%
Baa3	0.2310%	0.5775%	0.9405%	1.3090%	1.6775%	2.0350%	2.3815%	2.7335%	3.0635%	3.3550%
Ba1	0.4785%	1.1110%	1.7215%	2.3100%	2.9040%	3.4375%	3.8830%	4.3395%	4.7795%	5.1700%
Ba2	0.8580%	1.9085%	2.8490%	3.7400%	4.6255%	5.3735%	5.8850%	6.4130%	6.9575%	7.4250%
Ba3	1.5455%	3.0305%	4.3285%	5.3845%	6.5230%	7.4195%	8.0410%	8.6405%	9.1905%	9.7130%
B1	2.5740%	4.6090%	6.3690%	7.6175%	8.8660%	9.8395%	10.5215%	11.1265%	11.6820%	12.2100%
B2	3.9380%	6.4185%	8.5525%	9.9715%	11.3905%	12.4575%	13.2055%	13.8325%	14.4210%	14.9600%
B3	6.3910%	9.1355%	11.5665%	13.2220%	14.8775%	16.0600%	17.0500%	17.9190%	18.5790%	19.1950%
Caa1	9.5599%	12.7788%	15.7512%	17.8634%	19.9726%	21.4317%	22.7620%	24.0113%	25.1195%	26.2350%
Caa2	14.3000%	17.8750%	21.4500%	24.1340%	26.8125%	28.6000%	30.3875%	32.1750%	33.9625%	35.7500%
Caa3	28.0446%	31.3548%	34.3475%	36.4331%	38.4017%	39.6611%	40.8817%	42.0669%	43.2196%	44.3850%

Figure 13 illustrates the process for mapping various obligations from the municipal scale to the global scale:

Figure 13. Examples of Mapping from the Municipal Scale to the Global Scale use gridlines

STEP ONE: Identify Municipal Scale Rating and Sector	STEP TWO: Identify Corresponding Municipal Scale 10-Year Idealized Default Rate (PD) for Rating Category	STEP THREE: Identify Corresponding Average Loss Given Default (LGD) Rate for Municipal Sector	STEP FOUR: Multiply PD by LGD to obtain 10-Year Idealized Expected Loss	STEP FIVE: Find Global Scale Rating with equivalent Expected Loss
A3-Rated Local GO Bond	0.66%	10%	0.066%	Aa1
A3-Rated Airport General Revenue Bond	0.66%	15%	0.099%	Aa2
A3-Rated Hospital Revenue Bond	0.66%	45%	0.297%	A1
A3-Rated Convention Center Project Bond	0.66%	55%	0.362%	A1

13. *Figure 12 provides Moody's corporate idealized expected loss rates, by rating category. For instance, corporate obligations rated in the Ba1 category have an idealized expected loss of 5.1700% within ten years of the initial rating date.*

Figure 14 illustrates the full mapping of municipal and global scale ratings. To use this table, first find the municipal scale rating in the far-left column, and then find the appropriate LGD column. The cell where these intersect is the corresponding global scale rating. For instance, an airport general revenue bond rated A1 on the municipal scale maps to a rating of Aa1 on the global scale.

Figure 14. Global Scale Ratings by Municipal Scale Rating and Sector[14]

	LGD 5%	LGD 10%	LGD 15%	LGD 30%	LGD 45%	LGD 55%
Municipal Scale Rating	**State GO**	**Local GO; Water/ Sewer; State Revolving Fund; State Lease Obligation and Special Tax**	**Local Lease Obligation and Special Tax; Electric and Gas Enterprise (Transmission only); Mass Transit; Higher Education-Public; Airport General Revenue; Toll Roads and Bridges (established); Housing-Affiliated/ Actively Managed**	**Electric and Gas Enterprise (Generation and Joint Power Authorities); Solid Waste and Resource Recovery; Parking Enterprise; Lottery Bonds; Special Assessment and Tax Increment (established); Government-Affiliated Projects**	**Higher Education-Private; Hospitals (not-for-profit); Other Not-for-profit; Military Housing**	**Special Assessment and Tax Increment (start-up); Long-term Care (not-for-profit); Charter Schools; Housing-Unaffiliated/Passively Managed Toll Roads and Bridges (start-up); Airport and Port Special Facility; Hotel and Convention Center; Stadiums and other Projects**
Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa
Aa1	Aaa	Aaa	Aaa	Aaa	Aaa	Aa1
Aa2	Aaa	Aaa	Aaa	Aa1	Aa1	Aa1
Aa3	Aaa	Aaa	Aa1	Aa1	Aa1	Aa1
A1	Aaa	Aa1	Aa1	Aa1	Aa2	Aa2
A2	Aa1	Aa1	Aa1	Aa2	Aa3	Aa3
A3	Aa1	Aa1	Aa2	Aa3	A1	A1
Baa1	Aa1	Aa2	Aa3	A1	A1	A2
Baa2	Aa2	Aa3	Aa3	A1	A2	A3
Baa3	Aa2	Aa3	A1	A2	A3	Baa1
Ba1	Aa3	A1	A2	A3	Baa1	Baa2
Ba2	Aa3	A2	A3	Baa1	Baa2	Baa3
Ba3	A1	A3	Baa1	Baa2	Baa3	Ba1
B1	A2	Baa1	Baa2	Baa3	Ba1	Ba2
B2	A3	Baa2	Baa3	Ba1	Ba2	Ba3
B3	Baa1	Baa3	Ba1	Ba2	B1	B2
Caa1	Baa2	Baa3	Ba1	B1	B3	B3
Caa2	Baa3	Ba1	Ba2	B2	Caa1	Caa1
Caa3	Baa3	Ba2	B1	Caa1	Caa2	Caa3

As an alternative way of looking at the same data, Figure 15 shows the number of notches between the global scale and municipal scale ratings. To use this table, first find the municipal scale rating in the far-left column, and then find the appropriate expected loss severity column. The box where these intersect shows the number of notches by which the global scale rating exceeds the municipal scale rating. For example, an airport general revenue bond rated A1 on the municipal scale maps to a rating that is three notches higher (namely, Aa1) on the global scale.

14. *Shading indicates global scale ratings by whole letter rating bands, e.g. all A-range global scale ratings are shaded.*

Figure 15. Difference in Notches Between Global and Municipal Scale Ratings, by Sector[15]						
	LGD 5%	LGD 10%	LGD 15%	LGD 30%	LGD 45%	LGD 55%
Municipal Scale Rating	**State GO**	**Local GO; Water and Sewer; State Revolving Fund; State Lease Obligation and Special Tax**	**Local Lease Obligation and Special Tax; Electric and Gas Enterprise (Transmission only); Mass Transit; Higher Education-Public; Airport General Revenue; Toll Roads and Bridges (established); Housing-Affiliated**	**Electric and Gas Enterprise (Generation and Joint Power Authorities); Solid Waste and Resource Recovery; Parking Enterprise; Lottery Bonds; Special Assessment and Tax Increment (established); Government-Affiliated Projects**	**Higher Education-Private; Hospitals (not-for-profit); Other Not-for-Profit; Military Housing**	**Special Assessment and Tax Increment (start-up); Long-term Care (not-for-profit); Housing-Unaffiliated/ Passively Managed; Toll Roads and Bridges (start-up); Charter Schools; Airport and Port Special Facility; Hotel and Convention Center; Stadiums and other Projects**
Aaa	0	0	0	0	0	0
Aa1	1	1	1	1	1	0
Aa2	2	2	2	1	1	1
Aa3	3	3	2	2	2	2
A1	4	3	3	3	2	2
A2	4	4	4	3	2	2
A3	5	5	4	3	2	2
Baa1	6	5	4	3	3	2
Baa2	6	5	5	4	3	2
Baa3	7	6	5	4	3	2
Ba1	7	6	5	4	3	2
Ba2	8	6	5	4	3	2
Ba3	8	6	5	4	3	2
B1	8	6	5	4	3	2
B2	8	6	5	4	3	2
B3	8	6	5	4	2	1
Caa1	8	7	6	3	1	1
Caa2	8	7	6	3	1	1
Caa3	9	7	5	2	1	0

Note that at the top and bottom of the rating scale, for expected loss categories of 30% and higher, there are fewer notches separating municipal and global rating scales. That is because the Aaa rating level on both rating scales is reserved for extremely strong credit obligations. Also, obligations in the lowest rating levels, that are at the brink of default or have already defaulted, have expected loss rates comparable to those of similarly rated obligations on the global scale. For this reason, we have not mapped the Ca or C rating categories, which are generally reserved for obligations that are already in default. Obligations in these categories would be rated the same on both the municipal and global scales. In contrast, state and local GO bonds continue to have a growing distance between the municipal scale and global scale ratings, even at the bottom of the rating scale. We expect that any default of a GO bond would be short in duration, and that the loss given default would be minimal, such that even a Caa3-rated state GO obligation would map to a Baa3 on the global scale.

For state and local GO bonds in some municipal rating categories, the map we are now implementing results in a different global scale rating than the map that Moody's has been using for this purpose since 2003. Notably, our Baa2 municipal scale ratings of the Detroit Retirement Systems Funding Trust Taxable Certificates of Participation, Series 2005 and Series 2006 will now map to a GSR of Aa3, whereas under the existing methodology these securities had mapped to a GSR of Aa2. This rating will be changed in conjunction with the release of this report.

15. Shading indicates global scale ratings by whole letter rating bands, e.g. all A-range global scale ratings are shaded.

Assignment of Global Scale Ratings (formerly referred to as Corporate Equivalent Ratings)

In our 2002 default study publication, Moody's recognized both the difference between the municipal and global rating scales and the need in certain circumstances to provide a comparable rating for a municipal debt obligation on the global scale. The circumstances which Moody's thought warranted a rating on the global scale were limited to the issuance of municipal debt in non-U.S. taxable markets and to swap obligations entered into by municipalities with non-municipal entities rated on the global scale. The rationale for this practice was to increase the transparency of our ratings and mitigate economic inefficiencies that could arise due to the existence of two distinct rating scales. For example, many interest rate swaps between municipalities and financial institutions have bilateral credit terms, such as a requirement for posting of collateral upon downgrade to various rating levels, yet the two counterparties are rated on different rating scales.

Moody's is now removing the geographic restriction on global scale ratings, and will assign GSRs on (a) any taxable municipal transaction regardless of whether it is sold inside or outside the U.S., and (b) any municipal obligation under a swap transaction with a counterparty rated on the global scale. We believe that the expansion of GSRs to taxable securities sold inside the U.S. is consistent with our goal of providing greater transparency about the meaning of our ratings and reducing the disadvantage that municipal issuers may face when competing with issuers rated on the global scale that have the same rating. Using the methodology described in this report, we are also expanding GSRs beyond tax-backed and water/sewer debt to all bonds that are rated on the municipal scale. We will continue to assign GSRs only when requested by the issuer, or requested by another party with the issuer's consent, and we will assign GSRs only to credits with a published municipal scale rating. Figure 16 summarizes the changes from the current framework to the new framework for GSRs.

Figure 16. Expansion of Global Scale Ratings

	OLD (2003-present)	NEW
Nomenclature	Corporate Equivalent Ratings	Global Scale Ratings
Sectors	Tax-Backed and Water/Sewer Sectors	All Municipal Sectors
Types of Obligations	Taxable Bonds Sold Outside US and Obligations Under Swaps	*All* Taxable Bonds and Obligations Under Swaps
Issuer Consent	Must Have Issuer Request or Consent	Must Have Issuer Request or Consent
Municipal Scale Rating	Must Have Published Municipal Scale Rating	Must Have Published Municipal Scale Rating

In response to our Request for Comment dated June 2006, we received significant market feedback (summarized in our report dated November 2006) that the presence of a municipal scale and a global scale rating on the same security could create confusion, and the potential for intentional or unintentional misuse of the higher global scale rating in the municipal market. Because Moody's is committed to ensuring that its ratings and the scales they are based on are clearly communicated to the market, we plan to implement a special designation for all U.S. municipal scale ratings. We intend to communicate this new "municipal scale flag" through an additional field which will not be part of the rating itself, but will accompany the rating wherever it appears in Moody's publications and ratings databases. Ratings that are currently in Moody's municipal database, but are rated on the global scale, will not carry the municipal scale flag. These would include ratings based on municipal bond insurance and bank letters of credit, because the financial guarantors and LOC banks are rated on the global scale. Corporate-backed industrial development bonds, student loan bonds, certain housing and tobacco settlement bonds, and other municipal obligations that are rated on the global scale would also not display the municipal scale flag.

