

SECTOR IN-DEPTH

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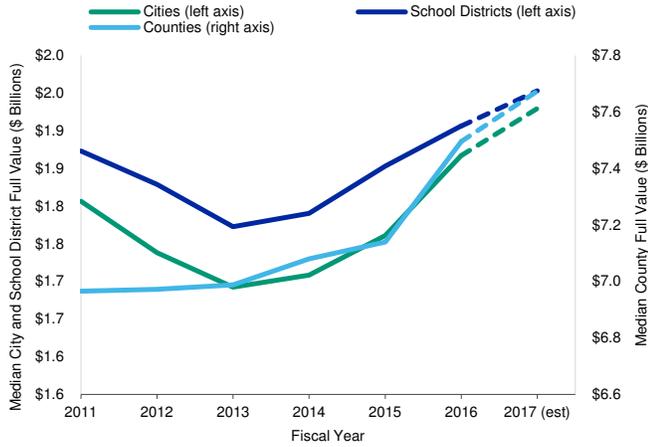
Medians – Property values key to stability, but pension burdens remain a challenge

Cities, counties and school districts continue to demonstrate stability underpinned by steady property tax growth, healthy reserves and solid liquidity, according to our 2016 medians data. Credit pressure surrounding growing pension burdens, however, remains a challenge for all three subsectors. The trends are consistent with our [stable outlook for local governments](#). (Basis for medians can be found on page 5.)

- » **Continued recovery of property valuations highlights sector stability.** In 2016 cities, counties and school districts posted median full value growth of 6.0%, 5.0% and 2.9%, respectively.
- » **Reserves increased across all subsectors as counties reversed a decline.** At 1.4% and 0.8%, cities and school districts had respective increases in median available fund balance as a percent of operating revenue. After a slight drop last year, counties experienced 0.3% growth.
- » **Liquidity remains healthy and mirrors reserve trends.** Median cash balances (measured as a percentage of operating revenue) increased from 2015 for all three subsectors, with cities rising to 36.9%, school districts to 36.7% and counties increasing to 26.8%. The county increase followed a slight decline in the prior year.
- » **Net direct debt as a percent of full value remained largely unchanged.** The lack of movement was caused by full value growth matching growth in debt. The median net direct debt as a percent of full value stood at 1.5% for school districts, 1.1% for cities and 0.5% for counties, respectively.
- » **Significant pension burdens remain a challenge for all subsectors.** Since 2012, the three-year average Moody's adjusted net pension liabilities (ANPL) in nominal dollars have increased by a median 66.1% for counties, 41.3% for school districts and 66.9% for cities. Rising pension costs will continue to strain operating budgets and pressure credit quality for local governments with large unfunded liabilities relative to revenues.

Exhibit 1

Full value continues to grow, underscoring sector stability



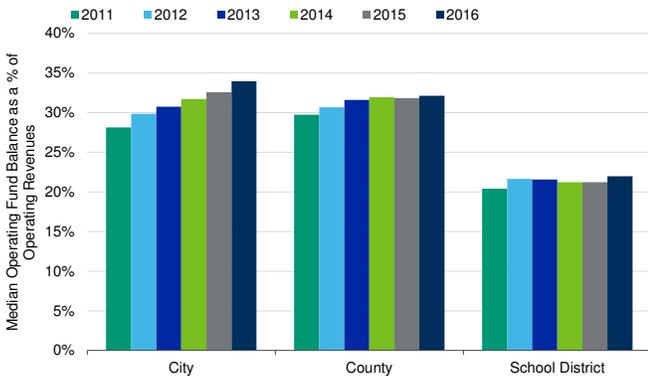
Source: Moody's Investors Service

Property valuations continue to recover

- » Full value growth demonstrates the health of cities, counties and school districts, with the metric rising by a median 6.0%, 5.0% and 2.9%, respectively.
- » Among the nation's largest issuers, [New York City](#) (Aa2 stable), [Los Angeles](#) (Aa2 stable) and [Chicago](#) (Ba1 negative) surpassed the median with each growing by over 6%.
- » Data from 2017 is likely to show continued full value growth due to appreciation of existing properties and new developments. Continued growth will boost property tax revenue.

Exhibit 2

Fund balance levels remain healthy



Source: Moody's Investors Service

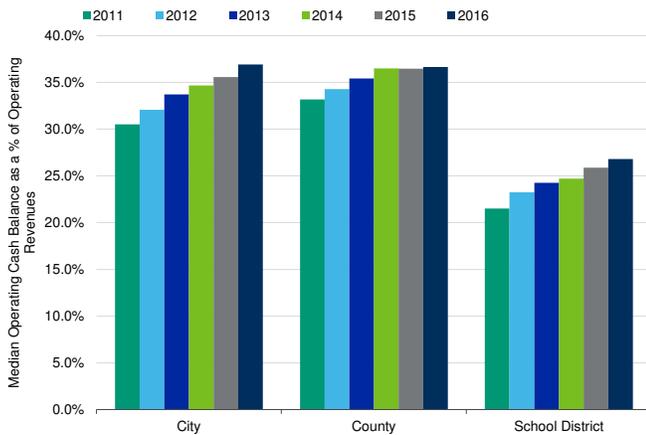
Reserves grew for all three subsectors as counties reversed a decline

