

Appendices

for *Hidden Debt, Hidden Deficits: How Pension Promises
Are Consuming State and Local Budgets*, by Joshua D. Rauh

APPENDIX A

List of All Pension Systems Studied

Alabama

Employees' Retirement System (S)
Teachers' Retirement System (S)
Judicial Retirement Fund (S)
Birmingham Retirement and Relief Fund (L)
Birmingham Firemens and Police Supplemental (L)
Southeast Alabama Gas District Pension Plan (L)

Alaska

Teachers' Retirement System (S)
Public Employees' Retirement System (S)
Judicial Retirement System (S)
National Guard and Naval Militia System (S)

Arizona

State Retirement System (S)
Public Safety Personnel Retirement System (S)
Corrections Officer Retirement Plan (S)
Elected Officials' Retirement Plan (S)
Phoenix City Employee Retirement System (L)
Tucson Supplemental Retirement System (L)

Arkansas

Public Employees Retirement Systems (S)
State Police Retirement System (S)
Judicial Retirement System (S)
Teacher Retirement System (S)
Local Police and Fire Retirement System (S)
Little Rock City Firemen's Pension and Relief
Fund (L)

Little Rock Nonuniformed Employees' Defined
Benefit Pension (L)
Little Rock 2014 Defined Benefit Plan (L)
Fayetteville Policemen's Pension and Relief Fund (L)
Fayetteville Firemen's Pension and Relief Fund (L)

California

Public Employees' Retirement Fund (S)
Judges' Retirement Fund (S)
Judges' Retirement Fund II (S)
Legislators' Retirement Fund (S)
State Teachers' Retirement Fund (S)
University of California Retirement System (S)
Los Angeles City Employees' Retirement System (L)
Los Angeles City Fire and Police Pension Plan (L)
Los Angeles City Water and Power Employees'
Retirement Plan (L)
San Jose Federated City Employees' Retirement
System (L)
San Jose Police and Fire Department Retirement
Plan (L)
San Francisco City and County Employees'
Retirement System (L)
San Diego City Employees' Retirement System (L)
Fresno City Employees Retirement System (L)
Fresno City Fire and Police Retirement System (L)
Sacramento City Employees' Retirement System (L)
Long Beach Public Transportation Company
Retirement (L)
Oakland Police and Fire Retirement System (L)
Albany Police and Fire Relief Pension Plan (L)
Los Angeles County Employees Retirement
Association (L)



San Diego County Employees Retirement Association (L)
 Orange County Employees Retirement System (L)
 San Bernardino County Employees' Retirement Association (L)
 Alameda County Employees' Retirement Association (L)
 Sacramento County Employees' Retirement System (L)
 Contra Costa County Employees' Retirement Association (L)
 Fresno County Employees' Retirement Association (L)
 Kern County Employees' Retirement Association (L)
 Ventura County Employees' Retirement Association (L)
 San Mateo County Employees' Retirement Association (L)
 San Joaquin County Employees' Retirement Association (L)
 Stanislaus County Employees' Retirement Association (L)
 Sonoma County Employees' Retirement Association (L)
 Tulare County Employees' Retirement Association (L)
 Santa Barbara County Employees' Retirement Association (L)
 San Luis Obispo County Pension Trust (L)
 Merced County Employees' Retirement Association (L)
 Marin County Employees' Retirement Association (L)
 Mendocino County Employees' Retirement Association (L)
 Imperial County Employees' Retirement System (L)
 Pasadena Fire and Police Retirement System (L)
 Richmond General Pension Plan (L)
 Richmond Police and Firemen's Pension Plan (L)
 Richmond Garfield Pension Plan (L)
 Concord Retirement System (L)

East Bay Municipal Utility District Employees' Retirement System (L)
 Santa Clara Valley Transportation Authority Amalgamated Transit Union Pension Plan (L)
 Santa Clara County Miscellaneous Plan (L)
 Santa Clara County Safety Plan (L)
 Santa Clara County Central Fire Safety Plan (L)
 Santa Clara County Authority Miscellaneous Plan (L)

Colorado

Fire and Police Pension Association (S)
 Public Employees' Retirement Association (S)
 Adams County Retirement Plan (L)
 El Paso County Retirement Plan (L)
 Englewood City Nonemergency Retirement Plan (L)
 Aurora General Employees' Retirement Plan (L)
 Boulder Police Pension Fund (L)
 Boulder Fire Pension Fund (L)
 Longmont Retirement System (L)
 Denver Board of Water Commissioners Employees' Retirement Plan (L)
 Denver Employees Retirement Plan (L)

Connecticut

Teachers' Retirement System (S)
 State Employees' Retirement System (S)
 Judicial Retirement System (S)
 Municipal Employees' Retirement System (S)
 Norwalk Employees' Pension Plan (L)
 Norwalk Fire Benefit Fund (L)
 Norwalk Police Benefit Fund (L)
 Stamford Classified Employees' Retirement Fund (L)
 Stamford Custodians' and Mechanics' Retirement Fund (L)
 Stamford Firefighters' Pension Fund (L)
 Stamford Police Pension Fund (L)
 Bristol Retirement System (L)
 Bristol Firefighters' Benefit Fund (L)
 Bristol Police Benefit Fund (L)

Hartford Municipal Employees' Retirement Fund (L)
 New Britain Police Benefit Fund (L)
 New Britain Firemen's Pension Plan (L)
 Torrington Police and Firemen's Retirement Plan (L)
 Torrington Municipal Employee Retirement Plan (L)
 Middletown Retirement System (L)
 New Haven Policemen and Firemen Retirement Plan (L)
 New Haven City Employees' Retirement Plan (L)
 Waterbury Retirement System (L)
 Milford Retirement System (L)
 Norwich Retirement System (L)
 Darien Employee Retirement Systems (L)
 Fairfield Police and Firemen's Retirement Plan (L)
 Greenwich Town Retirement System (L)
 Westport Police Pension Fund (L)
 Westport Firemen's' Pension Fund (L)
 Westport Town Pension Fund (L)
 East Hartford Retirement System (L)
 Farmington Town Pension Plan (L)
 Granby Town Pension Plan (L)
 West Hartford Town Pension Fund (L)
 Cromwell Town Retirement Plan (L)
 Cheshire Employees Retirement System (L)
 Hamden Town Employee Retirement Fund (L)
 Groton Town Retirement Fund (L)
 Stonington Employees' Pension Plan (L)
 Hartford Employee Retirement System (L)