Next Steps

In recent months, Moody's has received a growing number of requests to make GSRs available for all municipal debt, whether taxable or tax-exempt. While we have no immediate plans to expand GSRs beyond taxable municipal debt, we continue to welcome feedback from market participants on this topic. Even if we decide at some time in the future to make GSRs available for tax-exempt debt, we expect to continue using the municipal scale rating as our starting point in assigning global scale ratings. For the benefit of those market participants who desire to make fine distinctions among municipal securities, we remain committed to maintaining the integrity of the municipal rating scale.

Appendix A: Global Scale Ratings Currently Outstanding

Issuer/Obligor	Description of Obligation	Global Scale Rating	Initial Rating Date	CUSIP (of a representative maturity)
California (State of)	California Judgment Trust, Certificates of Participation, Series 2005	Aa1	7/20/2005	13067EAK8
Connecticut (State of)	Exposure under the ISDA Swap Agreements in relation to: State of CT 2nd Lien Special Tax Obligation Refunding Bonds, Transportation Infrastructure Purposes, 2003 Series 1 & 2	Aa1	1/13/2003	N/A
Detroit (City of) MI	Detroit Retirement Systems Funding Trust, Taxable Certificates of Participation, Series 2005A & B	Aa2 (under review for downgrade to Aa3 upon release of this publication)	5/22/2006	251228AA0
Illinois (State of)	General Obligation Bonds, Pension Funding Series of June 2003	Aaa	6/2/2003	452151KV4
Kansas Development Finance Authority	Revenue Bonds, Series 2004C (Kansas Public Employees Retirement System)	Aaa	2/12/2004	485428ZM1
Oregon (State of)	General Obligation Pension Bonds, 2003 Series	Aaa	10/16/2003	68607LXG7
Wisconsin (State of)	General Fund Annual Appropriation Bonds of 2003, Series A (Taxable Fixed) and Series B (Taxable Auction Rate Certificates)	Aa1	11/25/2003	977100AA4

Appendix B: The Default Stories – Moody's-Rated Defaults 1970 – 2006

The default stories are presented in chronological order, by sector. The stories from 1970 through 2000 are reproduced from Moody's Municipal Bond Scale report dated November 2002, updated in some cases to reflect subsequent developments. The CUSIP for each default is provided only as a representative identifier for one maturity of the bonds.

Moody's defines post-default recovery for municipal securities as the actual amount recovered by bondholders following a default, divided by the amount of principal and interest owed under the legal terms of the obligation. This differs from the approach Moody's uses in calculating recovery rates of corporate bonds, which takes trading values of defaulted obligations thirty days after the default date as a proxy for the market's best estimate of future recovery value. Although we used the corporate methodology in our 2002 study of municipal defaults, we subsequently determined that post-default trading values are not a reliable measure of recovery values in the municipal market. Bonds with less than $50 million outstanding, which account for the majority of municipal defaults, are generally infrequently traded, and the methods used to value them are imprecise. Moreover, information about municipal defaults is often extremely scarce, and market participants often have little factual basis on which to estimate future recoveries within weeks or even months after a default. We obtained recovery information on Moody's-rated defaulted bonds from a variety of sources, which we indicate within the recovery bullet point.

MOODY'S RATED MUNICIPAL DEFAULTS, 1970-2000

GENERAL OBLIGATION:

Baldwin County, Alabama (was not included in 2002 default study)

- CUSIP: 057845BB4
- Default Date: October 1, 1988
- Obligor: Baldwin County, AL
- Issuer: Baldwin County, AL
- Defaulted Bonds: GO Warrants; approximately $6 to $8 million of debt affected
- Cause of Default: Lack of funds to meet debt obligations
- Recovery: 100% of principal and interest (Source: Moody's reports)

On October 1, 1988, Baldwin County, AL, defaulted in its payments on two series of outstanding GO Warrants (the nomenclature for bonds in Alabama) with a total outstanding par of between $6 million and $8 million. AmSouth Bank served as Trustee and did not receive the payments as due from the county for the June 1 principal and interest payments. The county carried an "A" rating on the bonds at the time.

The county did not have sufficient funds on hand to meet its obligations at the time and officials decided to use available funds to make other payments (most probably payroll).

Moody's dropped the county's rating to "B" that month as a result of the default. With help from AmSouth, county management was able to come up with sufficient funds 15 days later, and bondholders received 100% of due principal and interest.

Rating History

RATING DATE	RATING	RATING ACTION
5 MAR 1985	A	ASSIGNED
JUN 1989	B	DOWNGRADED
19 MAR 1991	—	WITHDRAWN

NON-GO OBLIGATIONS OF STATE AND LOCAL GOVERNMENT

Belfield, ND

- CUSIP: 077689AP2
- Default Date: April 1987
- Obligor: Belfield, ND
- Issuer: Belfield, ND
- Defaulted Bonds: Special assessment bonds; $2.38 million of debt affected
- Cause of Default: Insufficient property taxes to repay existing debt
- Recovery: Approximately 55% of principal (Source: Moody's files)

In April 1987, the town of Belfield, North Dakota defaulted on debt service payments on $2.38 million of special assessment bonds. The proceeds of the bonds were used to provide roads, water, and sewer services for a tract of land that was slated for residential development. The bonds were to be repaid with collected property taxes from the properties within the development.

The oil boom of the early 1980's led to a severe housing shortage as workers relocated to the area to secure high paying jobs in the oil industry. The new residential development was to have provided housing for the influx of workers. A few years later the oil market declined and people began to seek housing and employment elsewhere. With only three homes built, the property taxes generated were insufficient to repay the existing debt.

A deficiency levy was instituted on all properties in Belfield to make up the shortfall. The deficiency levy rose to levels that forced an increasing number of homeowners to abandon their properties or to fail to pay their property taxes. Ultimately, the town council refused to raise the levy any further and Belfield defaulted on its outstanding debt.

Rating History

RATING DATE	RATING	RATING ACTION
DEC 1983	Baa	ASSIGNED
SEP 1986	Ba	DOWNGRADED
APR 1987	Ca	DOWNGRADED
16 FEB 1995	—	WITHDRAWN

Polk County, IA

- CUSIP: 731211AB4
- Default Date: December 1991
- Obligor: Polk County, IA
- Issuer: Polk County, IA
- Defaulted Bonds: Sports Facility Revenue Bonds, Series 1984; $39 million of debt affected
- Cause of Default: Operating losses associated with the racetrack
- Recovery: Trustee called the defaulted issue at par with proceeds from the 1993 refunding issue (Source: Moody's files)

Polk County defaulted on a $2.3 million principal and interest payment due in December 1991 on its Sports Facility Revenue Bonds, Series 1984. The bonds were issued to finance the track construction at Prairie Meadows racetrack. The bonds were secured by lease payments made by the Racing Association of Central Iowa (RACI) and to the extent necessary, from an unconditional commitment from the county.

The bond default was precipitated by RACI's bankruptcy filing on November 27, 1991 which was in response to actions taken by the county to curtail the losses associated with the racetrack. The financial actions taken by the County included cutting back on RACI's subsidy which in turn, threatened its continued existence and led it to seek protection under Chapter 11 of the Bankruptcy Code. Although the County was prepared to fund the upcoming debt service payments, the funds it was to provide were subjected to the automatic stay under Section 362(a) of the Bankruptcy Code as a result of RACI's bankruptcy filing, and therefore the funds were unavailable to make the necessary debt service payment due.

Rating History

RATING DATE	RATING	RATING ACTION
11 JUN 1987	Con.(A1)	ASSIGNED
1 NOV 1989	A1	CONDITIONAL PREFIX REMOVED
15 JUL 1991	A	DOWNGRADED
3 DEC 1991	Caa	DOWNGRADED
15 MAR 1994	—	WITHDRAWN

Orange County, CA

- CUSIP: 68428LAN4
- Default Date: December 6, 1994
- Obligor: Orange County, CA
- Issuer: Orange County, CA
- Defaulted Bonds: Pension Obligation Series B; $110 million of debt affected
- Cause of Default: Orange County Investment Pool's investment losses
- Recovery: Although the county was unable to fulfill its pledge to purchase any tendered bonds, all principal and interest payments were made. (Source: Moody's reports)

On December 6, 1994, Orange County, California filed bankruptcy petitions for both itself and the Orange County Investment Pool (OCIP). The County had pledged that the OCIP would purchase any tendered Pension Obligation Series B bond, but as a result of the bankruptcy filing, the OCIP was unable to fulfill this obligation and the bonds defaulted on December 8, 1994. The County did not default on the scheduled principal and interest payments of the Series B bonds or any of its other long-term obligations.

The Orange County bankruptcy was the largest municipal bankruptcy in US history. Orange County's bankruptcy filing was a direct result of the investment losses incurred by the Orange County Investment Pool (OCIP) which amounted to approximately $1.5 billion of the $7.5 billion pool. The investment strategy of the County Treasurer involved investing in high-risk, interest rate sensitive securities and leveraging the pool to further increase returns. During the period when interest rates were on the decline and remained low, the OCIP succeeded in earning high returns. However, when interest rates began to rise in 1994, the OCIP experienced big losses. Adding to the financial distress of OCIP, when OCIP was unable to repay a $1.2 billion loan to a Wall Street creditor, the creditor refused to extend the loan and started liquidating the securities that OCIP had pledged as collateral for the loan. To protect itself from other creditors, Orange County filed for bankruptcy for itself and OCIP.

Rating History

RATING DATE	RATING	RATING ACTION
8 SEP 1994	A1	ASSIGNED
8 DEC 1994	Caa	DOWNGRADED
30 MAY 1996	Ba	UPGRADED
1 AUG 1996	—	WITHDRAWN

ELECTRIC POWER:

Washington Public Power Supply System, WA (now Energy Northwest)

- CUSIP: 939821LN2
- Default Date: August 1983
- Obligor:Washington Public Power Supply System (WPPSS)
- Issuer:Washington Public Power Supply System (WPPSS)
- Defaulted Bonds: Nuclear Projects 4 & 5; approximately $2.25 billion of debt affected
- Cause of Default: Declining demand for energy, rising construction costs
- Recovery: Approximately 40% after the settlement of a class action suit in December, 1998 (Source: Moody's files)

In August 1983, Washington Public Power Supply System (WPPSS) defaulted on $2.25 billion of revenue bonds for Nuclear Projects 4 & 5.

Washington Public Power Supply System was organized in 1957 as a municipal corporation that allowed publicly owned utilities in the Pacific Northwest to jointly build power generation facilities. As part of the Ten-Year Hydro Thermal Power Plan, WPPSS and other Northwest utilities assumed that demand for electricity in the northwest region would double every ten years beyond the capacity of current power sources. In the early 1970s WPPSS planned to construct five nuclear generation facilities to meet this forecasted demand. Bonds were sold to finance the cost of the power plants and were to be repaid through participation agreements with numerous municipal and cooperatively owned electric utilities.

Construction delays and cost overruns on the sizable project and increased costs to meet newly required safety standards drove the cost of completion of the projects to three to four times the original estimates. At the same time demand for energy was declining due to rising energy costs, conservation, and an economic slowdown in the area. In January 1982, WPPSS abandoned construction on projects 4 and 5. In January 1983, the public utilities participating in WPPSS were obligated to begin repaying the debt incurred by the abandoned projects. In order to repay the debt, the utilities would have had to dramatically increase electricity rates on their customers to pay for the failed projects. The uproar due to the increasing rates resulted in challenges to the enforceability of the contracts with participants for repayment of the construction and operation costs of Projects 4 and 5 (including repayment of debt service).

In 1983, the Washington State Supreme Court ruled that the Washington State public agency participants in

Projects 4 and 5 did not have the authority to enter into the Project 4 and 5 participation agreements, rendering void the agreements and the source of revenues to pay debt service. WPPSS became unable to service the debt on the $2.25 billion in bonds issued to finance construction of Projects 4 and 5, thereby precipitating the largest municipal bond payment default in history.