- » Fund balances grew by a median 1.4% for cities and 0.8% for school districts.
- » Counties increased by 0.3% after a slight drop in 2017.
- » Reserves will likely remain healthy, although substantial growth will be hindered by increasing fixed costs associated with pension liabilities and outstanding capital needs.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

Exhibit 3

All subsectors exhibited year-over-year liquidity growth in 2016



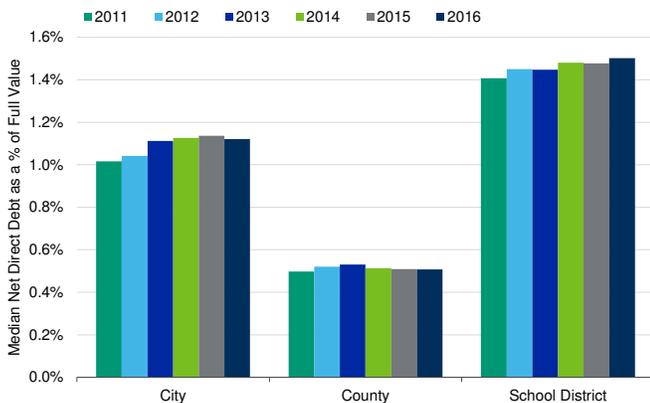
Source: Moody's Investors Service

Liquidity remains healthy and mirrors trends in reserves

- » Median cash balance as a percentage of revenue for cities, counties and schools stood at 36.9%, 36.7% and 26.8%, respectively. The county increase followed a slight decline in the prior year.
- » The median cash balance grew on a dollar basis by over 9% each for cities, counties and school districts.
- » We anticipate stable to improving cash levels across the local government subsectors, but growth will be limited by rising pension costs.

Exhibit 4

Debt levels largely unchanged as full value growth paralleled new debt issuances

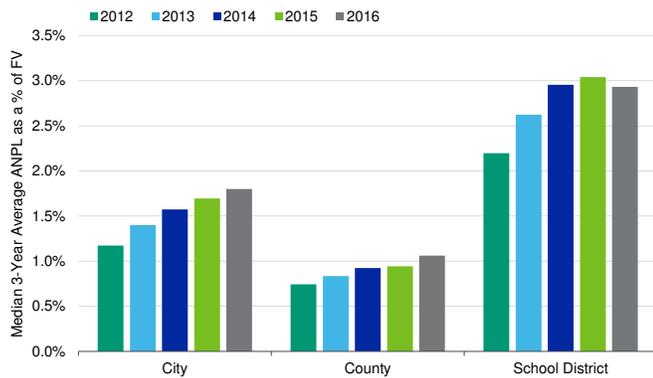


Source: Moody's Investors Service

Debt levels are flat relative to full value

- » Net direct debt as a percentage of full value remained largely flat in 2016. This was caused by full value growth matching growth in debt.
- » The median net direct debt as a percent of full value stood at 1.5% for school districts, 1.1% for cities and 0.5% counties.
- » Median net direct debt relative to operating revenues for 2016 was consistent with 2015 at 0.9x, 0.7x and 0.6x for cities, school districts and counties, respectively.

Exhibit 5
Elevated pension burdens strain cities, counties and school districts



FV stands for full value. ANPL stands for adjusted net pension liabilities.

Source: Moody's Investors Service

Significant pension burdens continue to weigh on cities, counties and school districts

- » Since 2012, Moody's adjusted net pension liabilities (ANPLs) have risen dramatically on both a nominal basis and relative to measures of governmental capacity to pay. The increases have roots in weak annual contributions, falling market-based discount rates and lackluster investment performances.¹
- » Since 2012, growth for the median three-year average ANPL in nominal dollars was 66.1% for counties, 41.3% for school districts and 66.9% for cities.
- » Rising pension costs will continue to strain operating budgets and pressure credit quality for local governments with large unfunded liabilities relative to operations.
- » Poor investment performance and sharp market discount rate declines will drive material ANPL spikes in fiscal year 2017, followed by moderate ANPL declines in fiscal 2018, primarily attributable to strong pension investment performance in calendar 2017.

Basis for medians

The medians are calculated from the Moody's-rated universe for local governments, which consists of approximately 2,800 cities, 900 counties and 3,500 school districts, for a total of 7,200 credits. This report conforms to our [US Local Government General Obligation Debt](#) rating methodology published in December 2016. As such, the medians presented here are based on the key metrics outlined in the methodology and the associated scorecard. The appendix in this report provides additional metrics broken out by sector, rating category and population.

We use data from a variety of sources to calculate the medians, many of which have differing reporting schedules. Whenever possible, we calculated these medians using available data for fiscal year 2016. However, there are some exceptions. Population data and median family income are derived from US Census Bureau American Community Survey estimates.

Medians for some rating levels are based on relatively small sample sizes. Therefore, these medians may be subject to potentially substantial year-over-year variation.