Delaware

Public Employees' Retirement System (S)
 Dover Police Pension Plan (L)
 Dover General Employee Pension Plan (L)
 Wilmington Firefighters Pension Plan (L)
 Wilmington Police Pension Plan (L)
 Wilmington Nonuniformed Employees Plan I (L)
 Wilmington Nonuniformed Employees Plan II (L)
 Wilmington Nonuniformed Employees Plan III (L)

Florida

Florida Retirement System (S)
 Jacksonville Police and Firefighter Pension Plan (L)
 Jacksonville General Employees Pension Plan (L)
 Jacksonville Correction Officers Pension Plan (L)
 Miami Firefighters' and Police Officers' Retirement Trust (L)
 Miami General Employees' and Sanitation Employees' Retirement Trust (L)
 Miami Department of Off-Street Parking Retirement Plan (L)
 Miami Beach Retirement System (L)
 Miami Beach Pension Fund for Firefighters and Police Officers (L)
 Miami Springs General Employees' Retirement System (L)
 Miami Springs Police and Firefighters' Retirement System (L)
 North Miami Clair T. Singerman Employees' Retirement System (L)
 North Miami Police Pension Plan (L)
 North Miami Beach General Employees Retirement Plan (L)
 Tampa General Employees' Pension Plan (L)
 Tampa Firefighters and Police Officers Pension Fund (L)
 Orlando Firefighter Pension Fund (L)
 Orlando Police Officers' Pension Fund (L)
 St Petersburg Police Officers' Retirement System (L)
 St Petersburg Firefighters' Retirement System (L)
 St Petersburg Employees' Retirement System (L)
 Hialeah Employees' Retirement System (L)
 Hialeah Elected Officials' Retirement System (L)
 Tallahassee General Employees Retirement Fund (L)
 Tallahassee Police Officers Retirement Fund (L)
 Tallahassee Firefighters Retirement Fund (L)
 Fort Lauderdale Police and Firefighters' Retirement System (L)
 Fort Lauderdale General Employees' Retirement System (L)



St Lucie County Fire District General Employees Retirement Fund (L)
 St Lucie County Fire District Firefighters' Pension Trust Fund (L)
 Pembroke Pines General Employees Pension Plan (L)
 Pembroke Pines Firefighters and Police Officers Pension Plan (L)
 Hollywood General Employees' Retirement System (L)
 Hollywood Firefighters' Pension System (L)
 Hollywood Police Officers Retirement System (L)
 Miami-Dade County Defined-Benefit Retirement Plan (L)
 Orange County Library District General Retirement Fund (L)

Georgia

Peace Officers' Annuity and Benefit Fund (S)
 Employees' Retirement System (S)
 Firefighters' Pension Fund (S)
 Teachers Retirement System (S)
 Atlanta Police Officers' Pension Plan (L)
 Atlanta Firefighters' Pension Plan (L)
 Augusta City General Retirement Plan (L)
 Augusta County 1945 Retirement Plan (L)
 Cape Coral General Retirement Fund (L)
 Cape Coral Police Retirement Fund (L)
 Cape Coral Firefighters' Retirement Fund (L)
 Fulton County Employees' Retirement System (L)
 Fulton County School Employees Pension Plan (L)
 DeKalb County Pension Plan (L)
 Macon County General Employees' Pension Plan (L)
 Macon County Fire and Police Pension Plan (L)

Hawaii

Employees' Retirement System (S)

Idaho

Public Employee Retirement System of Idaho (S)

Illinois

Teachers' Retirement System (S)
 State Employees' Retirement System (S)
 State Universities Retirement System (S)
 General Assembly Retirement System (S)
 Judges' Retirement System (S)
 Chicago Public School Teachers' Pension and Retirement Fund (L)
 Chicago Policemen's Annuity and Benefit Fund of Chicago (L)
 Chicago Firemen's Annuity and Benefit Fund of Chicago (L)
 Chicago Municipal Employees' Annuity & Benefit Fund (L)
 Chicago Laborer's and Retirement Board Employees' Annuity and Benefit Fund (L)
 Chicago Transit Authority Employees' Retirement Plan (L)
 Greater Chicago Metropolitan Water Reclamation District Retirement Fund (L)
 Aurora Police Pension Fund (L)
 Aurora Firefighter Pension Fund (L)
 Rockford Police Pension Fund (L)
 Rockford Firefighter's Pension Fund (L)
 Evanston Police Pension Fund (L)
 Evanston Firefighters' Pension Fund (L)
 Cook County Employees' and Officers' Annuity and Benefit Fund (L)
 Joliet Police Pension Plan (L)
 Joliet Firefighters' Pension Plan (L)

Indiana

Public Employees' Retirement Fund (S)
 Judges' Retirement System (S)
 State Excise Police, Gaming Agent, Gaming Control Officer and Conservation Enforcement Officers' Retirement Plan (S)
 1977 Police Officers' and Firefighters' Pension and Disability Fund (S)
 Prosecuting Attorneys' Retirement Fund (S)
 Legislators' Retirement System (S)
 Teachers' Retirement Fund (S)

State Police Retirement Fund (S)
 Indianapolis Police Pre-1977 Plan (L)
 Indianapolis Firefighters' Pre-1977 Plan (L)

Iowa

Public Employees' Retirement System (S)
 Peace Officers' Retirement System (S)
 Judicial Retirement System (S)
 Municipal Fire and Police Retirement System (S)

Kansas

Public Employees' Retirement System (S)
 Wichita Employees' Retirement System (L)
 Wichita Police and Fire Retirement System (L)

Kentucky

Teachers' Retirement System (S)
 Employees Retirement System (S)
 County Employees Retirement System (S)
 State Police Retirement System (S)
 Judicial Retirement Plan (S)
 Legislators Retirement Plan (S)

Louisiana

State Employees' Retirement System (S)
 Teachers' Retirement System (S)
 State Police Retirement System (S)
 School Employees' Retirement System (S)
 Firefighters' Retirement System (S)
 Municipal Employees' Retirement System (S)
 Registrar of Voters Employees' Retirement System (S)
 Parochial Employees' Retirement System (S)
 Sheriffs' Pension and Relief Fund (S)
 Municipal Police Employees' Retirement System and Subsidiaries (S)
 Harbor Police Retirement System (S)
 Assessors' Retirement Fund (S)
 District Attorney's Retirement System (S)
 Clerks' of Court Retirement and Relief Fund (S)
 New Orleans Employees' Retirement System (L)