Rating History

RATING DATE	RATING	RATING ACTION
14 FEB 1977	A1	ASSIGNED
10 JUN 1981	Baa1	DOWNGRADED
1 JUN 1983	Caa	DOWNGRADED
16 JUN 1983	—	WITHDRAWN

Vanceburg, KY

- CUSIP: 921547AY1
- Default Date: December 1, 1987
- Obligor: Vanceburg, KY
- Issuer: Vanceburg, KY
- Defaulted Bonds: Greenup Hydro Project; $124.5 million of debt affected
- Cause of Default: Rising project costs, delays in completion
- Recovery: Bondholders received par plus accrued interest up to May 1988 from the sale of the project (Source: Moody's files)

Vanceburg, KY defaulted on its December 1, 1987 debt service payment for its Electric System Revenue Bonds – Greenup Hydro Project.

The bonds were issued in 1979 to fund the construction and installation of a power plant structure containing hydroelectric generating units. The bulk of the power generating from this plant was to be sold to Hamilton Ohio Electric Utility. The bonds were secured by a lien on revenues of the Vanceburg Electric System.

A difficult start-up beginning in 1979 plagued the project. The problems included finding a location for the transmission lines to deliver power from Greenup to Hamilton, project cost overruns, and a six-month delay in project completion. In 1984, the City of Hamilton, Vanceburg Electric System's largest customer, filed a lawsuit seeking to have their power sales contract declared null and void alleging various contract breaches and fraudulent inducement to enter into a contract.

The December 1, 1987 default was part of the legal settlement between the towns of Vanceburg and Hamilton in which Hamilton would pay off the Vanceburg bonds and assume the responsibility for the ongoing plant.

Rating History

RATING DATE	RATING	RATING ACTION
10 OCT 1979	Con.(A)	ASSIGNED
26 FEB 1985	Caa	DOWNGRADED
24 FEB 1989	—	WITHDRAWN

PRIVATE UNIVERSITIES AND OTHER NOT-FOR-PROFITS:

Marine Military Academy, TX

- CUSIP: 413007AA3
- Default Date: May 2000
- Obligor: Marine Military Academy
- Issuer: Harlingen Higher Education Facilities Corporation, TX
- Defaulted Bonds: Revenue bonds Series 1995 and 1997; $10.4 million of debt affected
- Cause of Default: Civil lawsuits against the Academy
- Recovery: Full principal recovery; partial payment of interest accrued during bankruptcy (Source: Moody's reports)

In May 2000, Marine Military Academy declared bankruptcy and suspended payments on its $10.4 million of Series 1995 and 1997 debt issued through the Harlingen Higher Education Facilities Corporation, TX.

The Academy is the defendant in several civil lawsuits in which claimants have accused the Academy of not adequately supervising cadets in connection with hazing incidents that occurred between 1993 and 1997. The potential liabilities of the Academy due to the litigation exceeded the Academy's insurance coverage. As a protective measure, the Academy filed for bankruptcy and suspended payments on its debt.

In 2004, the Academy emerged from bankruptcy and resumed making debt service payments on outstanding bonds. The Academy separately negotiated with bondholders for the 1995 and 1997 bonds for settlement of obligations. While all principal payments will be made for both series of bonds, bondholders did not receive the full value of interest accrued during bankruptcy.

Rating History

RATING DATE	RATING	RATING ACTION
27 OCT 1995	Baa	ASSIGNED
2 JUN 2000	B1	DOWNGRADED
31 JUL 2000	Caa2	DOWNGRADED
19 JUL 2004	B3	UPGRADED

Midlands Community Hospital

- CUSIP: 803728AP9
- Default Date: January 1978
- Obligor: Midlands Community Hospital
- Issuer: Sarpy County Hospital Authority
- Defaulted Bonds: Revenue Bonds dated 11/1/73 and 7/1/76; $21.7 million of debt affected
- Cause of Default: Inability to recruit physicians
- Recovery: Principal payments due between January 1978 and January 1982 were paid between nine months and three years late. (Source: Moody's reports)

Midlands Community Hospital defaulted on Revenue Bonds dated 11/1/73 and 7/1/76 in January 1978.

In the 1960's, Doctors Hospital in Omaha, Nebraska was an aging hospital with declining patient usage and outdated equipment. The Board of Directors of Doctors Hospital decided to build a new 208-bed hospital and close the aging facility. Sarpy County Hospital Authority issued bonds to finance the construction of Midlands Community Hospital in Papillion, Nebraska, 12 miles from Omaha. The ability to recruit physicians from Doctors Hospital in Omaha to practice at Midlands Community Hospital was a key factor in the future success of the new hospital. The recruitment did not go as planned and the hospital opened with only a few doctors. As a result, utilization fell far below the levels necessary to cover operations and maintenance expenses as well as debt service.

In 1976 an event of default was declared under the legal documents, debt service reserves were used to make interest payments, and a receiver for the hospital was appointed and approved by the District Court. As a result, the principal payments due between January 1978 and January 1982 were paid between nine months and three years late.

Rating History

RATING DATE	RATING	RATING ACTION
7 DEC 1973	Baa	ASSIGNED
24 SEP 1976	Con.(Ba)	DOWNGRADED
4 FEB 1977	Caa	DOWNGRADED
23 NOV 1987	Baa	UPGRADED
1 SEP 1994	—	WITHDRAWN

Hilton Head Hospital, SC

- CUSIP: 074347QW8 (Issuer CUSIP)
- Default Date: January 1, 1978
- Obligor: Hilton Head Hospital, SC
- Issuer: Beaufort County, SC
- Defaulted Bonds: Revenue Series 1974; approximately $11 million of debt affected
- Cause of Default: Low patient utilization levels led to a financial strain on the hospital.
- Recovery: Bonds were redeemed at par plus call premium from the proceeds of the sale of the hospital (Source: Moody's files)

Hilton Head Hospital defaulted on its debt service payment due January 1, 1978.

In 1974, Beaufort County, South Carolina issued $11.2 million to finance the first health care facility on Hilton Head Island. The bonds were to be repaid from gross revenues of the hospital. Based on the substantial growth of residential, retirement, and resort facilities on the Island in the years preceding the debt issuance, officials decided that it was necessary to develop health care facilities on the Island. The feasibility study for the new hospital projected high utilization of the 40 acute-care and 40 skilled nursing beds and revenues sufficient to cover debt service after use of the capitalized interest fund.

In the mid 1970s, it became apparent that the population on the Island had been over-estimated and the national economic recession of 1974-1975 had further reduced population growth on the Island. Additionally, the hospital opened without being adequately staffed in certain areas that led to a loss of patients to hospitals in Savannah, GA. These factors resulted in patient utilization levels well below projected levels that led to financial strain on the hospital. In April 1976, the hospital missed payments on 1/6 of the upcoming interest due on the bonds. By January 1978, the capitalized interest and reserve funds had been depleted and the hospital failed to pay the interest payment due on January 1, 1978.

Rating History

RATING DATE	RATING	RATING ACTION
22 MAY 1974	Con.(Baa)	ASSIGNED
18 MAR 1976	Con.(Ba)	DOWNGRADED
1 DEC 1976	Con.(B)	DOWNGRADED
5 JUL 1977	Con.(Caa)	DOWNGRADED
1 DEC 1977	Ca	DOWNGRADED
19 JUN 1992	Ba	UPGRADED
18 NOV 1994	—	WITHDRAWN

Choate-Symmes Hospitals, MA

- CUSIP: 575850DM1
- Default Date: January 1, 1990
- Obligor: Choate-Symmes Hospitals, MA
- Issuer: Massachusetts Health and Educational Facilities Authority
- Defaulted Bonds: Revenue Bonds Series 1982; $32 million of debt affected
- Cause of Default: Lack of funds due to over collected revenues
- Recovery: Less than 100% (Source: Moody's files)

Choate-Symmes failed to make its debt service payment due on its revenue bonds on January 1, 1990.

In 1982, Massachusetts Health and Educational Facilities Authority issued bonds on behalf of Choate-Symmes to modernize an aged plant, remedy code deficiencies, ease capacity constraints and centralize certain services. The bonds were secured by a mortgage pledge as well as a first lien on gross receipts of the hospitals.

In early 1989, the Massachusetts Rate Setting Commission required that Choate-Symmes refund approximately $5.5 million in overcollected revenue. This action led Choate-Symmes to file for bankruptcy protection in October 1989. In January 1990, funds were not available to pay the debt service due on the bonds.

Rating History

RATING DATE	RATING	RATING ACTION
20 AUG 1982	Con.(Baa1)	ASSIGNED
10 OCT 1989	Caa	DOWNGRADED
3 DEC 1990	—	WITHDRAWN

Downtown Hospital Association, TN (D/B/A Downtown General Hospital)

- CUSIP: 162405AL8 (Issuer CUSIP)
- Default Date: August 1, 1991
- Obligor: Downtown Hospital Association, TN
- Issuer: Chattanooga Health and Education Facilities Board
- Defaulted Bonds: Revenue Series 1975; $2.2 million of debt affected
- Cause of Default: Unfavorable Medicare reimbursement process
- Recovery: All principal and approximately 50% of interest owed (Source: Moody's files)

Downtown Hospital Association defaulted on its principal and interest payments due August 1, 1991.

In 1975, Chattanooga Health and Education Facilities Board issued bonds to finance the construction of a new 54-bed hospital, Downtown General Hospital, in downtown Chattanooga as well as to capitalize interest through the construction period. The bonds were secured by a first lien on gross revenues of the hospital. The new hospital replaced the antiquated 54 bed Newell Clinic Hospital.

In the 1980s there were several changes in the health care industry that adversely affected smaller hospitals like Downtown General Hospital. The most notable change was the introduction of the Medicare Prospective Payment System (PPS). The transition from a cost basis to a PPS for Medicare reimbursement had a negative financial impact on the hospital. Additionally, Downtown General did not diversify into new service lines and therefore became particularly susceptible to the shift of hospital services out of the inpatient setting. As a result, the hospital's average daily population dropped from over 50 to 14. Beginning in November 1989, the hospital was unable to make its scheduled monthly payments for upcoming debt service payments. By August 1991, the reserve funds had been depleted and funds were not available to make the August 1 payment.

Rating History

RATING DATE	RATING	RATING ACTION
18 JUL 1975	Con.(Baa)	ASSIGNED
19 MAR 1980	Baa	CONDITIONAL PREFIX REMOVED
14 AUG 1991	C	DOWNGRADED
21 APR 1993	—	WITHDRAWN

Metropolitan Hospital, PA

- CUSIP: 717826KW0
- Default Date: December 1989
- Obligor: Metropolitan Hospital, PA
- Issuer: Philadelphia Hospitals Authority
- Defaulted Bonds: Revenue bonds Series 1976 and 1981; $63.2 million of debt affected
- Cause of Default: Low occupancy rates led to financial distress
- Recovery: Less than 100% (Source: Moody's files)

Metropolitan Hospital defaulted on the debt service due on its revenue bonds in December 1989.

The bonds were issued in 1976 and 1981 by Philadelphia Hospitals Authority to construct Metropolitan Hospital, an osteopathic facility located in downtown Philadelphia. Primarily due to low occupancy rates, the hospital was experiencing severe cash flow problems. As a result of the financial stress, the hospital filed for bankruptcy protection on July 11, 1989. In December 1989, funds were not available to meet the debt service payment due.

Rating History

RATING DATE	RATING	RATING ACTION
23 NOV 1976	Con.(Baa)	ASSIGNED (Series 1976)
29 MAR 1979	Baa1	REFINED AND CONDITIONAL PREFIX REMOVED (Series 1976)
3 DEC 1981	Con. (Baa)	ASSIGNED (Series 1981)
5 DEC 1988	B	DOWNGRADED (Both Series)
8 AUG 1989	Caa	DOWNGRADED (Both Series)
13 MAR 1992	C	DOWNGRADED (Both Series)
3 DEC 2004	—	WITHDRAWN (Both Series)

Northwest General Hospital, MI

- CUSIP: 594648PW1
- Default Date: April 1991
- Obligor: Northwest General Hospital, MI
- Issuer: Michigan State Hospital Finance Authority
- Defaulted Bonds: Revenue Bonds Series 1980; $4.8 million of debt affected
- Cause of Default: Inadequate federal reimbursements, decline in admissions
- Recovery: Approximately 24% of par (Source: Moody's files)

Northwest General Hospital failed to make its interest payment due to bondholders in April 1991.