Our ratings reflect our forward-looking opinion derived from forecasts of financial performance and qualitative factors, as opposed to strictly historical quantitative data. Our expectation of future performance combined with the relative importance of certain metrics on individual local government ratings account for the range of values that can be found within each rating category.

Median data for prior years published in this report may not match last year's publication due to data refinement and changes in the sample sets used, as well as rating changes, initial ratings and rating withdrawals. The data for this report includes the addition of the debt service fund as an operating fund for fiscals 2011-16, so certain medians might differ from prior year reports.

The medians report with 2017 data will be published in the first quarter of calendar year 2019 and include updated medians for fiscal years 2012-17.

Appendix A

Exhibit 6

Six-Year History of Select Medians

Cities	2011	2012	2013	2014	2015	2016
Total Full Value (\$000)	\$1,806,556	\$1,738,086	\$1,692,417	\$1,708,496	\$1,760,838	\$1,867,050
Full Value Per Capita	\$90,635	\$87,089	\$85,152	\$85,207	\$87,392	\$89,200
Median Family Income (% of US Median)	111.9%	112.5%	112.7%	112.3%	112.6%	112.6%
Fund Balance as % of Revenues	28.1%	29.8%	30.8%	31.7%	32.6%	33.9%
5-Year Change in Fund Balance as % of Revenues	5.8%	6.5%	8.1%	9.4%	8.1%	7.8%
Cash Balance as % of Revenues	30.5%	32.1%	33.7%	34.7%	35.6%	36.9%
5-Year Dollar Change in Cash Balance as % of Revenues	6.4%	6.8%	9.0%	10.3%	9.1%	9.1%
Institutional Framework	-	-	-	Aa	Aa	Aa
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures (x)	1.00	1.00	1.01	1.01	1.01	1.01
Net Direct Debt / Full Value (%)	1.0%	1.0%	1.1%	1.1%	1.1%	1.1%
Net Direct Debt / Operating Revenues (x)	0.91	0.90	0.91	0.91	0.89	0.88
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	-	1.2%	1.4%	1.6%	1.7%	1.8%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	-	1.02	1.20	1.32	1.43	1.51
Population (Most Recent)	17,626	17,917	18,069	18,155	18,222	18,222
Available Fund Balance (\$000s)	\$5,073	\$5,618	\$6,041	\$6,387	\$6,878	\$7,419
Net Cash Balance (\$000s)	\$5,693	\$6,145	\$6,804	\$7,166	\$7,625	\$8,404
Operating Revenues (\$000s)	\$18,935	\$19,356	\$19,933	\$20,212	\$20,947	\$21,930
Net Direct Debt (\$000s)	\$17,264	\$16,975	\$17,704	\$17,822	\$18,285	\$18,580
3-Year Average Adjusted Net Pension Liability (\$000s)	-	\$19,483	\$22,691	\$25,915	\$28,885	\$32,507

Counties	2011	2012	2013	2014	2015	2016
Total Full Value (\$000)	\$6,965,438	\$6,971,802	\$6,988,058	\$7,079,413	\$7,139,524	\$7,495,206
Full Value Per Capita	\$79,606	\$77,965	\$78,237	\$79,072	\$80,820	\$82,836
Median Family Income (% of US Median)	93.6%	93.9%	93.8%	94.1%	93.7%	93.7%
Fund Balance as % of Revenues	29.7%	30.7%	31.6%	31.9%	31.8%	32.1%
5-Year Change in Fund Balance as % of Revenues	8.9%	8.3%	8.4%	9.1%	5.5%	5.0%
Cash Balance as % of Revenues	33.2%	34.3%	35.4%	36.5%	36.5%	36.7%
5-Year Dollar Change in Cash Balance as % of Revenues	10.3%	9.8%	10.3%	11.1%	7.2%	6.6%
Institutional Framework	-	-	-	Aa	Aa	Aa
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures (x)	1.01	1.01	1.01	1.01	1.01	1.01
Net Direct Debt / Full Value (%)	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Net Direct Debt / Operating Revenues (x)	0.64	0.64	0.63	0.62	0.62	0.61
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	-	0.7%	0.8%	0.9%	0.9%	1.1%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	-	0.90	1.07	1.15	1.20	1.28
Population (Most Recent)	86,033	87,483	88,182	87,794	88,052	88,052
Available Fund Balance (\$000s)	\$18,627	\$18,094	\$19,440	\$20,557	\$21,302	\$23,300
Net Cash Balance (\$000s)	\$20,296	\$20,331	\$21,027	\$22,830	\$22,598	\$24,724
Operating Revenues (\$000s)	\$60,698	\$60,683	\$60,551	\$62,866	\$64,850	\$69,726
Net Direct Debt (\$000s)	\$35,562	\$35,446	\$36,615	\$37,217	\$36,476	\$38,387
3-Year Average Adjusted Net Pension Liability (\$000s)	-	\$46,747	\$57,006	\$64,590	\$69,726	\$77,659