New Orleans Firefighters' Pension and Relief Fund (L)
 New Orleans Police Employees' Retirement System (L)
 Baton Rouge Employees' Retirement System (L)
 Shreveport Firemen's Pension and Relief Fund (L)
 Shreveport Policemen's Pension and Relief Fund (L)
 Shreveport Employees' Retirement System (L)

Maine

Public Employees Retirement System (S)

Maryland

State Retirement and Pension System (S)
 Transit Administration Pension Plan (S)
 Anne Arundel County Employees' Retirement Plan (L)
 Anne Arundel County Police Service Retirement Plan (L)
 Anne Arundel County Fire Service Retirement Plan (L)
 Anne Arundel County Officers' and Deputy Sheriffs' Retirement Plan (L)
 Baltimore Employees' Retirement System (L)
 Baltimore Fire and Police Employees' Retirement System (L)
 Baltimore Elected Officials' Retirement System (L)
 Baltimore County Employees' Retirement System (L)
 Montgomery County Employee Retirement Plans (L)
 Prince Georges County Fire Service Pension Plan (L)
 Prince Georges County Police Pension Plan (L)

Massachusetts

State Employees' Retirement System (S)
 Teachers' Retirement System (S)
 Worcester Regional Retirement System (L)
 Worcester Retirement System (L)
 Springfield Retirement System (L)



Middlesex County Retirement System (L)

Michigan

State Police Retirement System (S)
Judges' Retirement System (S)
Public School Employees' Retirement System (S)
State Employees' Retirement System (S)
Detroit General Retirement System Pension Plan (L)
Detroit Police and Fire Retirement System (L)
Grand Rapids Police and Fire Retirement System (L)
Grand Rapids General Retirement System (L)
Jackson County Employees' Retirement System (L)
Wayne County Employees' Retirement System (L)
Wayne County Circuit Court Commissioners Bailiffs' Retirement System (L)
Oakland County Employees' Retirement System (L)
Macomb Fire Retirement System (L)

Minnesota

State Retirement System (S)
Public Employees Retirement Association (S)
Teachers Retirement Association (S)
Minneapolis Employees Retirement Fund (L)
St. Paul Teachers' Retirement Fund Association (L)

Mississippi

Public Employees' Retirement System (S)
Highway Safety Patrol Retirement System (S)
Supplemental Legislative Retirement Plan (S)

Missouri

Public School Retirement System (S)
Public Education Employee Retirement System (S)
State Employees' Retirement System (S)
Department of Transportation and Highway Patrol Employees' Retirement System (S)
Local Government Employees Retirement System (S)

Kansas City Police Retirement System (L)
Kansas City Civilian Employees' Retirement System of the Police Department (L)
Kansas City Public School Retirement System (L)
St. Louis Firemen's Retirement System (L)
St. Louis Employees' Retirement System (L)
St. Louis Public School Retirement System (L)
St. Louis County Employee Retirement Plan (L)
Springfield Police Officers' and Fire Fighters' Retirement Fund (L)

Montana

Public Employees' Retirement System-Defined Benefit Retirement Plan (S)
Sheriffs Retirement System (S)
Game Warden & Peace Officers Retirement System (S)
Municipal Police Officers' Retirement System (S)
Firefighters' Unified Retirement System (S)
Volunteer Firefighters Compensation Act (S)
Judges' Retirement System (S)
Highway Patrol Officers' Retirement System (S)
Teachers Retirement System (S)

Nebraska

State Patrol Retirement System (S)
School Retirement System (S)
Judges' Retirement System (S)
State Employees' Retirement System (S)
County Employees' Retirement System (S)
Omaha Police and Fire Pension Fund—Uniformed Plan (L)
Omaha Employees Retirement System—Civilian Plan (L)
Omaha School Employees' Retirement System (L)
Lincoln Police and Fire Pension Plan (L)

Nevada

Public Employees' Retirement System (S)
Legislators' Retirement System (S)
Judicial Retirement System (S)

New Hampshire

Retirement System (S)

New Jersey

Judicial Retirement System (S)

Prison Officers' Pension Fund (S)

State Police Retirement System (S)

Consolidated Police and Firemen's Pension
Fund (S)

Teachers' Pension and Annuity Fund (S)

Police and Firemen's Retirement System (S)

Public Employees' Retirement System (S)

New Mexico

Public Employees Retirement System (S)

Educational Employees Retirement System (S)

Judicial Retirement System (S)

Magistrate Retirement System (S)

Volunteer Firefighter Retirement System (S)

New York

State and Local Employees' Retirement System (S)

State and Local Police and Fire Retirement
System (S)

State Teachers' Retirement System (S)

New York City Teachers' Retirement System (L)

New York City Employees' Retirement System (L)

New York City Board of Education Retirement
System (L)

New York City Police Pension Funds (L)

New York City Fire Pension Funds (L)

North CarolinaTeachers' and State Employees' Retirement
System (S)Local Government Employees' Retirement
System (S)

Consolidated Judicial Retirement System (S)

National Guard Pension Fund (S)

Legislative Retirement System (S)

Firefighters' and Rescue Squad Workers' Pension
Fund (S)

Charlotte Firefighters' Retirement System (L)

Winston-Salem Police Officers' Retirement
System (L)**North Dakota**

Public Employees Retirement System (S)

Ohio

Police & Fire Pension Fund (S)

Public Employees Retirement System (S)

School Employees Retirement System (S)

State Teachers Retirement System (S)

Highway Patrol Retirement System (S)

Cincinnati Retirement System (L)

Oklahoma

Firefighters Pension and Retirement System (S)

Police Pension and Retirement System (S)

Teachers' Retirement System (S)

Public Employees Retirement System (S)

Law Enforcement Retirement System (S)

Uniform Retirement System for Justices and
Judges (S)

Oklahoma City Employee Retirement System (L)

Tulsa City Employees' Retirement System (L)

Oregon

Public Employees Retirement System (S)

Portland Fire and Police Disability and Retirement
Funds (L)**Pennsylvania**

Public School Employees' Retirement System (S)

State Employees' Retirement System (S)

Philadelphia Municipal Retirement System (L)

Pittsburgh Policemen's Relief and Pension Plan (L)

Allegheny County Employees' Retirement
System (L)**Rhode Island**

Employees' Retirement System (S)



South Carolina

Retirement System (S)
 Police Officers Retirement System (S)
 Retirement System for Members of the General
 Assembly (S)
 Retirement System for Judges and Solicitors (S)
 National Guard Supplemental Retirement Plan (S)