The bonds were issued by Michigan State Hospital Finance Authority in 1980 to construct an addition to Northwest General Hospital, a 104-bed facility located in Detroit. Throughout the 1980s the hospital was plagued by continued financial deterioration despite financial and management support from an outside organization, Botsford General Hospital. Inadequate reimbursements from state and federal agencies, a decline in hospital admissions, an excess of available beds in the area, and the failure to recruit physicians to admit to the hospital were the reasons cited when Northwest General Hospital's management decided to close the hospital in September 1990.

Although not legally obligated, the Michigan State Hospital Finance Authority provided funds to make the debt service payment due in October 1990. In April 1991, the bonds defaulted when funds were not available to make the interest payment.

Rating History

RATING DATE	RATING	RATING ACTION
30 JAN 1980	Con.(Baa1)	ASSIGNED
5 AUG 1982	Ba	DOWNGRADED
5 MAR 1990	Caa	DOWNGRADED
10 SEP 1990	C	DOWNGRADED
5 JUL 1995	—	WITHDRAWN

Michigan Health Care Corporation, MI

- CUSIP: 430586BM8
- Default Date: June 1, 1995
- Obligor: Michigan Health Care Corporation, MI
- Issuer: Highland Park, MI Hospital Finance Authority
- Defaulted Bonds: Revenue Bonds Series 1986, 1987 and 1992; $262 million of debt affected
- Cause of Default: Poor financial performance
- Recovery: Approximately 24 to 54% of par, depending on series (Source: Bloomberg)

On June 1, 1995, Michigan Health Care Corporation defaulted on debt service due on its bonds issued by the Highland Park, MI Hospital Finance Authority and its bonds issued by the Detroit, MI Hospital Finance Authority.

Michigan Health Care Corporation's main facilities were located in sites in and around the Detroit area which in the early 1990's was plagued with high unemployment and a decreasing population due to the contraction in the domestic automotive industry. The economic strain on the area, combined with an over-supply of beds in the Detroit health care market caused financial strain on the Corporation. Michigan Health Care Corporation filed for Chapter 11 Bankruptcy on March 31, 1995. This action was attributed to overwhelming legal expenses due to various litigation issues. The filing was preceded by several years of poor financial performance caused by unwise business decisions, high debt load, and high Medicaid and indigent patient load for which reimbursement was unable to cover costs. As a result of the bankruptcy filing, an automatic stay under Section 362(a) of the Bankruptcy Code was invoked and the bond trustee was prohibited from using funds on hand to pay the bonds resulting in a payment default.

Rating History

RATING DATE	RATING	RATING ACTION
24 NOV 1986	Ba	ASSIGNED
20 DEC 1990	B	DOWNGRADED
18 AUG 1993	B1	REFINED
17 APR 1995	Caa	DOWNGRADED
11 FEB 1997	C	DOWNGRADED
13 JAN 1998	—	WITHDRAWN

Allegheny Health and Education Research Foundation, PA

- CUSIP: 709172FJ4 (Delaware Valley Obligated Group); 717825BW2 (Graduate Health System)
- Default Date: July 21, 1998
- Obligors: Delaware Valley Obligated Group (DVOG) and Graduate Obligated Group (Graduate)
- Issuer: Pennsylvania Higher Educational Facilities Authority (for DVOG); Philadelphia Hospitals and Higher Education Facilities Authority (for Graduate)
- Defaulted Bonds: Delaware Valley Obligated Group and Graduate Obligated Group; approximately $200 million of debt affected
- Cause of Default: Financial deterioration, reduction in Medicaid payments
- Recovery: DVOG bondholders continue to be paid under MBIA insurance; litigation on Graduate continues and so final distributions have not been made (Source: Moody's files)

On July 21, 1998 several entities of the Allegheny Health and Education Research Foundation (AHERF) filed to seek bankruptcy protection under Chapter 11 of the Bankruptcy Code, including the Philadelphia operations of Delaware Valley Obligated Group and Graduate Obligated Group as well as the parent, AHERF, and the physician organization, Allegheny University Medical Practices. The filing for bankruptcy protection by AHERF triggered an automatic stay under Section 362(a) of the Bankruptcy Code and as a result AHERF defaulted on some of its outstanding bond issues.

The bankruptcy filing followed a long period of financial deterioration for AHERF and its subsidiaries. Beginning in the mid 1980's, AHERF began an expansion from its Pittsburgh base into the highly competitive Philadelphia health care market. From 1987 until 1997 the organization's debt grew from less than $70 million to over $1 billion, as AHERF acquired medical schools, numerous hospitals and physician practices.

AHERF's problems included operating in the highly competitive Philadelphia and Pittsburgh health care markets, and the curb in growth of Medicare reimbursements.. Other factors included the increased penetration of managed care plans that negotiated discounts on hospital fees, curbed admissions, and mismanaged and costly endeavors into physician practices. In 1998, AHERF attempted to strike a deal to sell a large portion of its Philadelphia holdings. When the deal later fell apart in June 1998, AHERF's options were limited, and one month later several of its entities filed for bankruptcy.

Rating History - Delaware Valley Obligated Group (underlying rating on insured bonds)

RATING DATE	RATING	RATING ACTION
8 JUL 1998	B3	ASSIGNED
21 JUL 1998	Caa1	DOWNGRADED
15 OCT 1998	Caa3	DOWNGRADED
21 MAY 2001	Ca	DOWNGRADED
15 SEP 2006	—	WITHDRAWN

Rating History -Graduate Health System

RATING DATE	RATING	RATING ACTION
17 MAY 1993	Baa1	ASSIGNED
13 JUN 1996	Baa	DOWNGRADED
26 AUG 1996	Ba	DOWNGRADED
15 NOV 1996	Ba2	REFINED
5 JAN 1998	B2	DOWNGRADED
8 JUL 1998	Caa1	DOWNGRADED
21 JUL 1998	Caa3	DOWNGRADED
15 OCT 1998	Ca	DOWNGRADED
15 SEP 2006	—	WITHDRAWN

Boston Regional Medical Center, MA

- CUSIP: 575851YA2
- Default Date: February 1999
- Obligor: Boston Regional Medical Center (BRMC)
- Issuer: Massachusetts Health and Educational Facilities Authority
- Defaulted Bonds: Revenue Bonds Series 1993B; $30 million of debt affected
- Cause of Default: Large operating deficits
- Recovery: Approximately 20% recovery (Source: Moody's reports)

In February 1999, Boston Regional Medical Center (BRMC) declared bankruptcy and defaulted on principal and interest payments due on its Series 1993B bonds issued through Massachusetts Health and Educational Facilities Authority.

Ongoing deterioration of the hospital's balance sheet, characterized by a dangerously nominal cash position, a steadily increasing debt position due to use of local lines of credit, and a negative fund balance, were the result of four years of large operating deficits. On-going equity transfers to a physician practice subsidiary also contributed to a rate violation of its debt service coverage test in fiscal 1997. An anticipated sale of the hospital did not occur as expected, causing the hospital to file for Chapter 11 bankruptcy protection and close the hospital.

BRMC's assets were liquidated as part of the liquidation plan approved by the bankruptcy court. The proceeds of the sale of the hospital's tangible assets, including its hospital facility and property, was approximately $22-23 million and was used to pay secured creditors and then unsecured creditors that included Series 1993 bondholders. At the time of the liquidation, approximately $30 million of Series 1993 bonds were outstanding.

Rating History

RATING DATE	RATING	RATING ACTION
21 JAN 1993	Baa	ASSIGNED
19 SEP 1994	Ba	DOWNGRADED
1 FEB 1996	B	DOWNGRADED
15 NOV 1996	B2	REFINED
15 JUN 1998	Caa	DOWNGRADED
15 JUL 1998	Caa2	REFINED
4 FEB 1999	Ca	DOWNGRADED
11 APR 2002	—	WITHDRAWN

Greater Southeast Healthcare System, MD

- CUSIP: 741710AN7
- Default Date: May 1999
- Obligor: Greater Southeast Healthcare System
- Issuer: Prince George's County, MD
- Defaulted Bonds: Revenue Bonds Series 1993; $46 million of debt affected
- Cause of Default: Decreasing Medicaid reimbursement, declining patient volume
- Recovery: Less than 50% recovery (Source: Moody's reports)

In May 1999, Greater Southeast Healthcare System filed for bankruptcy protection and suspended payments on its approximately $46 million of outstanding Series 1993 bonds issued through Prince George's County, MD.

Greater Southeast Healthcare System was a community based health delivery system that included two hospitals, three nursing homes, a physician care network, and extensive community based programs. The system's flagship, 450- bed Greater Southeast Community Hospital, was located in the southeast quadrant of Washington D.C. with a much smaller 33-bed facility in Fort Washington, Prince George's County. Prior to the bankruptcy, Greater Southeast Healthcare System was viewed as an essential service provider in an urban part of Washington D.C., characterized by an aging, declining population with below average socioeconomic characteristics reflected in an increasing reliance on governmental payers.

The organization's weak financial profile deteriorated significantly with changes in reimbursement from Medicaid, legislative changes which eliminated DC Medicaid Disproportionate Share payments to the system, and continued market forces which contributed to the system's declining patient volume and lower reimbursement rates. These revenue pressures coupled with management turnover and labor disputes further contributed to a rapidly deteriorating financial profile. Even after the filing, there were discussions that the District of Columbia might provide some financial assistance given the essentially of the system in the area; however, the District failed to do so. In November 1999, the courts approved the sale of Greater Southeast Community Hospital to Doctors Community Healthcare Inc. for $22.5 million.

Rating History

RATING DATE	RATING	RATING ACTION
25 MAR 1993	Baa	ASSIGNED
15 NOV 1996	Baa3	MODIFIED
22 JUN 1998	Ba3	DOWNGRADED
17 AUG 1998	B1	DOWNGRADED
20 NOV 1998	Caa3	DOWNGRADED
6 OCT 1999	Ca	DOWNGRADED
25 JUL 2006	—	WITHDRAWN

HOUSING FINANCE

Connecticut Housing Authority, CT

- CUSIP: 207747KS4
- Default Date: July 1, 1994
- Obligor: Connecticut Housing Authority
- Issuer: Connecticut Housing Authority
- Defaulted Bonds: Mortgage Revenue Bonds (New Haven FHA-Insured Projects); $4.8 million of debt affected
- Cause of Default: Delinquencies and defaults on the loans
- Recovery: Not available.

Connecticut Housing Authority defaulted on a debt service payment due in July 1, 1994 on its Mortgage Revenue Bonds (New Haven FHA-Insured Projects).

The bonds were issued to finance multi-family housing projects. The repayment of the bonds was secured by the underlying mortgage loans that were insured by FHA pursuant to Section 203(k) of the National Housing Act. Due to delinquencies and defaults on the loans, lengthy foreclosure proceedings, and less than full payment from HUD on the defaulted loans, the Authority was not able to make its required debt service payment.

Rating History - Not Available

Tarrant County Housing Finance Corporation

- CUSIP: 876394CD7
- Default Date: November 15, 1999
- Obligor: Tarrant County Housing Finance Corporation, TX
- Issuer: Tarrant County Housing Finance Corporation
- Defaulted Bonds: Home Mortgage Revenue Bonds, Series 1983A
- Cause of Default: Asset deterioration, mortgage insurer cancelled all policies
- Recovery: Not Available.

Tarrant County Housing Finance Corporation defaulted on its Home Mortgage Revenue Bonds, 1983 Series A on November 15, 1999 when it failed to make a required redemption payment to bondholders.

The bonds were issued to finance a pool of single family mortgage loans. Many of the mortgage loans were originally covered by Primary Mortgage Insurance policies issued by Ticor Mortgage Insurance Company. A mortgage pool policy was also issued by Ticor. Ticor began experiencing financial difficulties in early 1986 and in 1988 all mortgage guarantee policies issued by Ticor were cancelled. The pool suffered significant asset deterioration as a result of defaulted loans that were not covered by insurance.