School Districts	2011	2012	2013	2014	2015	2016
Total Full Value (\$000)	\$1,873,101	\$1,828,879	\$1,772,636	\$1,790,167	\$1,853,154	\$1,906,225
Full Value Per Capita	\$81,607	\$78,958	\$76,745	\$79,712	\$82,192	\$84,623
Median Family Income (% of US Median)	102.6%	102.3%	102.3%	102.8%	102.3%	102.3%
Fund Balance as % of Revenues	20.4%	21.6%	21.6%	21.2%	21.2%	22.0%
5-Year Change in Fund Balance as % of Revenues	10.0%	9.7%	9.0%	8.3%	4.5%	3.7%
Cash Balance as % of Revenues	21.5%	23.2%	24.3%	24.7%	25.9%	26.8%
5-Year Dollar Change in Cash Balance as % of Revenues	7.9%	7.3%	8.1%	8.5%	6.7%	6.4%
Institutional Framework	-	-	-	A	A	A
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures (x)	1.01	1.01	1.01	1.01	1.01	1.01
Net Direct Debt / Full Value (%)	1.4%	1.4%	1.4%	1.5%	1.5%	1.5%
Net Direct Debt / Operating Revenues (x)	0.76	0.76	0.74	0.73	0.72	0.71
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	-	2.2%	2.6%	3.0%	3.0%	2.9%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	-	1.00	1.40	1.49	1.57	1.42
Population (Most Recent)	20,696	20,852	20,959	21,088	21,088	21,086
Available Fund Balance (\$000s)	\$7,035	\$7,406	\$7,459	\$7,640	\$8,140	\$8,985
Net Cash Balance (\$000s)	\$7,422	\$7,481	\$8,286	\$8,892	\$9,831	\$10,862
Operating Revenues (\$000s)	\$35,736	\$36,000	\$36,205	\$37,498	\$38,952	\$41,251
Net Direct Debt (\$000s)	\$25,716	\$25,478	\$25,476	\$26,296	\$26,402	\$28,020
3-Year Average Adjusted Net Pension Liability (\$000s)	-	\$39,547	\$46,832	\$51,177	\$54,042	\$55,897

Source: Moody's Investors Service

Exhibit 7

US Local Government Medians - US Cities (All)

Selected Indicators	2016
Median Moody's GO/Issuer Rating	Aa3
Total Full Value (\$000)	\$1,867,050
Full Value Per Capita	\$89,200
Median Family Income (% of US Median)	112.6%
Fund Balance as % of Revenues	33.9%
Cash Balance as % of Revenues	36.9%
Net Direct Debt / Full Value (%)	1.1%
Net Direct Debt / Operating Revenues (x)	0.88
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	1.8%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.51
Population (Most Recent)	18,222
Available Fund Balance (\$000s)	\$7,419
Net Cash Balance (\$000s)	\$8,404
Operating Revenues (\$000s)	\$21,930
Net Direct Debt (\$000s)	\$18,580
3-Year Average Adjusted Net Pension Liability (\$000s)	\$32,507

Source: Moody's Investors Service

Exhibit 8

Medians by Rating - US Cities (All)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$7,603,135	\$2,399,519	\$619,312	\$877,359	\$706,675
Full Value Per Capita	\$184,988	\$102,537	\$62,405	\$49,927	\$35,607
Fund Balance as % of Revenues	41.0%	35.0%	30.8%	17.3%	8.5%
Cash Balance as % of Revenues	45.3%	39.4%	32.4%	18.1%	6.2%
Net Direct Debt / Full Value (%)	0.6%	1.0%	1.6%	2.3%	3.7%
Net Direct Debt / Operating Revenues (x)	0.83	0.84	1.00	1.02	1.27
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	1.1%	1.7%	2.4%	4.1%	5.5%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.47	1.48	1.56	1.67	2.04
Population (Most Recent)	37,814	21,918	9,036	11,902	21,586
Available Fund Balance (\$000s)	\$25,642	\$9,926	\$2,863	\$2,228	\$966
Net Cash Balance (\$000s)	\$28,822	\$11,230	\$3,053	\$2,806	\$1,117
Operating Revenues (\$000s)	\$64,991	\$27,287	\$8,657	\$12,910	\$17,871
Net Direct Debt (\$000s)	\$51,491	\$23,122	\$9,443	\$14,654	\$20,335
3-Year Average Adjusted Net Pension Liability (\$000s)	\$84,922	\$38,248	\$13,527	\$37,269	\$31,359

Source: Moody's Investors Service

Exhibit 9

Medians by Rating - US Cities (Population greater than 500,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$95,701,853	\$65,732,696	N/A	N/A	N/A
Full Value Per Capita	\$119,424	\$76,896	N/A	N/A	N/A
Fund Balance as % of Revenues	28.3%	19.4%	N/A	N/A	N/A
Cash Balance as % of Revenues	36.2%	24.6%	N/A	N/A	N/A
Net Direct Debt / Full Value (%)	1.6%	1.7%	N/A	N/A	N/A
Net Direct Debt / Operating Revenues (x)	1.39	1.18	N/A	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	2.3%	4.2%	N/A	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.71	3.07	N/A	N/A	N/A
Population (Most Recent)	722,577	782,265	N/A	N/A	N/A
Available Fund Balance (\$000s)	\$330,732	\$225,501	N/A	N/A	N/A
Net Cash Balance (\$000s)	\$379,054	\$307,214	N/A	N/A	N/A
Operating Revenues (\$000s)	\$1,047,126	\$887,531	N/A	N/A	N/A
Net Direct Debt (\$000s)	\$1,394,899	\$1,163,571	N/A	N/A	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$2,447,646	\$3,180,004	N/A	N/A	N/A