South Dakota

Retirement System (S)
 Sioux Falls Employee's Retirement System (L)
 Sioux Falls Firefighters' Pension Fund (L)

Tennessee

Consolidated Retirement System (S)
 Memphis Employees Retirement System (L)
 Memphis Library Retirement System (L)
 Nashville-Davidson County Retirement System (L)
 Nashville Metropolitan Employees Benefit Trust (L)
 Nashville-Davidson County Education Retirement
 Plan (L)
 Metropolitan Board of Education Teachers
 Retirement Fund (L)
 Nashville Education Retirement Plan (L)
 Knoxville Pension System (L)
 Chattanooga Fire and Police Pension Fund (L)
 Chattanooga General Pension Plan (L)
 Shelby County Retirement System (L)

Texas

Employees Retirement System (S)
 Teacher Retirement System (S)
 Municipal Retirement System (S)
 Dallas Employees' Retirement Fund (L)
 Dallas Police and Fire Pension System (L)
 Houston Police Officers' Pension System (L)
 Houston Firefighters' Relief and Retirement Fund (L)
 Houston Municipal Employees Pension System (L)
 San Antonio Fire and Police Pension Fund (L)
 Austin Employees' Retirement System (L)
 Austin Fire Fighters Relief and Retirement Fund (L)

Austin Police Retirement System (L)
 Fort Worth Employers' Retirement Fund (L)
 El Paso Firemen and Policemen's Pension Fund (L)
 El Paso Employees' Pension Fund (L)
 Lubbock Fire Pension Fund (L)
 Harris County Metropolitan Transit Authority
 Transport Workers Union Pension Plan (L)
 Harris County Metropolitan Authority Non-Union
 Pension Plan and Trust (L)

Utah

Noncontributory Retirement System (S)
 Contributory Retirement System (S)
 Public Safety Retirement System (S)
 Firefighters Retirement System (S)
 Judges Retirement System (S)
 Governors and Legislators Retirement Plan (S)
 Tier 2 Public Employees Contributory Retirement
 System (S)
 Tier 2 Public Safety and Firefighter Contributory
 Retirement System (S)

Vermont

State Employees' Retirement System (S)
 State Teachers' Retirement System (S)
 Municipal Employees' Retirement System (S)
 Burlington employees Retirement System (L)

Virginia

Retirement System (S)
 State Police Officers' Retirement System (S)
 Law Officers' Retirement System (S)
 Judicial Retirement System (S)
 Norfolk Employees' Retirement System (L)
 Richmond Retirement System (L)
 Newport News Employees' Retirement Fund (L)
 Fairfax County Employees' Retirement System (L)
 Fairfax County Police Officers Retirement
 System (L)
 Fairfax County Uniformed Retirement System (L)
 Fairfax County Educational Retirement System (L)

Washington

Public Employees' Retirement System (S)
 School Employees' Retirement System (S)
 Public Safety Employees' Retirement System (S)
 Teachers' Retirement System (S)
 Law Enforcement Officers' and Fire Fighters'
 Retirement System (S)
 Washington State Patrol Retirement System (S)
 Judicial Retirement System (S)
 Judges' Retirement Fund (S)
 Volunteer Fire Fighters' and Reserve Officers'
 Relief and Pension Fund (S)
 Seattle Employees' Retirement System (L)
 Spokane Employees' Retirement System (L)
 Tacoma Employees' Retirement System (L)

West Virginia

Public Employees' Retirement System (S)
 Teachers' Retirement System (S)
 State Police Death, Disability, and Retirement
 System (S)
 State Police Retirement System (S)
 Deputy Sheriff Retirement System (S)
 Judges' Retirement System (S)
 Emergency Medical Services Retirement
 System (S)

Municipal Police Officers & Firefighters
 Retirement System (S)

Teachers' Defined Contribution Retirement
 System (S)

Wisconsin

Retirement System (S)
 Milwaukee Employees' Retirement System (L)
 Milwaukee Policemen's Annuity and
 Benefit Fund (L)
 Milwaukee County Employee's
 Retirement System (L)

Wyoming

Retirement System (S)

Washington DC

DC Police Officers and Firefighters'
 Retirement Plan (L)
 DC Teachers' Retirement Plan (L)

Puerto Rico

Government Employees Retirement System (S)
 System of Annuities and Pensions for
 Teachers (S)
 Commonwealth Judiciary Retirement System (S)



APPENDIX B

Tables of Chart Values

Chart Values for Figure 1: State Pension Liabilities in Relation to Own Revenues: Top 25

\$ Amounts in Thousands

State	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
ILLINOIS	\$114,075,969	\$220,696,915	\$49,533,144	\$39,921,740
ARIZONA	\$21,989,059	\$79,405,484	\$19,509,098	\$14,254,065
OHIO	\$46,929,604	\$163,071,378	\$40,629,136	\$27,077,536
NEVADA	\$10,439,154	\$35,158,812	\$8,902,340	\$7,488,061
KENTUCKY	\$35,832,235	\$56,369,611	\$15,192,049	\$11,018,271
COLORADO	\$24,543,026	\$58,904,439	\$17,847,922	\$11,827,107
NEW JERSEY	\$113,125,551	\$131,477,665	\$40,959,520	\$29,566,186
MISSISSIPPI	\$12,261,746	\$32,256,626	\$10,351,898	\$7,579,600
ALASKA	\$7,727,208	\$17,145,281	\$5,518,198	\$3,390,153
GEORGIA	\$16,514,681	\$77,088,030	\$25,228,328	\$18,905,136
CONNECTICUT	\$26,544,795	\$58,745,811	\$19,382,738	\$15,944,715
LOUISIANA	\$19,277,623	\$47,098,660	\$16,175,450	\$10,295,619
NEW MEXICO	\$9,066,148	\$26,202,441	\$9,223,808	\$5,355,818
CALIFORNIA	\$162,444,128	\$494,082,821	\$174,620,192	\$140,670,272
ALABAMA	\$13,952,082	\$39,355,557	\$14,583,809	\$9,250,917
TEXAS	\$46,280,249	\$209,631,990	\$79,480,416	\$55,067,884
SOUTH CAROLINA	\$19,328,072	\$45,202,873	\$18,123,654	\$9,208,380
MONTANA	\$3,125,971	\$9,377,379	\$3,783,956	\$2,641,348
PENNSYLVANIA	\$54,437,716	\$118,450,192	\$49,492,912	\$34,100,972
MISSOURI	\$8,432,154	\$38,983,063	\$16,322,193	\$11,249,604
HAWAII	\$8,017,085	\$17,721,320	\$8,395,583	\$6,068,967
INDIANA	\$13,607,229	\$46,399,853	\$23,139,266	\$17,344,136
SOUTH DAKOTA	-\$720,459	\$4,809,445	\$2,466,830	\$1,608,361
MICHIGAN	\$28,090,369	\$70,407,814	\$36,490,712	\$24,464,886
WASHINGTON	\$8,040,787	\$52,772,560	\$27,364,798	\$19,546,024