Rating History

RATING DATE	RATING	RATING ACTION
27 APR 1983	Aa	ASSIGNED
10 MAR 1986	Ba1	DOWNGRADED
8 MAR 1889	Ba	DOWNGRADED
16 NOV 1994	B	DOWNGRADED
9 DEC 1997	B3	REFINED
25 JUN 1999	Caa3	DOWNGRADED
2 SEP 2005	C	DOWNGRADED

MOODY'S RATED MUNICIPAL DEFAULTS, 2001-2006

NON-GO OBLIGATIONS OF STATE AND LOCAL GOVERNMENT

Cicero Local Development Corporation, NY

- CUSIP: 171731AD4
- Default Date: November, 2003
- Obligor: CLDC
- Issuer: CLDC (pledged by the Town of Cicero)
- Defaulted Bonds: Revenue Annual Lease Appropriation bonds, Series 2001A; $15.3 million of debt affected
- Cause of Default: Operating losses; The Town of Cicero failed to honor its lease obligation to cure a $244,000 deficiency in the bond fund. Subsequently the Town of Cicero failed to include appropriation for the least in its 2004 budget, leading to a second default
- Recovery: Approximately 10.3% (Source: Bloomberg)

Cicero Local Development Corporation (CLDC) defaulted on its Revenue Annual Lease Appropriation bonds, Series 2001A in November 2003 when it failed to make a required payment to bondholders.

Cicero Local Development Corporation signed an agreement for construction of two ice rinks, a recreational center, as well as residential and commercial developments. Although the construction was completed in 2002, CLDC did not realize any revenues from the project due to overestimated utilization projections. As the result of its poor operating performance, CLDC's reserve fund was depleted following the November 2002 and May 2003 debt service payments. CLDC was in discussions with a developer for a land sale expected to close prior to November 1, which the issuer's counsel reported fell through on October 27 with no additional source of revenue anticipated prior to November 1. The Town of Cicero, although legally required, failed to honor its lease obligation to cure a $244,000 deficiency in the bond fund, causing a missed payment to bondholders on November 1, 2003.

The Town of Cicero subsequently fulfilled its obligation under the lease and cured the November 1 debt service deficiency, but failed to include the appropriation for the lease in its 2004 budget. Consequently, funds were not available to meet the debt service payment due in May 2004, inducing CLDC's second default.

On October 28, 2005 the Trustee commence a foreclosure sale on the mortgages securing the obligations, generating approximately $2,000,000. Ultimately, the bondholders recovered approximately 10.3% or $1.57 million of the $15.3 million of debt outstanding.

Rating History

RATING DATE	RATING	RATING ACTION
25 MAY 2001	Baa2	ASSIGNED
23 SEP 2003	Ba1	DOWNGRADED
28 OCT 2003	Ba2	DOWNGRADED
4 NOV 2003	Caa1	DOWNGRADED
13 FEB 2004	C	DOWNGRADED

NOT-FOR-PROFIT HEALTHCARE

Citizens' General Hospital, PA

- CUSIP: 961008GD5
- Default Date: First Quarter, 2001
- Obligor: Citizens' General Hospital (CGH)
- Issuer: Westmoreland County Industrial Development Authority, PA
- Defaulted Bonds: Series 1998; $30 million of debt affected
- Cause of Default: Operating losses
- Recovery: Full repayment of principal and accrued interest (Source: Bloomberg)

In the first quarter of 2001, Citizens' General Hospital (CGH) defaulted on approximately $30 million Series 1998 bonds issued through the Westmoreland County Industrial Development Authority.

CGH was a small primary and secondary care facility located in New Kensington, Pennsylvania. Due to its small size and pressures stemming from the highly competitive Pittsburgh healthcare market, the hospital incurred several years of sizable operating losses. As a result of the hospital's poor performance, CGH shut down operations on November 4, 2001.

In the beginning of 2001, a forbearance agreement was signed by CGH, requiring the hospital to transfer all available and future funds directly to the bond trustee for the benefit of bondholders. Consequently, by August 2003, CGH bondholders were fully repaid all owed principal and accrued interest.

Rating History

RATING DATE	RATING	RATING ACTION
13 NOV 1998	Baa3	ASSIGNED
5 FEB 2001	Ba3	DOWNGRADED
7 NOV 2001	B1	DOWNGRADED
2 AUG 2002	—	WITHDRAWN

Genesee Hospital, NY

- CUSIP: 610755PP9
- Default Date: May 2001
- Obligor: Genesee Hospital
- Issuer: Monroe County Industrial Development Agency, NY
- Defaulted Bonds: Series 1991A tax-exempt and Series 1991B taxable; $32.5 million of debt affected
- Cause of Default: Operating losses and overspending on capital
- Recovery: Final resolution expected by April 2007 (tender offer extended for most of the bonds from the two large institutional holders)

In May 2001, Genesee Hospital defaulted on approximately $32.5 million of its Series 1991A tax-exempt and Series 1991B taxable bonds issued through the Monroe County Industrial Development Agency (NY).

Starting in 1998, Genesee Hospital recorded operating losses of $15 million in 1998, $6 million in 1999 and $18.5 million in 2000. Due to large operating losses, ViaHealth, Genesee's parent company, announced that it would be shutting down the hospital in the second quarter of 2001.

Although certain bank loans were guaranteed by ViaHealth, neither series of the 1991 bonds were guaranteed, and while ViaHealth is also the parent of Rochester General Hospital, neither entity is legally obligated on Genesee's debt. The company was legally dissolved and certain unsecured creditors were paid in January 2007. All of Genesee's outstanding collateral is expected to be liquidated and bondholders are expected to receive final payouts by April 2007.

Rating History

RATING DATE	RATING	RATING ACTION
20 NOV 1991	A	ASSIGNED
28 APR 1995	Baa	DOWNGRADED
20 OCT 1995	B1	DOWNGRADED
4 FEB 1999	B2	DOWNGRADED
20 OCT 1999	B3	DOWNGRADED
3 APR 2001	Caa2	DOWNGRADED
28 JUL 2006	—	WITHDRAWN

Metro Health Center, PA

- CUSIP: 295200ND7
- Default Date: July 01, 2002
- Obligor: Metro Health Center
- Issuer: Erie County Hospital Authority, PA
- Defaulted Bonds: Series 1992; $9 million of debt affected
- Cause of Default: Low liquidity levels and unprofitable operations
- Recovery: Approximately 21% recovery (Source: Trustee notice to bondholders)

On July 1, 2002 Metro Health Center, PA declared bankruptcy and defaulted on its $9.9 million Series 1992 Hospital Revenue Bonds issued through Erie County Hospital Authority. The trustee allowed Metro Health to attempt to reorganize and operate as a debtor in possession in bankruptcy, rather than immediately seeking its liquidation.

Metro Health Center was the smallest hospital in a highly competitive market, surrounded by two large tertiary hospitals and a similarly sized osteopathic hospital. With two large viable hospitals in the vicinity, there was little need in the community for the services provided by Metro Health. Due to a 17% decline in inpatient admissions and a 19% decline in revenues between 1998 and 2001, Metro Health had to tap into its cash reserves to fund continuing operations. As a result of the hospital's low liquidity levels and unprofitable operations, Metro Health Center closed its doors effective July 1, 2003.

On June 6, 2005, the bondholders of the defaulted Series 1992 bonds received approximately $910 of principal and interest for every $5,000 bond (representing about 18% recovery.) On September 15, 2005, after liquidation of the hospital's collateral, the bond Trustee declared a final payment to bondholders of $110.67 for each $5000 bond. Interest payments of $17.67 and $17.98 were made for each $5000 bond with maturities of 2012 and 2022, respectively. As the result of that liquidation payment, bondholder's total principal and accrued interest recovery rate was approximately 21%.

Rating History

RATING DATE	RATING	RATING ACTION
13 MAY 1992	Baa	ASSIGNED
7 APR 1995	Ba	DOWNGRADED
15 NOV 1996	Ba3	REFINED
18 JUN 1997	B1	DOWNGRADED
11 JUL 2002	Ca	DOWNGRADED
16 SEP 2005	—	WITHDRAWN

St. Francis Medical Center, PA

- CUSIP: 04232LAN5
- Default Date: November 2002
- Obligor: St. Francis Medical Center
- Issuer: Allegheny County Hospital Development Authority, PA
- Defaulted Bonds: $50 million of AMBAC-insured Series 1992 bonds; $29 million of uninsured Series 1997 bonds. St. Francis Medical Center also acted as a guarantor to St. Francis Hospital of New Castle (which defaulted on $15 million of its Series 1992 bonds) and St. Francis Health Care Services (defaulted on approximately $3 million of its Series 1993 bonds)
- Cause of Default: Operating losses
- Recovery: With the exception of the Series 1992 St. Francis Medical Center bonds, which were insured by Ambac and paid in full, the final recovery for the bondholders was less than 100%. (Source: Moody's reports)

In November 2002, St. Francis Medical Center defaulted on debt service payment on its insured Series 1992 bonds (approximately $50 million) and its uninsured Series 1997 bonds (approximately $29 million) issued through Allegheny County Hospital Development Authority. St. Francis Medical Center also acted as a guarantor to St. Francis Hospital of New Castle (which defaulted on $15 million of its Series 1992 bonds) and St. Francis Health Care Services (defaulted on approximately $3 million of its Series 1993 bonds.)

Partially due to challenges associated with operating in a very competitive Pittsburgh market, St. Francis Medical Center experienced increasing operating losses, and growing dependence on investment income to offset operating deficits. Prompted by a steady decline in the system's cash position, in August 2002, St. Francis Medical Center entered into an asset purchase agreement with regional organizations to purchase certain fixed assets of the system.

A partial distribution of principal and accrued interest of approximately $2,447.03 per $5000 bond was paid to bondholders on November 17, 2003. A settlement with creditors was reached in December 2003 and a final distribution of settlement proceeds was made in January of 2004. With the exception of the Series 1992 St. Francis Medical Center bonds, which were insured by Ambac and paid in full, the final recovery for the bondholders was less than 100%.

Rating History

RATING DATE	RATING	RATING ACTION
1 JAN 1992	A	ASSIGNED
15 NOV 1996	A3	REFINED
16 MAR 1999	Baa1	DOWNGRADED
17 APR 2000	Ba2	DOWNGRADED
19 APR 2001	Ba3	DOWNGRADED
22 MAR 2002	B3	DOWNGRADED
1 MAR 2004	Caa1	DOWNGRADED
2 MAR 2004	—	WITHDRAWN

Mercy Hospital and Medical Center, IL

- CUSIP: 45200KNC8 and 45200LEL6
- Default Date: January 2, 2004
- Obligor: Mercy Hospital and Medical Center
- Issuer: Illinois Health Facilities Authority
- Defaulted Bonds: Series 1992 and 1996; $63 million of debt affected
- Cause of Default: Weak cash management
- Recovery: Default cured in full on Feb 17, 2004 (Source: Trustee notices to bondholders)

On January 2, 2004, Mercy Hospital and Medical Center defaulted on principal payments due on its Series 1992 and Series 1996 bonds issued by the Illinois Health Facilities Authority.

In the beginning of 2000, Mercy Hospital experienced a decline in both liquidity and operating performance. In addition, management turnover was high, leading to lack of focus and consistency which may have contributed to the default. At year-end of 2003, the Mercy Hospital maintained approximately $6 million in its Debt Service Reserve Fund (DSRF), and had transferred $2.1 million into the Bond Fund to pay for the upcoming interest due on January 2, 2004. While Mercy had hoped for the bond trustee to tap the DSRF to disburse the $3,505,000 principal payment to bondholders, the trustee had the option not to do so, and in fact, did not tap the DSRF, resulting in a payment default. Moody's estimates that Mercy had approximately $15 million of unrestricted cash on hand as of January 2, 2004, sufficient to have transferred the principal amount due to the trustee, thereby avoiding default.

Following the January 2, 2004 default, Mercy transferred $5,303,005.41 to the trustee derived from the sale of its two building properties. On February 17, 2004, the trustee made the full repayment of principal ($3,505,000) and accrued interest (in the amount of $29,989.44) owed to bondholders, curing the January 2, 2004 default. In April 2005, Mercy retired all of its outstanding rated debt with proceeds derived from bank loans and asset sales.