Source: Moody's Investors Service

Exhibit 10

Medians by Rating - US Cities (Population of 100,000 to 500,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$23,654,830	\$13,296,814	\$9,163,066	\$12,810,936	N/A
Full Value Per Capita	\$116,356	\$81,536	\$52,766	\$62,343	N/A
Fund Balance as % of Revenues	38.6%	29.4%	19.0%	8.8%	N/A
Cash Balance as % of Revenues	38.7%	32.0%	17.0%	9.8%	N/A
Net Direct Debt / Full Value (%)	1.0%	1.2%	3.0%	2.9%	N/A
Net Direct Debt / Operating Revenues (x)	1.16	0.95	1.06	0.92	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	1.3%	2.8%	7.1%	7.4%	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.46	2.16	2.33	2.64	N/A
Population (Most Recent)	185,594	147,190	173,388	202,770	N/A
Available Fund Balance (\$000s)	\$73,073	\$51,049	\$37,092	\$14,485	N/A
Net Cash Balance (\$000s)	\$73,496	\$57,070	\$52,151	\$31,737	N/A
Operating Revenues (\$000s)	\$169,206	\$153,402	\$245,432	\$418,983	N/A
Net Direct Debt (\$000s)	\$244,836	\$143,229	\$264,469	\$488,605	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$295,169	\$363,950	\$618,211	\$965,368	N/A

Source: Moody's Investors Service

Exhibit 11

Medians by Rating - US Cities (Population of 50,000 to 100,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$10,973,709	\$5,888,370	\$4,136,933	\$2,730,389	N/A
Full Value Per Capita	\$152,739	\$89,701	\$60,770	\$47,264	N/A
Fund Balance as % of Revenues	46.8%	33.6%	15.5%	9.5%	N/A
Cash Balance as % of Revenues	50.9%	37.3%	14.7%	9.1%	N/A
Net Direct Debt / Full Value (%)	0.6%	1.1%	1.8%	3.0%	N/A
Net Direct Debt / Operating Revenues (x)	0.75	0.83	0.64	1.02	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	1.0%	2.1%	5.3%	7.9%	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.53	1.76	2.57	1.97	N/A
Population (Most Recent)	62,957	65,947	68,221	63,778	N/A
Available Fund Balance (\$000s)	\$37,216	\$23,922	\$13,209	\$5,536	N/A
Net Cash Balance (\$000s)	\$39,170	\$26,488	\$13,079	\$9,353	N/A
Operating Revenues (\$000s)	\$75,997	\$66,632	\$73,416	\$119,269	N/A
Net Direct Debt (\$000s)	\$62,604	\$62,001	\$73,169	\$107,255	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$95,725	\$126,602	\$177,472	\$200,240	N/A

Source: Moody's Investors Service

Exhibit 12

Medians by Rating - US Cities (Population less than 50,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$4,992,316	\$1,821,208	\$572,834	\$645,822	\$660,690
Full Value Per Capita	\$241,190	\$108,836	\$63,067	\$49,067	\$29,366
Fund Balance as % of Revenues	40.4%	36.5%	32.3%	21.9%	12.2%
Cash Balance as % of Revenues	46.7%	41.5%	34.4%	20.5%	5.0%
Net Direct Debt / Full Value (%)	0.6%	1.0%	1.6%	2.3%	3.8%
Net Direct Debt / Operating Revenues (x)	0.78	0.83	1.01	1.11	1.43
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	1.1%	1.5%	2.2%	3.8%	4.9%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.46	1.31	1.47	1.63	1.78
Population (Most Recent)	22,733	16,484	8,297	10,104	14,903
Available Fund Balance (\$000s)	\$15,863	\$7,479	\$2,616	\$1,963	\$732
Net Cash Balance (\$000s)	\$19,164	\$8,455	\$2,868	\$2,288	\$1,047
Operating Revenues (\$000s)	\$37,001	\$20,285	\$7,858	\$10,397	\$12,036
Net Direct Debt (\$000s)	\$28,685	\$17,060	\$8,094	\$11,347	\$18,820
3-Year Average Adjusted Net Pension Liability (\$000s)	\$50,245	\$26,560	\$11,008	\$24,872	\$21,933

Source: Moody's Investors Service

Exhibit 13

US Local Government Medians - US Counties (All)

Selected Indicators	2016
Median Moody's GO/Issuer Rating	Aa2
Total Full Value (\$000)	\$7,495,206
Full Value Per Capita	\$82,836
Median Family Income (% of US Median)	93.7%
Fund Balance as % of Revenues	32.1%
Cash Balance as % of Revenues	36.7%
Net Direct Debt / Full Value (%)	0.5%
Net Direct Debt / Operating Revenues (x)	0.61
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	1.1%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.28
Population (Most Recent)	88,052
Available Fund Balance (\$000s)	\$23,300
Net Cash Balance (\$000s)	\$24,724
Operating Revenues (\$000s)	\$69,726
Net Direct Debt (\$000s)	\$38,387
3-Year Average Adjusted Net Pension Liability (\$000s)	\$77,659