Chart Values for Figure 2: State Pension Liabilities in Relation to Own Revenues: Bottom 25

\$ Amounts in Thousands

State	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
UTAH	\$3,456,333	\$20,779,565	\$10,808,745	\$6,305,949
MINNESOTA	\$12,986,899	\$52,254,015	\$27,624,736	\$23,244,478
WISCONSIN	-\$2,420,438	\$43,077,792	\$22,839,474	\$16,365,342
KANSAS	\$8,291,794	\$20,819,146	\$11,079,041	\$7,492,585
WYOMING	\$1,993,781	\$6,778,651	\$3,730,695	\$2,505,596
NEW HAMPSHIRE	\$3,753,586	\$8,317,149	\$4,663,918	\$2,276,193
MASSACHUSETTS	\$25,116,843	\$61,762,424	\$35,612,212	\$25,179,826
VIRGINIA	\$21,350,046	\$52,311,398	\$31,764,164	\$19,044,094
IOWA	\$4,480,012	\$20,903,365	\$12,974,100	\$8,407,357
ARKANSAS	\$4,525,077	\$19,448,216	\$12,076,102	\$8,924,262
FLORIDA	\$6,101,471	\$84,981,176	\$53,166,824	\$36,552,312
MAINE	\$2,133,307	\$8,075,096	\$5,176,222	\$3,847,133
RHODE ISLAND	\$4,332,014	\$7,224,135	\$4,656,995	\$2,931,897
OKLAHOMA	\$6,589,053	\$22,187,743	\$14,429,034	\$9,243,381
OREGON	-\$2,266,700	\$23,466,546	\$15,925,164	\$9,675,898
NORTH CAROLINA	\$698,661	\$43,294,824	\$31,111,126	\$23,397,302
WEST VIRGINIA	\$3,839,116	\$11,195,661	\$8,104,553	\$5,337,101
IDAHO	\$736,200	\$6,905,412	\$5,100,381	\$3,635,328
MARYLAND	\$18,376,779	\$33,800,087	\$25,568,558	\$18,985,040
TENNESSEE	\$770,323	\$18,490,668	\$16,625,990	\$12,424,805
NEBRASKA	\$876,595	\$6,820,681	\$6,700,323	\$4,887,048
VERMONT	\$1,319,206	\$3,837,222	\$3,916,886	\$2,987,906
DELAWARE	\$755,613	\$5,101,784	\$5,895,311	\$3,553,430
NEW YORK	-\$7,485,872	\$78,647,896	\$108,300,984	\$77,084,368
NORTH DAKOTA	\$1,661,908	\$4,799,976	\$8,893,381	\$7,411,037



Chart Values for Figure 3: State Contributions: Actual vs Required to Prevent Rise in Unfunded Liability

% Share of Own Revenue

State	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
NEVADA	15.9%	22.2%	39.5%
ILLINOIS	15.9%	21.4%	28.5%
CALIFORNIA	8.2%	13.6%	26.2%
NEW JERSEY	5.5%	16.5%	24.7%
WASHINGTON	5.9%	7.9%	24.1%
NEW MEXICO	8.0%	12.0%	23.8%
OHIO	9.4%	10.1%	22.6%
KENTUCKY	8.9%	17.4%	22.4%
TEXAS	5.6%	8.0%	21.7%
MISSOURI	9.0%	8.6%	21.4%
OREGON	5.7%	8.1%	20.6%
GEORGIA	7.0%	9.5%	20.1%
MISSISSIPPI	9.5%	11.3%	19.6%
MONTANA	8.9%	9.7%	19.5%
LOUISIANA	15.4%	13.1%	18.1%
COLORADO	8.2%	10.4%	17.5%
SOUTH DAKOTA	4.3%	0.3%	17.4%
UTAH	9.0%	7.1%	17.2%
ALASKA	11.6%	13.4%	17.1%
IDAHO	6.1%	5.1%	17.1%
ARIZONA	7.3%	8.3%	16.7%
ALABAMA	7.6%	8.8%	15.9%
HAWAII	7.8%	10.9%	15.8%
PENNSYLVANIA	6.2%	11.3%	15.7%
WISCONSIN	4.5%	2.0%	15.1%
CONNECTICUT	12.3%	12.6%	15.1%
VIRGINIA	5.9%	8.3%	15.1%
WYOMING	4.0%	5.5%	14.7%
FLORIDA	4.1%	5.4%	14.5%
ARKANSAS	6.3%	7.1%	14.4%
NORTH CAROLINA	5.3%	5.0%	14.4%
IOWA	5.7%	5.7%	14.3%
KANSAS	6.3%	8.6%	14.1%
SOUTH CAROLINA	6.3%	8.8%	14.0%
TENNESSEE	6.2%	5.1%	14.0%
MINNESOTA	3.7%	5.4%	13.4%
OKLAHOMA	8.3%	7.1%	13.1%
MAINE	6.5%	6.2%	12.8%
NEW HAMPSHIRE	7.0%	7.8%	12.3%
NEW YORK	7.6%	4.1%	12.3%
MARYLAND	6.9%	8.3%	11.6%
INDIANA	7.5%	5.6%	11.0%
MASSACHUSETTS	4.9%	6.6%	10.7%
NEBRASKA	4.1%	3.1%	10.5%
RHODE ISLAND	8.5%	9.3%	10.1%
WEST VIRGINIA	4.4%	6.3%	9.9%
MICHIGAN	6.5%	7.1%	9.6%
DELAWARE	4.3%	4.2%	9.3%
VERMONT	3.6%	3.5%	6.9%
NORTH DAKOTA	1.4%	2.1%	4.2%

Chart Values for Figure 4: Pension Liabilities in Relation to Own Revenues for the 25 Largest Cities