Rating History

RATING DATE	RATING	RATING ACTION
14 OCT 1992	A	ASSIGNED
9 MAY 1994	Baa1	DOWNGRADED
11 FEB 1999	Baa2	DOWNGRADED
18 JUL 2000	B2	DOWNGRADED
9 JAN 2004	Caa1	DOWNGRADED
9 SEP 2005	—	WITHDRAWN

National Benevolent Association (NBA), MO

- CUSIP: Multiple
- Default Date: February 16, 2004
- Obligor: National Benevolent Association
- Issuer: Multiple
- Defaulted Bonds: Debt of National Benevolent Association and 25 affiliates; approximately $153 million of debt affected
- Cause of Default: Unsuccessful operations and losses in aggressive investment portfolio
- Recovery: 100% recovery of interest and principal paid in April 2005 (Source: Trustee notice to bondholders)

On February 16, 2004, National Benevolent Association (NBA), and 25 of its affiliates voluntarily filed to seek bankruptcy protection under Chapter 11 of the Bankruptcy Code. The bankruptcy filing marked one of the largest non-for-profit enterprises to file for Chapter 11. At the time of bankruptcy filing, NBA had approximately $153 million of Moody's rated debt outstanding issued primarily to finance NBA's expansion of its senior care facilities. Unprofitable operations of its senior living facilities coupled with losses incurred due to a stock market decline, forced NBA to file for bankruptcy protection.

Pursuant to the Chapter 11 re-organization plans, NBA sold some of its senior living facilities and other assets to pay off its creditors. Payment from the sale proceeds covered 100% of outstanding principal, 100% of accrued interest through the February 16, 2004 bankruptcy filing, and interest payments at rates ranging from 2.17% to 2.4% for the period from February 16, 2004 to April 18, 2005.

Rating History - for a representative series, City of Indianapolis, IN, Series 1992 (Robin Run Village)

RATING DATE	RATING	RATING ACTION
9 OCT 1992	Baa1	ASSIGNED
13 AUG 1999	Baa2	DOWNGRADED
9 JUL 2002	Baa3	DOWNGRADED
9 JUN 2002	Ba2	DOWNGRADED
4 SEP 2003	B3	DOWNGRADED
2 DEC 2003	Caa1	DOWNGRADED
9 DEC 2003	Ca	DOWNGRADED
10 MAY 2005	—	WITHDRAWN

Fort Worth Osteopathic Hospital, TX

- CUSIP: 875906HP7
- Default Date: August, 2004
- Obligor: Fort Worth Osteopathic Hospital
- Issuer: Tarrant County Health Facilities Development Corporation TX
- Defaulted Bonds: MBIA insured Series 1993, Series 1996 and Series1997 bonds totaling $79.7 million; $7.1 million of Series 1993 bonds were uninsured
- Cause of Default: Operating losses
- Recovery: Uninsured bondholders recovered 21% of principal and interest (Source: Moody's files)

In August of 2004, Fort Worth Osteopathic Hospital defaulted on its outstanding debt, including Series 1997, Series 1996 and 1993 bonds issued through the Tarrant County Health Facilities Development Corporation. The default affected $79.7 million of debt, of which $7.1 million was uninsured.

Primarily due to low healthcare reimbursement rates and its small size, compared to nearby hospital systems, Fort Worth Osteopathic Hospital experienced severe financial difficulties since the late 1990's. Facing insufficient operating funds, the hospital sought partnerships with other established hospital systems. However, when negotiations concerning a potential merger failed, the hospital closed its doors on October 10, 2004.

As the result of the proceeds collected from post-default liquidation, the recovery rate for bondholders holding the uninsured Series 1993 bonds was approximately 21% of the principal and interest due.

Rating History

RATING DATE	RATING	RATING ACTION
5 JAN 1993	Baa	ASSIGNED
15 NOV 1996	Baa2	REFINED
25 JAN 2000	Baa3	DOWNGRADED
29 SEP 2004	B3	DOWNGRADED
14 OCT 2004	Caa3	DOWNGRADED
11 FEB 2005	C	DOWNGRADED
9 NOV 2006	—	WITHDRAWN

HOUSING FINANCE

Yorkshire Development Project, NE

- CUSIP: 639673HU
- Default Date: October 1, 2002
- Obligor: Yorkshire Development LTD
- Issuer: Nebraska Investment Finance Authority
- Defaulted Bonds: Multi-Family Housing Revenue Bonds, Series 1993; $1,500,000 of debt affected
- Cause of Default: Loss of Section 8 subsidy for many units as a result of poor property condition
- Recovery: Bondholders recovered 100% of principal (Source: Bloomberg)

On October 1, 2002, bonds issued through the Nebraska Investment Finance Authority defaulted due to a failure to make a debt service payment.

The bonds were issued to finance the acquisition and rehabilitation of 63 housing units which were subsidized by Section 8 Housing Assistance Payments from HUD in Omaha, Nebraska in June 1993. By 1998, many units in the project had fallen into disrepair and 20 of the units failed to meet the local housing authority's physical inspection standards, rendering them ineligible to receive the Section 8 subsidy. The unwillingness and inability of the property owners to repair the debilitated housing units led to the project's further financial deterioration and payment default on $140,000 of principal and $15,618.75 of interest due October 1, 2002.

The final distribution occurred after the project was sold on May 2, 2003. Bondholders recovered 100% of principal.

Rating History

RATING DATE	RATING	RATING ACTION
9 JUL 1993	A	ASSIGNED
18 AUG 1997	A2	REFINED
17 APR 1998	B1	DOWNGRADED
16 DEC 2002	C	DOWNGRADED
15 JUL 2003	—	WITHDRAWN

Meadows/ Phoenix Project, IN

- CUSIP: 455261QE
- Default Date: July 1, 2003
- Obligor: Quinn I Limited Partnership
- Issuer: Indianapolis Economic Development Authority
- Defaulted Bonds: City of Indianapolis Economic Development Revenue, Series 1993A; $3,600,000 of debt affected
- Cause of Default:Low occupancy due to location and crime-related history
- Recovery: 4% for Series 1993A, maturing 7/1/2004, 4% for Series 1993A, maturing 7/1/2009, 4% for Series 1993A, maturing 7/1/2014, and 5% for Series 1993A, maturing 7/1/2023 (Source: Bloomberg)

On July 1, 2003, bonds issued through the Indianapolis Economic Development Authority defaulted when debt service payments were missed.

The bonds were issued to fund The Meadows Section 8 Assisted Project (later renamed the Phoenix Project), a 330 – unit apartment project in urban Indianapolis. Several factors contributed to the financial difficulties that ultimately led to default on debt service payment. The project is located in an economically depressed, high-crime region. The occupancy rate was impacted by the location of the project, as the occupancy rate fell to 75% after several murders occurred on the property in 1997 and occupancy fluctuated between 70% and 85% in subsequent years. Significant capital improvement expenses and high turnover costs added to financial difficulties. The Debt Service Reserve Fund was depleted by July 2003, and the property entered into monetary default under the mortgage documents. Without sufficient funds to cover debt expenses, the bonds defaulted.

On November 30, 2005, distributions were made on Series 1993A bonds of varying dates of maturity. The average rate of recovery on the bonds was 4.37%.

Rating History

RATING DATE	RATING	RATING ACTION
22 DEC 1993	A	ASSIGNED
22 JUL 1997	B2	DOWNGRADED
23 DEC 1999	Caa3	DOWNGRADED
9 FEB 2004	Ca	DOWNGRADED
13 JAN 2006	—	WITHDRAWN

Lakeview Apartments, TX

- CUSIP: 89438NAA
- Default Date: July 1, 2003 (Series 2001C and Series 2001D); July 1, 2005 (Series 2001A)
- Obligor: Agape Austin Area Housing, Inc.
- Issuer: Travis County Housing Finance Corporation
- Defaulted Bonds: Travis County Housing Finance Corporation Multifamily Housing Revenue Bonds, Senior Series 2001A, Junior Series 2001C and Subordinate Series 2001D; $27,690,000 of debt affected
- Cause of Default: Adverse rental market conditions
- Recovery: Senior bondholders recovered 8%; Junior bondholders recovered 3%; Subordinate bondholders recovered less than 1%. (Source: Trustee notice to bondholders)

On July 1, 2003, Series 2001C and 2001D issued by the Travis County Housing Finance Corporation defaulted due to lack of debt service payment. On July 1, 2005, Series 2001A defaulted due to missed payments as well.

In December 2001, the bonds were sold to finance the acquisition and rehabilitation of the Lakeview Apartments Project, a 504-unit project in Austin, Texas. Initially, revenues were strong, due to sufficient market demand, the presence of an experienced management team, and the property's good physical condition. However, by July 2002, revenues had fallen after a significant decrease in occupancy caused by a downturn in the Austin economy and a softening in demand for multifamily affordable housing. Revenues became insufficient to cover the full debt service payments and each Debt Service Reserve Fund was tapped. By July 2003, the Debt Service Reserve Funds for Series 2001C and Series 2001D were insufficient to cover the full payment due to bondholders. Persistent financial deterioration led to a Series 2001A default on January 1, 2005.

On June 7, 2005, the final distribution to bondholders provided a recovery of 8% for Senior Series 2001A, 3% for Junior Series 2001C, and less than 1% for Subordinate Series 2000D.

Rating History – Series 2001A and B (senior)

RATING DATE	RATING	RATING ACTION
29 NOV 2001	A3	ASSIGNED
7 NOV 2002	Baa2	DOWNGRADED
20 MAY 2003	Ba1	DOWNGRADED
28 JUL 2003	B3	DOWNGRADED
5 MAY 2004	Caa2	DOWNGRADED
20 OCT 2005	—	WITHDRAWN

Rating History – Series 2001C (junior)

RATING DATE	RATING	RATING ACTION
29 NOV 2001	Baa3	ASSIGNED
7 NOV 2002	Ba2	DOWNGRADED
20 MAY 2003	B1	DOWNGRADED
28 JUL 2003	Ca	DOWNGRADED
20 OCT 2005	—	WITHDRAWN

Rating History – Series 2001D (subordinate)

RATING DATE	RATING	RATING ACTION
29 NOV 2001	Ba1	ASSIGNED
7 NOV 2002	Ba3	DOWNGRADED
4 MAR 2003	B3	DOWNGRADED
28 JUL 2003	Ca	DOWNGRADED
20 OCT 2005	—	WITHDRAWN

Fair Oaks Apartments, TX

- CUSIP: 876394NJ
- Default Date: January 1, 2004
- Obligor: Maple Avenue Economic Development Corporation (MAEDC)
- Issuer: Tarrant County Housing Finance Corporation
- Defaulted Bonds: Tarrant County Housing Finance Corporation Multifamily Housing Revenue Bonds (Fair Oaks Apartment Project) Senior Series 2000A and 2000B, Junior Series 2000C and Junior Subordinate Series 2000D; $8,785,000 of debt affected
- Cause of Default: Adverse rental market conditions
- Recovery: Senior Series bondholders recovered 70.32%; Junior Series bondholders recovered 1.69%; Junior Subordinate Series bondholders recovered 1.31%. (Source: Bloomberg)

On January 1, 2004, the bonds issued through the Tarrant County Housing Finance Corporation defaulted due to failure to make debt service payment.

The Maple Avenue Economic Development Corporation (MAEDC) issued bonds through the Tarrant County Housing Finance Corporation to finance the Fair Oaks Apartment Project. Fair Oaks was an affordable housing project located in Euless, Texas. By December 2002, the financial health of Fair Oaks had deteriorated primarily due to adverse rental market pressures and low rental revenue. New luxury apartment units became available in the Tarrant County submarket, and offered amenity packages and move-in specials that forced Fair Oaks to make deep pricing concessions in attempt to maintain occupancy. Although the occupancy rate stabilized at approximately 90%, the project's rental revenue was insufficient to cover both the maintenance and debt service expenses of the property. By January 2004 and after multiple taps on Debt Service Reserve Funds, available funds were insufficient to pay the full interest due to bondholders.