Source: Moody's Investors Service

Exhibit 14

Medians by Rating - US Counties (All)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$48,258,832	\$8,340,354	\$2,215,074	\$2,350,636	N/A
Full Value Per Capita	\$110,246	\$84,145	\$65,023	\$61,538	N/A
Fund Balance as % of Revenues	31.6%	33.8%	29.0%	5.4%	N/A
Cash Balance as % of Revenues	35.2%	39.4%	30.5%	21.2%	N/A
Net Direct Debt / Full Value (%)	0.6%	0.5%	0.7%	0.6%	N/A
Net Direct Debt / Operating Revenues (x)	0.84	0.60	0.57	0.82	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.8%	1.0%	1.7%	0.7%	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.33	1.30	1.23	0.86	N/A
Population (Most Recent)	437,271	95,906	32,009	42,925	N/A
Available Fund Balance (\$000s)	\$97,934	\$24,885	\$8,611	\$1,948	N/A
Net Cash Balance (\$000s)	\$123,289	\$27,312	\$9,272	\$3,265	N/A
Operating Revenues (\$000s)	\$344,231	\$74,726	\$28,898	\$16,823	N/A
Net Direct Debt (\$000s)	\$309,570	\$40,559	\$15,790	\$16,887	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$390,753	\$83,350	\$36,463	\$23,166	N/A

Source: Moody's Investors Service

Exhibit 15

Medians by Rating - US Counties (Population great than 1 Million)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$181,636,044	\$197,904,196	\$212,185,368	N/A	N/A
Full Value Per Capita	\$113,321	\$115,020	\$101,791	N/A	N/A
Fund Balance as % of Revenues	28.2%	24.1%	6.6%	N/A	N/A
Cash Balance as % of Revenues	36.1%	26.1%	10.5%	N/A	N/A
Net Direct Debt / Full Value (%)	0.4%	0.4%	1.0%	N/A	N/A
Net Direct Debt / Operating Revenues (x)	0.82	0.33	0.85	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.8%	2.1%	2.5%	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.80	1.91	1.95	N/A	N/A
Population (Most Recent)	1,378,806	2,035,572	1,478,000	N/A	N/A
Available Fund Balance (\$000s)	\$428,655	\$483,206	\$89,473	N/A	N/A
Net Cash Balance (\$000s)	\$470,849	\$719,055	\$74,852	N/A	N/A
Operating Revenues (\$000s)	\$1,334,598	\$2,604,269	\$2,826,142	N/A	N/A
Net Direct Debt (\$000s)	\$720,509	\$735,395	\$1,597,870	N/A	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$1,769,227	\$5,018,293	\$3,467,808	N/A	N/A

Source: Moody's Investors Service

Exhibit 16

Medians by Rating - US Counties (Population of 250,000 to 1 Million)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$57,215,913	\$37,382,496	\$46,722,440	N/A	N/A
Full Value Per Capita	\$108,707	\$84,079	\$70,843	N/A	N/A
Fund Balance as % of Revenues	30.3%	24.1%	19.0%	N/A	N/A
Cash Balance as % of Revenues	33.8%	34.2%	32.6%	N/A	N/A
Net Direct Debt / Full Value (%)	0.6%	0.4%	1.3%	N/A	N/A
Net Direct Debt / Operating Revenues (x)	0.85	0.68	0.55	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.8%	1.2%	1.1%	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.35	1.74	0.92	N/A	N/A
Population (Most Recent)	506,646	417,724	553,591	N/A	N/A
Available Fund Balance (\$000s)	\$105,168	\$65,870	\$60,508	N/A	N/A
Net Cash Balance (\$000s)	\$126,869	\$83,696	\$42,438	N/A	N/A
Operating Revenues (\$000s)	\$331,009	\$249,674	\$288,883	N/A	N/A
Net Direct Debt (\$000s)	\$300,161	\$144,147	\$332,988	N/A	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$478,015	\$402,369	\$246,547	N/A	N/A

Source: Moody's Investors Service

Exhibit 17

Medians by Rating - US Counties (Population of 100,000 to 250,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$18,471,055	\$12,043,041	\$8,222,400	N/A	N/A
Full Value Per Capita	\$110,655	\$75,851	\$49,646	N/A	N/A
Fund Balance as % of Revenues	33.5%	33.8%	15.9%	N/A	N/A
Cash Balance as % of Revenues	42.2%	39.5%	18.1%	N/A	N/A
Net Direct Debt / Full Value (%)	1.0%	0.4%	0.7%	N/A	N/A
Net Direct Debt / Operating Revenues (x)	0.89	0.65	0.52	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.9%	1.0%	2.8%	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.07	1.25	1.70	N/A	N/A
Population (Most Recent)	185,012	154,023	149,428	N/A	N/A
Available Fund Balance (\$000s)	\$77,613	\$32,001	\$26,587	N/A	N/A
Net Cash Balance (\$000s)	\$78,746	\$36,253	\$27,253	N/A	N/A
Operating Revenues (\$000s)	\$183,573	\$84,060	\$122,491	N/A	N/A
Net Direct Debt (\$000s)	\$175,260	\$54,440	\$50,184	N/A	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$238,961	\$112,902	\$205,825	N/A	N/A