\$ Amounts in Thousands

City	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
CHICAGO CITY	\$20,090,589	\$36,655,499	\$5,930,538	\$2,781,701
DETROIT CITY	\$2,918,026	\$6,478,574	\$1,885,454	\$767,906
DALLAS CITY	\$5,601,612	\$8,750,237	\$3,052,831	\$1,228,753
HOUSTON CITY	\$3,895,960	\$11,592,213	\$4,339,146	\$2,177,208
EL PASO CITY	\$418,005	\$2,187,087	\$852,446	\$438,113
SAN JOSE CITY	\$1,697,602	\$4,841,124	\$1,994,260	\$1,054,513
LOS ANGELES CITY	\$7,595,433	\$35,957,490	\$15,148,455	\$4,701,201
FORT WORTH CITY	\$1,530,483	\$3,150,748	\$1,395,277	\$690,784
BALTIMORE CITY	\$1,585,028	\$4,351,716	\$2,015,744	\$1,375,796
PHILADELPHIA CITY	\$5,525,515	\$11,136,789	\$5,311,049	\$3,352,220
NEW YORK CITY	\$55,095,141	\$131,434,360	\$64,276,440	\$45,764,312
PORTLAND CITY	\$2,453,438	\$2,484,162	\$1,298,285	\$681,268
SAN FRANCISCO CITY	\$1,770,435	\$12,055,614	\$6,818,603	\$3,476,155
SAN DIEGO CITY	\$1,599,194	\$5,116,900	\$3,242,371	\$1,370,619
AUSTIN CITY	\$1,289,895	\$4,150,933	\$3,161,250	\$695,302
JACKSONVILLE CITY	\$2,558,742	\$5,250,094	\$4,004,224	\$1,023,955
PHOENIX CITY	\$1,392,543	\$2,952,421	\$2,695,750	\$1,082,604
SEATTLE CITY	\$1,108,019	\$3,027,268	\$2,885,111	\$1,013,110
DENVER CITY	\$922,110	\$2,810,675	\$3,134,917	\$1,276,779
MEMPHIS CITY	\$361,899	\$1,753,405	\$2,656,891	\$539,527
SAN ANTONIO CITY	\$304,638	\$2,059,538	\$4,129,418	\$838,892
NASHVILLE CITY	\$319,075	\$1,481,717	\$3,167,317	\$1,265,683
INDIANAPOLIS CITY	\$958,819	\$828,524	\$2,628,927	\$942,859
WASHINGTON DC	-\$477,193	\$2,294,608	\$8,656,988	\$6,611,147
CHARLOTTE CITY	\$4,638	\$224,751	\$1,332,083	\$640,865



Chart Values for Figure 5: Actual vs Required Contributions to Prevent Rise in Unfunded Liability for the 25 Largest Cities

% Share of Own Revenue

City	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
CHICAGO	7.5%	29.9%	31.8%
SAN JOSE	11.6%	11.2%	19.7%
NEW YORK CITY	15.1%	14.0%	18.5%
LOS ANGELES	7.8%	8.7%	18.1%
SAN FRANCISCO	7.8%	6.9%	17.8%
HOUSTON	6.8%	11.0%	16.8%
DETROIT	1.3%	12.1%	16.3%
DALLAS	5.2%	8.9%	16.1%
FORT WORTH	2.3%	6.5%	14.6%
EL PASO	5.6%	3.7%	14.4%
BALTIMORE	10.4%	9.5%	14.0%
PORTLAND	8.8%	13.9%	12.9%
SAN DIEGO	9.3%	6.2%	10.9%
AUSTIN	4.6%	4.7%	10.1%
PHILADELPHIA	10.4%	9.6%	9.3%
PHOENIX	4.1%	5.9%	8.5%
JACKSONVILLE	5.4%	6.1%	8.0%
SEATTLE	3.1%	3.7%	7.2%
MEMPHIS	0.7%	2.7%	5.5%
WASHINGTON DC	1.6%	1.6%	5.1%
NASHVILLE	3.2%	2.0%	4.4%
DENVER	2.4%	2.3%	4.4%
SAN ANTONIO	1.8%	1.4%	4.3%
CHARLOTTE	0.6%	0.6%	2.1%
INDIANAPOLIS	2.2%	1.4%	1.2%

Chart Values for Figure 6: California Pensions in Relation to Own Revenues

\$ Amounts in Thousands

City/County	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
MERCED COUNTY	\$450,406	\$1,045,526	\$155,511	\$95,395
ORANGE COUNTY	\$5,082,481	\$12,715,424	\$2,002,840	\$1,144,577
FRESNO COUNTY	\$878,054	\$3,284,168	\$531,359	\$341,432
SAN JOAQUIN COUNTY	\$1,317,495	\$3,650,501	\$636,829	\$260,538
KERN COUNTY	\$2,069,234	\$4,811,677	\$1,011,197	\$553,036
SAN DIEGO COUNTY	\$2,137,714	\$8,917,227	\$1,933,263	\$1,329,149
IMPERIAL COUNTY	\$58,724	\$471,333	\$104,344	\$59,906
MENDOCINO COUNTY	\$142,120	\$425,650	\$104,064	\$74,139
SAN LUIS OBISPO COUNTY	\$422,484	\$1,351,063	\$340,467	\$236,646
SANTA BARBARA COUNTY	\$610,339	\$2,297,300	\$600,725	\$349,088
STANISLAUS COUNTY	\$233,067	\$1,397,585	\$365,668	\$186,700
MARIN COUNTY	\$247,139	\$1,444,282	\$387,714	\$271,536
SAN BERNARDINO COUNTY	\$1,699,755	\$6,429,702	\$1,801,829	\$728,488
SACRAMENTO COUNTY	\$770,927	\$4,832,655	\$1,407,620	\$620,349
TULARE COUNTY	\$156,680	\$1,044,943	\$321,787	\$179,859
SANTA CLARA COUNTY	\$2,554,471	\$8,937,967	\$2,817,763	\$1,137,037
LOS ANGELES COUNTY	\$7,274,744	\$35,521,804	\$11,488,289	\$6,192,568
CONTRA COSTA COUNTY	\$1,195,701	\$5,761,495	\$1,990,576	\$594,405
SAN MATEO COUNTY	\$411,647	\$2,988,442	\$1,050,225	\$493,201
ALAMEDA COUNTY	\$1,740,643	\$5,537,674	\$2,076,660	\$798,565
EAST BAY MUNICIPAL UTILITY DISTRICT	\$412,460	\$1,363,316	\$548,807	\$37,387
SAN JOSE CITY	\$1,697,602	\$4,841,124	\$1,994,260	\$1,054,513
LOS ANGELES CITY	\$7,595,433	\$35,957,490	\$15,148,455	\$4,701,201
VENTURA COUNTY	\$553,154	\$3,093,637	\$1,427,127	\$618,188
SONOMA COUNTY	\$216,778	\$1,378,294	\$653,821	\$371,673
SAN FRANCISCO CITY	\$1,770,435	\$12,055,614	\$6,818,603	\$3,476,155
SAN DIEGO CITY	\$1,599,194	\$5,116,900	\$3,242,371	\$1,370,619
FRESNO CITY	-\$326,710	\$774,106	\$714,685	\$326,659
SANTA CLARA VALLEY TRANSPORTATION AUTHORITY	\$102,816	\$340,400	\$518,799	\$406,514
CONCORD CITY	\$23,436	\$33,019	\$134,827	\$86,373
OAKLAND CITY	\$176,515	\$339,614	\$1,391,087	\$696,943
SACRAMENTO CITY	\$60,256	\$145,309	\$1,022,246	\$447,820
PASADENA CITY	\$11,312	\$38,604	\$754,026	\$237,619
RICHMOND CITY	\$9,834	\$12,643	\$267,605	\$184,384
ALBANY CITY	\$2,916	\$597	\$29,485	\$21,437
LONG BEACH CITY	\$8,757	\$20,223	\$2,249,167	\$502,450