On December 19, 2005, the final distribution was made by the Tarrant County Housing Finance Corporation using proceeds from the foreclosure sale. Bondholders of Senior Series 2000A and 2000B recovered 70% on principal, Series 2000C recovered 2% and Series 2000D recovered 1%.

Rating History – Series 2000A and B (senior)

RATING DATE	RATING	RATING ACTION
27 JUN 2000	A3	ASSIGNED
15 APR 2003	Baa1	DOWNGRADED
19 AUG 2003	Ba1	DOWNGRADED
26 NOV 2003	B1	DOWNGRADED
23 APR 2004	Ca	DOWNGRADED
14 FEB 2006	—	WITHDRAWN

Rating History – Series 2000C (junior)

RATING DATE	RATING	RATING ACTION
27 JUN 2000	Baa3	ASSIGNED
15 APR 2003	Ba1	DOWNGRADED
19 AUG 2003	B2	DOWNGRADED
26 NOV 2003	Caa1	DOWNGRADED
23 APR 2004	C	DOWNGRADED
14 FEB 2006	—	WITHDRAWN

Rating History – Series 2000D (subordinate)

RATING DATE	RATING	RATING ACTION
27 JUN 2000	Ba3	ASSIGNED
15 APR 2003	B2	DOWNGRADED
26 JUN 2003	B3	DOWNGRADED
26 NOV 2003	Caa2	DOWNGRADED
23 APR 2004	C	DOWNGRADED
14 FEB 2006	—	WITHDRAWN

Magnolia Park Apartments, GA

- CUSIP: 184160HV4
- Default Date: May 2004
- Obligor: Magnolia Park Housing Foundation, LLC
- Issuer: Clayton County Housing Authority
- Defaulted Bonds: Multifamily Housing Revenue Bonds, Series 1999A; $10,100,000 of debt affected
- Cause of Default: Adverse rental market conditions, insufficient proceeds from foreclosure sale to cover outstanding principal and interest
- Recovery: Approximately 67% of principal and interest. (Source: Moody's issuer report dated May 19, 2004)

In May 2004, Clayton County Housing Authority's Series 1999A bonds defaulted when bondholders recovered less than the full principal amount outstanding after the foreclosure of the property.

The bonds were secured by the revenue from the Magnolia Park Apartments project, a 328-unit project located 12 miles south of Atlanta. The project was built in 1972 and housed low to moderate income tenants. The stable Atlanta rental market, healthy local economy and high occupancy rate contributed to the initial strength of the project. However, after a downturn in the local economy, the occupancy rate of the project fell to 73% by December 2002. Rent concessions, bad debt expenses and unbudgeted legal fees further reduced the project's revenue. The trustee tapped the Debt Service Reserve Fund in July 2003 and December 2003 to make the required debt service payments. The bonds defaulted in May 2004, before the scheduled July 2004 debt service payment, because the project was foreclosed upon and sold for less than the outstanding principal and interest due to bondholders.

After the sale of the project in May 2004, bondholders recovered approximately 67% of outstanding principal and interest from the proceeds of the project's sale.

Rating History

RATING DATE	RATING	RATING ACTION
23 JUN 1999	Baa1	ASSIGNED
19 MAR 2002	Baa2	DOWNGRADED
25 MAR 2003	Ba1	DOWNGRADED
14 JUL 2003	B2	DOWNGRADED
4 FEB 2004	Caa1	DOWNGRADED
19 MAY 2004	Caa3	DOWNGRADED

Westridge Apartments, TX

- CUSIP: 876394PV
- Default Date: June 1, 2004 (Subordinate Series 2001C); June 1, 2005 (Series 2001A, 2001B)
- Obligor: PWA Coalition of Dallas, Inc.
- Issuer: Tarrant County Housing Finance Corporation
- Defaulted Bonds: Tarrant County Housing Finance Corporation, Texas, Housing Revenue Bonds (Westridge Apartments Project) Senior Series 2001A and 2001B, Subordinate Series 2001C; $5,600,000 of debt affected
- Cause of Default: Adverse rental market conditions
- Recovery: Pending

On June 1, 2004, Series 2001C issued by the Tarrant County Housing Finance Corporation defaulted due to lack of interest payment. On June 1, 2005, Series 2001A and 2001B defaulted due to missed payment as well.

The default on bonds secured by the Westridge Apartments Project, located in Fort Worth, Texas, was primarily due to adverse rental market pressures and low rental revenue. Although Westridge had maintained an occupancy rate near 90%, this was accomplished by making deep concessions, offering move-in specials and other incentives that decreased rental revenue. Concurrently, the project's utility expenses increased dramatically and reduced operating income to levels insufficient to afford the capital repairs needed by many apartment units. The Series 2001C Debt Service Reserve Fund was tapped to make interest payments on December 1, 2003. Monetary default occurred when Series 2001C interest payments were not made on June 1, 2004. Series 2001A and 2001B defaulted one year later after continued financial difficulties.

To date, PWA Coalition of Dallas, Inc. has entered into a "Renovation Plan" in attempt to revive the financial health of Westridge Apartments. There has been no indication of the final distribution to bondholders.

Rating History – Series 2001A and B (senior)

RATING DATE	RATING	RATING ACTION
11 JUN 2001	A3	ASSIGNED
13 MAY 2003	Baa1	DOWNGRADED
19 AUG 2003	Baa3	DOWNGRADED
25 SEP 2003	Ba3	DOWNGRADED
19 Jul 2003	B2	DOWNGRADED
13 DEC 2004	Caa1	DOWNGRADED
13 AUG 2005	Caa3	DOWNGRADED
1 AUG 2006	Ca	DOWNGRADED

Rating History – Series 2001C (junior)

RATING DATE	RATING	RATING ACTION
11 JUN 2001	Baa3	ASSIGNED
13 MAY 2003	Ba1	DOWNGRADED
19 AUG 2003	B2	DOWNGRADED
25 SEP 2003	B3	DOWNGRADED
9 DEC 2003	Caa1	DOWNGRADED
9 JUL 2004	C	DOWNGRADED

Bay Club at Mesa Cove Project, AZ

- CUSIP: 566823QA
- Default Date: September 1, 2004
- Obligor: Bay Club Housing Corporation
- Issuer: Industrial Development Authority of the County of Maricopa
- Defaulted Bonds: Maricopa County Industrial Development Authority Multifamily Housing Revenue Bonds (Bay Club at Mesa Project) Subordinate Series 2000B; $2,200,000 of debt affected
- Cause of Default: Adverse rental market conditions, maintenance problems
- Recovery: 35% for Series 2000B (Source: Bloomberg)

On September 1, 2004, Maricopa County Industrial Development Bond Series 2000B defaulted when the issuer failed to make the debt service payment. Series 2000A was insured by MBIA and Series 2000C was unrated by Moody's.

The 472 – unit Bay Club affordable housing property was located in the Maricopa County rental market, which was a competitive market for affordable housing. High occupancy rates at Bay Club were achieved through rental discounts and other concessions. As a result, rental revenue was insufficient to cover the capital expenditures needed to repair mold, piping leaks and other maintenance problems, and many apartments were taken off the rental market because of such difficulties. Lack of income led the trustee to make debt service payments from the Series 2000B Debt Service Reserve Fund, and ultimately led to default on the Series 2000B bonds.

On November 25, 2005, the trustee made final distributions to bondholders following the sale of the property. Series 2000B bondholders recovered 35.47% of principal.

Rating History

RATING DATE	RATING	RATING ACTION
12 SEP 2000	Baa3	ASSIGNED
22 FEB 2002	Ba2	DOWNGRADED
17 JAN 2003	Ba3	DOWNGRADED
21 MAY 2003	B3	DOWNGRADED
4 SEP 2003	Caa2	DOWNGRADED
22 SEP 2004	Ca	DOWNGRADED
24 OCT 2005	C	DOWNGRADED
12 DEC 2005	—	WITHDRAWN

River Bend Apartments, FL

- CUSIP: 14052TAW
- Default Date: September 15, 2004
- Obligor: Wellington – Tampa LLC
- Issuer: Capital Trust Agency
- Defaulted Bonds: Multifamily Housing Revenue Bonds Senior Series 2002A, Taxable Series 2002B, Junior Series 2002C and Junior Subordinate Series 2002D; $14,600,000 of debt affected
- Cause of Default: Adverse rental market conditions
- Recovery: 99.7%. The Majority Senior Bondholder purchased nearly all of the senior bonds as well as all of the junior bonds and subordinate junior bonds. The Majority Senior bondholder took possession of the project in lieu of payment. The remaining Senior bondholders (approximately 5% of total bondholders) who did not sell their loans to the Majority Senior Bondholder received 94% recovery. (Source: Trustee notice to bondholders)

On September 15, 2004, Wellington – Tampa, LLC declared bankruptcy, affecting $14.6 million Multifamily Housing Revenue Bonds Series 2002 A-D issued through Capital Trust Agency, Florida.

The bonds were issued in September 2002 to finance the acquisition and rehabilitation of River Bend Apartments affordable housing complex. The 296 – unit project was located in Tampa, and all of the units were required to be rented to low income tenants. Between March and May 2004, the occupancy rate declined from 88% to 81%, primarily due to poor rental market conditions and poor management of the project. The project did not generate sufficient revenues to pay for routine maintenance expenses, and many apartments were taken offline due to the need for substantial structural repairs. An increasing level of deferred maintenance expenses amplified the financial difficulties caused by the decline in the occupancy rate. By August 2004, Wellington – Tampa had stopped forwarding project revenues to service its debt, and on September 15 filed for Chapter 11 bankruptcy protection.

After the default on the bonds, the majority senior bondholder purchased nearly all of the senior bonds as well as all of the junior bonds and subordinate junior bonds. The majority senior bondholder took possession of the project in lieu of payment. We classify this purchase as a 100% recovery. The remaining senior bondholders (approximately 5% of total bondholders) who did not sell their loans to the majority senior bondholder received 94% recovery. The combined recovery is 99.7%.

Rating History – Series A and B (Senior)

RATING DATE	RATING	RATING ACTION
3 SEP 2002	A3	ASSIGNED
6 APR 2004	Baa2	DOWNGRADED
28 MAY 2004	Ba1	DOWNGRADED
13 OCT 2004	Ca	DOWNGRADED
22 MAY 2006	—	WITHDRAWN

Rating History – Series C (Subordinate)

RATING DATE	RATING	RATING ACTION
3 SEP 2002	Baa3	ASSIGNED
6 APR 2004	Ba2	DOWNGRADED
28 MAY 2004	B1	DOWNGRADED
13 OCT 2004	C	DOWNGRADED
22 MAY 2006	—	WITHDRAWN

Rating History – Series D (Junior Subordinate)

RATING DATE	RATING	RATING ACTION
3 SEP 2002	Ba1	ASSIGNED
6 APR 2004	Ba3	DOWNGRADED
28 MAY 2004	B2	DOWNGRADED
13 OCT 2004	C	DOWNGRADED
22 MAY 2006	—	WITHDRAWN

Crossroads Apartments, TX

- CUSIP: 876394QE0
- Default Date: December 31, 2004
- Obligor:PWA Coalition of Dallas, Inc.
- Issuer: Tarrant County Housing Finance Corporation
- Defaulted Bonds:Multifamily Housing Revenue Bonds, Subordinate Series 2001C; $1,500,000 of debt affected
- Cause of Default: Adverse rental market conditions, unexpected rise in costs
- Recovery: Pending

On December 31, 2004, Tarrant County Housing Finance Corporation's Series 2001C bonds defaulted when bondholders did not receive principal and interest payments. Senior Series 2001A is insured by MBIA.

The bonds were issued to finance the acquisition and improvement of Crossroads Apartments, a 292-unit multifamily rental property located in Fort Worth, Texas. By July 2003, the project had begun to experience financial difficulties. The local affordable housing market had weakened, primarily due to competition from luxury housing complexes and low interest rates that encouraged prospective tenants to buy instead of rent housing. The cost of utilities rose unexpectedly. By June 2004, the project's revenues were insufficient to meet debt service requirements, and the trustee tapped and nearly depleted the subordinate Debt Service Reserve Fund to make the necessary debt service payments. The reserve fund was insufficient to make the full principal and interest payments due to subordinate bondholders on December 31, 2004.