Source: Moody's Investors Service

Exhibit 18

Medians by Rating - US Counties (Population less than 100,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	N/A	\$4,513,261	\$1,934,913	\$1,397,464	N/A
Full Value Per Capita	N/A	\$91,918	\$66,541	\$61,538	N/A
Fund Balance as % of Revenues	N/A	37.0%	30.5%	8.1%	N/A
Cash Balance as % of Revenues	N/A	42.4%	32.6%	22.5%	N/A
Net Direct Debt / Full Value (%)	N/A	0.5%	0.6%	0.6%	N/A
Net Direct Debt / Operating Revenues (x)	N/A	0.55	0.57	1.23	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	N/A	0.9%	1.5%	0.5%	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	N/A	1.17	1.19	0.86	N/A
Population (Most Recent)	N/A	48,166	28,129	21,297	N/A
Available Fund Balance (\$000s)	N/A	\$15,115	\$7,323	\$1,648	N/A
Net Cash Balance (\$000s)	N/A	\$17,692	\$8,289	\$2,952	N/A
Operating Revenues (\$000s)	N/A	\$39,474	\$24,447	\$13,092	N/A
Net Direct Debt (\$000s)	N/A	\$21,530	\$12,430	\$13,688	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	N/A	\$44,049	\$27,752	\$19,493	N/A

Source: Moody's Investors Service

Exhibit 19

US Local Government Medians - US School Districts (All)

Selected Indicators	2016
Median Moody's GO/Issuer Rating	Aa3
Total Full Value (\$000)	\$1,906,225
Full Value Per Capita	\$84,623
Median Family Income (% of US Median)	102.3%
Fund Balance as % of Revenues	22.0%
Cash Balance as % of Revenues	26.8%
Net Direct Debt / Full Value (%)	1.5%
Net Direct Debt / Operating Revenues (x)	0.71
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	2.9%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.42
Population (Most Recent)	21,086
Available Fund Balance (\$000s)	\$8,985
Net Cash Balance (\$000s)	\$10,862
Operating Revenues (\$000s)	\$41,251
Net Direct Debt (\$000s)	\$28,020
3-Year Average Adjusted Net Pension Liability (\$000s)	\$55,897

Source: Moody's Investors Service

Exhibit 20

Medians by Rating - US School Districts (All)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$12,549,228	\$3,784,326	\$842,767	\$626,027	\$851,097
Full Value Per Capita	\$209,589	\$98,220	\$69,371	\$62,552	\$45,181
Fund Balance as % of Revenues	31.3%	22.1%	22.3%	10.2%	8.4%
Cash Balance as % of Revenues	39.8%	27.9%	26.0%	9.5%	9.5%
Net Direct Debt / Full Value (%)	0.8%	1.2%	1.9%	2.5%	4.1%
Net Direct Debt / Operating Revenues (x)	0.80	0.69	0.74	0.72	0.75
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.9%	2.5%	3.7%	5.2%	5.0%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.24	1.40	1.46	1.52	1.34
Population (Most Recent)	45,075	35,859	11,239	10,522	21,448
Available Fund Balance (\$000s)	\$37,724	\$15,292	\$4,730	\$1,635	\$1,094
Net Cash Balance (\$000s)	\$38,867	\$18,764	\$5,674	\$1,762	\$1,564
Operating Revenues (\$000s)	\$113,940	\$69,973	\$22,360	\$18,520	\$35,459
Net Direct Debt (\$000s)	\$59,755	\$45,692	\$16,452	\$12,855	\$32,945
3-Year Average Adjusted Net Pension Liability (\$000s)	\$137,286	\$95,799	\$28,810	\$30,859	\$47,907

Source: Moody's Investors Service

Exhibit 21

Medians by Rating - US School Districts (Population greater than 200,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$62,542,137	\$29,709,042	\$24,353,812	N/A	N/A
Full Value Per Capita	\$106,411	\$88,966	\$66,462	N/A	N/A
Fund Balance as % of Revenues	33.1%	20.3%	11.0%	N/A	N/A
Cash Balance as % of Revenues	40.2%	25.9%	16.1%	N/A	N/A
Net Direct Debt / Full Value (%)	1.1%	1.1%	1.3%	N/A	N/A
Net Direct Debt / Operating Revenues (x)	0.89	0.80	0.62	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.8%	2.0%	4.2%	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	0.81	1.74	2.37	N/A	N/A
Population (Most Recent)	342,117	299,234	357,552	N/A	N/A
Available Fund Balance (\$000s)	\$111,364	\$95,436	\$54,242	N/A	N/A
Net Cash Balance (\$000s)	\$193,056	\$122,328	\$57,301	N/A	N/A
Operating Revenues (\$000s)	\$471,388	\$468,479	\$441,696	N/A	N/A
Net Direct Debt (\$000s)	\$375,425	\$378,324	\$294,436	N/A	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$348,951	\$746,439	\$1,004,693	N/A	N/A