**Chart Values for Figure 7: California City and County Contributions:
Actual vs Required to Prevent Rise in Unfunded Liability**

% Share of Own Revenue

City/County	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
FRESNO COUNTY	31.1%	31.0%	60.6%
ORANGE COUNTY	31.2%	28.7%	56.5%
IMPERIAL COUNTY	16.3%	20.3%	52.0%
MERCED COUNTY	30.9%	30.4%	43.4%
SAN DIEGO COUNTY	20.4%	20.7%	43.0%
SAN JOAQUIN COUNTY	21.5%	24.2%	41.6%
SAN BERNARDINO COUNTY	18.3%	19.9%	39.6%
KERN COUNTY	21.8%	26.4%	39.3%
SACRAMENTO COUNTY	15.0%	17.3%	39.2%
MARIN COUNTY	19.2%	16.8%	36.2%
SANTA BARBARA COUNTY	19.8%	18.1%	35.8%
STANISLAUS COUNTY	12.8%	14.2%	35.1%
TULARE COUNTY	8.1%	12.6%	32.9%
MENDOCINO COUNTY	13.8%	18.1%	31.6%
SANTA CLARA COUNTY	8.9%	12.8%	26.2%
LOS ANGELES COUNTY	11.5%	12.1%	26.1%
SAN MATEO COUNTY	19.3%	10.3%	25.7%
SAN LUIS OBISPO COUNTY	9.4%	11.3%	25.0%
CONTRA COSTA COUNTY	14.8%	10.4%	23.9%
VENTURA COUNTY	11.9%	10.5%	23.5%
SONOMA COUNTY	9.4%	7.8%	21.3%
EAST BAY MUNICIPAL UTILITY DISTRICT	11.2%	11.8%	20.3%
SAN JOSE CITY	11.6%	11.2%	19.7%
LOS ANGELES CITY	7.8%	8.7%	18.1%
SAN FRANCISCO CITY AND COUNTY	7.8%	6.9%	17.8%
ALAMEDA COUNTY	10.3%	8.5%	15.6%
FRESNO CITY	2.1%	2.0%	14.7%
SAN DIEGO CITY	9.3%	6.2%	10.9%
SANTA CLARA VALLEY TRANSPORTATION AUTHORITY	5.0%	4.2%	6.8%
OAKLAND CITY	0.0%	0.8%	0.8%
CONCORD CITY	1.5%	1.1%	0.7%
SACRAMENTO CITY	0.9%	0.4%	0.5%
PASADENA CITY	0.2%	0.2%	0.3%
ALBANY CITY	0.3%	0.4%	0.1%
RICHMOND CITY	0.5%	0.1%	0.1%
LONG BEACH CITY	0.1%	0.0%	0.1%

Chart Values for Figure 8: Connecticut Pensions in Relation to Own Revenues

\$ Amounts in Thousands

City/County	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
HAMDEN TOWN	\$402,388	\$569,618	\$151,641	\$145,340
NEW HAVEN CITY	\$554,696	\$1,129,398	\$302,406	\$240,414
EAST HARTFORD TOWN	\$129,956	\$326,425	\$126,595	\$120,075
HARTFORD CITY	\$258,887	\$850,441	\$343,125	\$292,951
WATERBURY CITY	\$162,499	\$414,996	\$266,409	\$227,980
WEST HARTFORD TOWN	\$180,860	\$344,522	\$233,497	\$208,584
NORWICH CITY	\$77,336	\$189,006	\$164,875	\$66,260
MILFORD CITY	(\$317)	\$185,424	\$181,614	\$168,330
TORRINGTON CITY	\$36,776	\$91,603	\$92,057	\$79,788
NORWALK CITY	\$58,513	\$275,288	\$311,421	\$272,802
CHESHIRE TOWN	\$31,327	\$75,168	\$87,296	\$79,469
STAMFORD CITY	\$113,904	\$428,964	\$501,773	\$440,885
GROTON TOWN	\$17,139	\$79,013	\$94,486	\$80,940
GREENWICH TOWN	\$110,653	\$314,938	\$383,313	\$337,557
FARMINGTON TOWN	\$20,285	\$60,450	\$93,460	\$83,544
MIDDLETOWN CITY	(\$68,375)	\$93,396	\$159,990	\$104,964
WESTPORT TOWN	\$22,284	\$111,191	\$195,239	\$174,099
NEW BRITAIN CITY	\$9,930	\$77,690	\$157,602	\$114,963
FAIRFIELD TOWN	(\$1,802)	\$71,453	\$276,031	\$250,479
STONINGTON TOWN	\$1,722	\$14,689	\$58,056	\$51,974
CROMWELL TOWN	\$1,212	\$10,634	\$42,343	\$39,131
DARIEN TOWN	(\$13,118)	\$27,465	\$120,866	\$113,074
GRANBY TOWN	\$1,556	\$7,873	\$35,693	\$32,912
BRISTOL CITY	(\$243,096)	(\$24,955)	\$156,391	\$124,526



**Chart Values for Figure 9: Connecticut City and County Contributions:
Actual vs Required to Prevent Rise in Unfunded Liability**