To date, the Subordinate Series 2001C bonds remain in default. There has been no indication of a distribution to subordinate bondholders.

Rating History

RATING DATE	RATING	RATING ACTION
12 NOV 2001	Baa3	ASSIGNED
19 AUG 2003	Ba2	DOWNGRADED
26 SEP 2003	B3	DOWNGRADED
26 OCT 2004	Ca	DOWNGRADED
12 SEP 2005	C	DOWNGRADED

Legacy at Anderson Project, SC

- CUSIP: 837036CA
- Default Date: February 1, 2005
- Obligor: GF/Legacy Anderson, Inc.
- Issuer: South Carolina Jobs-Economic Development Authority
- Defaulted Bonds: South Carolina Jobs Economic Development Authority Multifamily Housing Revenue Bonds, Series 2002A and Series 2002B; $8,950,000 of debt affected
- Cause of Default: Unanticipated withdrawal of USDA Section 538 loan guaranty and decision by bond trustee not to use the Debt Service Reserve Fund to cover shortfalls
- Recovery: Initial Distribution on October 6, 2006: Series 2002A 86% – 89%; Series 2002B: 89% (Source: Trustee notice to bondholders)

On February 1, 2005, bond issued by the South Carolina Jobs-Economic Development Authority defaulted when bondholders did not receive debt service payments.

The bonds were issued to finance the acquisition and construction of a 102-unit senior housing facility in Anderson County, South Carolina. The security for the bonds was primarily provided by a mortgage loan guaranty from the United States Department of Agriculture Rural Development under its Section 538 Program. Although this guaranty provided the construction loan and the permanent loan for the project, the project did not meet the necessary conditions to secure the permanent loan according to the USDA. The USDA's interpretation of the regulations found that the permanent loan was not in force and could not be drawn upon to cover shortfalls in the project's mortgage. The lender challenged the USDA's interpretation of Section 538. In addition, the trustee decided that all moneys – including those in the Debt Service Reserve Funds – would be retained to serve the trustee's perception of the best long-term interest of the bondholders, and as a result the February 1, 2005 debt service was not made.

On October 6, 2006, the trustee made an initial distribution of $8,000,000 to bondholders using proceeds from the sale of the property. The distribution provided Series 2002A bondholders with recovery rates ranging from 85.8% to 89.3% of principal and interest outstanding. Series 2002B bondholders recovered 88.8% of principal and interest outstanding. A final distribution will be made when the project manager completes the final accounting.

Rating History

RATING DATE	RATING	RATING ACTION
6 SEP 2002	A1	ASSIGNED
1 FEB 2005	Caa1	DOWNGRADED
19 JUN 2006	Ca	DOWNGRADED

Ashton Place and Woodstock Apartments Project, TX

- CUSIP: 88271FAE
- Default Date: August 1, 2005
- Obligor: Agape Ashton/ Woodstock, Inc.
- Issuer: Texas State Affordable Housing Corporation
- Defaulted Bonds: Texas State Affordable Housing Corporation Multifamily Housing Revenue Bonds, Junior Series 2001C and Subordinate Series 2001D; $11,405,000 of debt affected
- Cause of Default: Adverse rental market conditions
- Recovery: Pending

On August 1, 2005, Series 2001C and Series 2001D issued by the Texas State Affordable Housing Corporation defaulted due to lack of debt service payment.

In July 2001, bonds were issued to acquire two apartment properties: Ashton Place in Galveston, Texas, and Woodstock in Arlington, Texas. Both properties were located in desirable neighborhoods and had records of consistent operating expenses and high occupancy rates. However, by July 2002, changes in the rental market had impaired the financial performance of the properties. Low interest rates encouraged homeownership and dampened affordable housing demand. Luxury housing complexes in the vicinity reduced their rental rates and attracted tenants away from Ashton Place and Woodstock. In response, both properties made large market concessions to attract and maintain tenants. Vacancies and concessions drained the financial performance of the properties to the point where full debt service on the Junior and Subordinate bonds went unpaid on August 1, 2005.

To date, the Series 2001C and Series 2001D remain in default. There has been no indication of the final distribution on the bonds.

Rating History – Series 2001C (junior)

RATING DATE	RATING	RATING ACTION
3 JUL 2001	Baa3	ASSIGNED
11 SEP 2003	Ba2	DOWNGRADED
22 APR 2005	Ca	DOWNGRADED
22 NOV 2006	C	DOWNGRADED

Rating History – Series 2001D (subordinate)

RATING DATE	RATING	RATING ACTION
3 JUL 2001	Ba3	ASSIGNED
11 SEP 2003	B2	DOWNGRADED
22 APR 2005	C	DOWNGRADED

River Falls Project, CO

- CUSIP: 051558AB0
- Default Date: January 1, 2006
- Obligor: American Opportunity Foundation
- Issuer: Housing Authority of the City of Aurora, Colorado
- Defaulted Bonds: Multifamily Housing Revenue Bonds, Subordinate Series 1999C; $2,045,000 of debt affected
- Cause of Default: Adverse rental market conditions, reluctance of trustee to tap debt service reserve fund
- Recovery: Pending

On January 1, 2006, Aurora Housing Authority's Series 1999C bonds defaulted when the debt service payment due to subordinate bondholders was not made by the trustee.

The bonds are secured by the revenue from the River Falls project, a 511-unit apartment complex which houses low income and market rate tenants and is located near Denver in Aurora, Colorado. By April 2004, the project had begun to experience financial difficulties. The local affordable housing market had softened, leading to lower occupancy, and the project's operating expenses had increased substantially. Rental revenues were used to pay for unforeseen capital expenditures, rising utility costs and various other expenses. The decrease in rental revenue available to service the bonds led to a shortfall in debt service coverage due on January 1, 2006. Although the subordinate debt service reserve fund was fully funded at this time, the trustee elected not to tap the reserve and allowed the subordinate bonds to go into default.

To date, the Subordinate Series 1999C bonds remain in default. There has been no indication of a distribution to subordinate bondholders.

Rating History

RATING DATE	RATING	RATING ACTION
1 JUN 1999	Baa3	ASSIGNED
2 FEB 2002	Baa2	UPGRADED
28 APR 2004	Baa3	DOWNGRADED
28 OCT 2004	B1	DOWNGRADED
24 OCT 2005	B3	DOWNGRADED
17 FEB 2006	Ca	DOWNGRADED
28 JUN 2006	C	DOWNGRADED

Legacy at Lehigh Project, FL

- CUSIP: 52349KBC9
- Default Date: June 1, 2006
- Obligor: N/A
- Issuer: Lee County Industrial Development Authority
- Defaulted Bonds: Revenue Bonds, Series 2003A and Series 2003B; $8,075,000 of debt affected
- Cause of Default: Operating losses, low occupancy rates
- Recovery: Pending

On June 1, 2006, Lee County Industrial Development Authority defaulted on its Series 2003A and Series 2003B bonds when only a partial interest payment was made to the bondholders.

The bonds were issued to finance the acquisition and construction of a 94-unit senior housing facility located in Lee County, Florida. As part of the project's financing, the Authority was relying on a loan guarantee from the United States Department of Agriculture (USDA) Rural Development. In order for the facility to qualify for a USDA Rural Development Section 538 guarantee, it was required to achieve a 90% occupancy rate for a period of 90 consecutive days. Although the project has improved its occupancy rate in the last year to approximately 88%, it still falls short to qualify for the USDA permanent loan guarantee program. As the project experienced operating losses, the Authority had to tap the Debt Service Reserve Fund throughout 2005, making only a partial interest payment to bondholders on June 1, 2006.

To date, the Series 2003A and Series 2003B bonds remain in default. The current outstanding amount for the bonds is $8,075,000 ($40,000 of Series 2003B were optionally redeemed on December 1, 2005). It is unclear whether USDA will reinstate the loan guarantee in the near future.

Rating History

RATING DATE	RATING	RATING ACTION
5 MAR 2003	A1	ASSIGNED
16 FEB 2005	B2	DOWNGRADED
19 JUN 2006	Caa3	DOWNGRADED

Cameron Crossing I and II projects, CA

- CUSIP: 396081AD3
- Default Date: June 1, 2006
- Obligor: Greenville Housing Finance LLC
- Issuer: Greenville Housing Finance LLC
- Defaulted Bonds: Taxable Mortgage Backed Revenue Bonds, Series 2003A; $14,355,000 of debt affected
- Cause of Default: Operating losses, low occupancy rates, depleted reserves
- Recovery: On June 20, 2006, the trustee paid debt service due and owing as of June 1, 2006 (Source: Moody's report)

On June 1, 2006, Greenville Housing Finance LLC defaulted on its Series 2003A bonds upon missing a debt service payment to the bondholders. This default was cured on June 20, 2006 when the trustee made a payment to bondholders in the amount of debt service that was missed.

The bonds were issued to finance the acquisition and construction of Cameron Crossing I and II, a 134-unit and a 64-unit multifamily rental housing community located in Greenville County, South Carolina. The current occupancy rate at the projects is approximately 75%, falling short to qualify for the USDA Section 538 permanent loan guarantee. The project continues to experience operating losses, primarily due to the low occupancy rates. The debt service reserve fund has been tapped throughout 2005 for debt service and is reported to be only 10% of the required reserve amount. Consequently, in May 2006, the project lender, Allied Mortgage Capital Corporation, filed a complaint for a foreclosure of the project.

Although no debt service payment was made to bondholders on June 1, the default was fully cured by the trustee on June 20th. The current outstanding amount for the bonds is $14,355,000.

Rating History

RATING DATE	RATING	RATING ACTION
18 JUL 2003	A1	ASSIGNED
16 FEB 2005	B2	DOWNGRADED
20 JUN 2006	Ca	DOWNGRADED

Appendix C: Derivation of Moody's Idealized Municipal Default Tables

In conjunction with the effort to further define the relationship between Moody's municipal bond ratings and Moody's global rating scale, we have developed an "idealized" cumulative default probability table for the municipal market. The idealized cumulative default rate table represents our prospective look at default probabilities and adjusts historical default data for statistical anomalies.

When combined with assumptions regarding average sub-sector loss severity, the idealized cumulative default table provides a useful starting point for the analysis of expected loss for portfolios of municipal bonds.

Moody's developed the idealized cumulative default table to further clarify our expectations surrounding default risk in the municipal market and for use in the models employed by our CDO, Financial Guarantor (FG), and Managed Funds analytic groups. Along with other risk measures and assumptions, idealized default rates are a key input in the various methodologies, including the Binomial Expansion Technique and the Monte Carlo Simulation-based CDOROMTM modeling, used by the Moody's Derivatives Group to calculate expected losses and rate an assortment of CDOs.

In Moody's FG model, default rates and expected recoveries factor into the estimation of the probability distribution of losses a guarantor would face under a very wide range of scenarios given the unique composition of its insurance portfolio. The FG model is used for the assessment of a guarantor's claims-paying ability, and is one of the pillars of its overall credit evaluation.

Both models drive the need for idealized default rates that include a level of robustness to stress. The fact that the municipal default data set contains limited observations compared to corporate data further strengthens the case for conservative assumptions on prospective default rates.

Moody's municipal finance idealized cumulative default rate table is based on a variety of adjustments of historical default data to reflect the considerations above. In addition, it makes use of statistical patterns in corporate defaults to smooth missing or "thin" municipal default data. Moody's has used a combination of historical information, indenture analysis, and estimates of market participants and analysts to approximate expected severity of loss given default for the different municipal sub-sectors.

Related Research

Special Comments:

Moody's US Municipal Bond Rating Scale, November 2002 (76553)

Moody's Introduces Corporate Equivalent Ratings for Municipal Obligations Under Swap and Cross Border Taxable Transactions, April 2003 (77844)

Request for Comment: Mapping of Moody's U.S. Municipal Bond Rating Scale to Moody's Corporate Rating Scale and Assignment of Corporate Equivalent Ratings to Municipal Obligations (97921)

Moody's U.S. Municipal Bond Rating Scale: Summary of Market Feedback (100478)

The Incorporation of Joint-Default Analysis into Moody's Corporate, Financial and Government Rating Methodologies (91617)

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