Source: Moody's Investors Service

Exhibit 22

Medians by Rating - US School Districts (Population of 100,000 to 200,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$29,377,947	\$12,565,453	\$9,792,018	N/A	N/A
Full Value Per Capita	\$225,533	\$91,860	\$73,463	N/A	N/A
Fund Balance as % of Revenues	24.4%	19.9%	12.8%	N/A	N/A
Cash Balance as % of Revenues	33.4%	26.9%	17.7%	N/A	N/A
Net Direct Debt / Full Value (%)	1.1%	1.1%	1.5%	N/A	N/A
Net Direct Debt / Operating Revenues (x)	1.39	0.72	0.67	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	1.0%	2.9%	3.6%	N/A	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.61	1.87	1.89	N/A	N/A
Population (Most Recent)	133,165	135,276	127,784	N/A	N/A
Available Fund Balance (\$000s)	\$58,204	\$43,013	\$26,285	N/A	N/A
Net Cash Balance (\$000s)	\$81,313	\$56,184	\$34,122	N/A	N/A
Operating Revenues (\$000s)	\$244,343	\$226,388	\$215,217	N/A	N/A
Net Direct Debt (\$000s)	\$355,394	\$151,589	\$154,445	N/A	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$368,599	\$374,808	\$449,458	N/A	N/A

Source: Moody's Investors Service

Exhibit 23

Medians by Rating - US School Districts (Population of 50,000 to 100,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$12,549,228	\$6,533,446	\$3,973,104	\$2,702,662	N/A
Full Value Per Capita	\$194,657	\$88,882	\$61,295	\$41,715	N/A
Fund Balance as % of Revenues	43.7%	20.5%	17.6%	6.3%	N/A
Cash Balance as % of Revenues	54.1%	27.5%	22.3%	8.8%	N/A
Net Direct Debt / Full Value (%)	0.8%	1.4%	1.9%	2.8%	N/A
Net Direct Debt / Operating Revenues (x)	0.71	0.75	0.63	0.36	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.8%	2.8%	4.8%	5.5%	N/A
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	0.44	1.86	1.86	1.13	N/A
Population (Most Recent)	66,262	68,870	67,566	64,320	N/A
Available Fund Balance (\$000s)	\$67,406	\$24,137	\$18,164	\$7,209	N/A
Net Cash Balance (\$000s)	\$83,374	\$32,245	\$23,944	\$14,351	N/A
Operating Revenues (\$000s)	\$147,329	\$120,019	\$106,616	\$159,453	N/A
Net Direct Debt (\$000s)	\$104,640	\$82,226	\$69,890	\$74,559	N/A
3-Year Average Adjusted Net Pension Liability (\$000s)	\$103,956	\$196,590	\$187,095	\$158,850	N/A

Source: Moody's Investors Service

Exhibit 24

Medians by Rating - US School Districts (Population less than 50,000)

Selected Indicators	Aaa	Aa	A	Baa	Ba
Total Full Value (\$000)	\$6,735,951	\$2,249,542	\$764,516	\$527,120	\$581,348
Full Value Per Capita	\$272,018	\$105,815	\$69,890	\$62,620	\$42,751
Fund Balance as % of Revenues	28.7%	24.0%	23.3%	10.7%	8.4%
Cash Balance as % of Revenues	36.7%	28.9%	27.0%	9.5%	7.3%
Net Direct Debt / Full Value (%)	0.7%	1.2%	2.0%	2.6%	4.3%
Net Direct Debt / Operating Revenues (x)	0.52	0.64	0.76	0.78	0.75
Moody's - Adjusted Net Pension Liability (3-Year Average) to Full Value (%)	0.9%	2.4%	3.6%	5.2%	5.4%
Moody's - Adjusted Net Pension Liability (3-Year Average) to Revenues (x)	1.21	1.20	1.39	1.53	1.50
Population (Most Recent)	27,071	21,694	10,202	8,848	14,140
Available Fund Balance (\$000s)	\$23,217	\$10,281	\$4,327	\$1,517	\$847
Net Cash Balance (\$000s)	\$27,130	\$12,595	\$5,174	\$1,581	\$1,564
Operating Revenues (\$000s)	\$70,649	\$44,724	\$20,246	\$16,690	\$23,755
Net Direct Debt (\$000s)	\$41,594	\$27,804	\$14,950	\$11,965	\$27,421
3-Year Average Adjusted Net Pension Liability (\$000s)	\$101,384	\$55,588	\$24,795	\$23,223	\$40,943

Source: Moody's Investors Service

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Methodology

- » [US Local Government General Obligation Rating Methodology](#), December 16, 2016

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- » [Pension burdens to rise through 2020, even in positive investment scenario](#), June 20, 2017
- » [FAQ: Pension asset risk more important than ever to government credit quality](#), September 6, 2017
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Endnotes

- 1 Most governments report pension information with a lag, compared to their own fiscal year-end. As a result, the median pension statistics in this report primarily reflect pension measurements as of calendar year 2015.

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