% Share of Own Revenue

City/County	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
NEW HAVEN CITY	13.7%	17.7%	20.3%
HAMDEN TOWN	8.2%	20.8%	17.6%
HARTFORD CITY	12.7%	9.4%	17.4%
EAST HARTFORD TOWN	8.1%	11.4%	15.4%
MILFORD CITY	1.2%	3.2%	10.6%
BRISTOL CITY	0.1%	-6.0%	10.4%
MIDDLETOWN CITY	1.5%	0.8%	10.0%
WESTPORT TOWN	4.9%	4.5%	8.4%
TORRINGTON CITY	5.4%	5.5%	8.3%
WATERBURY CITY	6.0%	5.8%	8.1%
WEST HARTFORD TOWN	6.8%	7.7%	8.0%
GREENWICH TOWN	5.2%	4.8%	7.7%
NORWALK CITY	3.1%	3.4%	7.7%
STAMFORD CITY	3.5%	4.0%	7.4%
GROTON TOWN	3.3%	3.4%	7.4%
CHESHIRE TOWN	2.8%	4.3%	6.3%
FARMINGTON TOWN	2.4%	2.8%	5.6%
NORWICH CITY	3.7%	3.7%	5.3%
DARIEN TOWN	2.4%	1.1%	4.8%
CROMWELL TOWN	1.6%	1.8%	4.0%
NEW BRITAIN CITY	1.0%	1.5%	3.6%
FAIRFIELD TOWN	1.8%	1.2%	3.1%
STONINGTON TOWN	2.0%	1.4%	3.0%
GRANBY TOWN	1.3%	1.1%	2.1%

Chart Values for Figure 10: Florida Pension Liabilities in Relation to Own Revenues

\$ Amounts in Thousands

City/County	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
MIAMI CITY	\$674,929	\$2,124,261	\$609,346	\$450,714
HOLLYWOOD CITY	\$414,456	\$915,157	\$308,172	\$136,109
PEMBROKE PINES CITY	\$184,811	\$665,451	\$227,923	\$102,885
HIALEAH CITY	\$187,812	\$533,369	\$199,532	\$114,338
MIAMI BEACH CITY	\$385,334	\$1,359,619	\$599,441	\$363,617
ORLANDO CITY	-\$3,851	\$1,161,133	\$557,227	\$247,885
TAMPA CITY	\$82,874	\$1,359,025	\$660,002	\$299,183
CAPE CORAL CITY	\$122,166	\$428,250	\$252,445	\$102,235
NORTH MIAMI BEACH CITY	\$47,896	\$154,236	\$102,686	\$25,325
ST PETERSBURG CITY	\$4,329	\$530,699	\$378,086	\$154,793
FORT LAUDERDALE CITY	\$19,035	\$621,737	\$447,812	\$191,245
MIAMI SPRINGS CITY	\$3,524	\$22,024	\$16,550	\$10,612
JACKSONVILLE CITY	\$2,558,742	\$5,250,094	\$4,004,224	\$1,023,955
TALLAHASSEE CITY	\$69,033	\$925,637	\$742,128	\$117,117
NORTH MIAMI CITY	\$22,106	\$85,672	\$80,062	\$33,393
ORANGE COUNTY	\$547	\$18,758	\$1,493,326	\$973,770
MIAMI-DADE COUNTY SCHOOL DISTRICT	\$19,970	-\$260,876	\$1,910,647	\$1,694,019



**Chart Values for Figure 11: Florida City and County Contributions:
Actual vs Required to Prevent Rise in Unfunded Liability**

% Share of Own Revenue

City/County	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
PEMBROKE PINES CITY	18.7%	10.5%	18.9%
HIALEAH CITY	15.9%	11.1%	16.8%
MIAMI CITY	13.1%	9.2%	15.3%
FORT LAUDERDALE CITY	7.9%	5.1%	15.3%
MIAMI BEACH CITY	10.3%	8.3%	15.1%
CAPE CORAL CITY	11.9%	7.6%	14.9%
HOLLYWOOD CITY	15.2%	12.4%	13.9%
ST PETERSBURG CITY	9.8%	3.9%	13.2%
TAMPA CITY	6.2%	3.2%	13.0%
ORLANDO CITY	6.2%	5.5%	12.8%
MIAMI SPRINGS CITY	6.5%	4.7%	12.1%
NORTH MIAMI BEACH CITY	6.6%	6.2%	11.5%
TALLAHASSEE CITY	3.5%	3.2%	10.6%
NORTH MIAMI CITY	5.2%	4.1%	8.5%
JACKSONVILLE CITY	5.4%	6.1%	8.0%
MIAMI-DADE COUNTY			
PUBLIC SCHOOL DISTRICT	0.6%	0.5%	0.2%
ORANGE COUNTY	0.0%	0.0%	0.1%

Chart Values for Figure 12: Local Pension Liabilities in Relation to Own Revenues

\$ Amounts in Thousands

City/County	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
ST PAUL				
SCHOOL DISTRICT (MN)	\$535,792	\$1,546,033	\$137,570	\$111,361
CITY OF CHICAGO				
SCHOOL DISTRICT (IL)	\$9,501,205	\$22,591,364	\$2,886,974	\$2,589,829
CHICAGO CITY (IL)	\$20,090,589	\$36,655,499	\$5,930,538	\$2,781,701
CHICAGO TRANSIT AUTHORITY (IL)	\$1,427,242	\$3,596,836	\$630,970	\$0
MILWAUKEE CITY (WI)	\$114,956	\$3,713,915	\$672,134	\$309,618
SPRINGFIELD CITY (MA)	\$731,726	\$1,234,151	\$230,395	\$202,364
OMAHA CITY				
SCHOOL DISTRICT (NE)	\$429,712	\$1,520,049	\$336,731	\$321,873
KANSAS CITY				
SCHOOL DISTRICT (MO)	\$180,766	\$563,018	\$134,663	\$127,358
ST LOUIS CITY BOARD OF EDUCATION (MO)	\$265,068	\$805,772	\$203,664	\$194,312
ROCKFORD CITY (IL)	\$266,454	\$516,319	\$132,588	\$82,600
JOLIET CITY (IL)	\$294,343	\$606,957	\$165,665	\$79,652
WATER RECLAMATION OF CHICAGO (IL)	\$947,300	\$2,294,929	\$645,827	\$542,545
DETROIT CITY (MI)	\$2,918,026	\$6,478,574	\$1,885,454	\$767,906
OMAHA CITY (NE)	\$1,046,325	\$1,798,589	\$592,223	\$439,760
PITTSBURGH CITY (PA)	\$811,161	\$1,321,027	\$458,882	\$369,725
DALLAS CITY (TX)	\$5,601,612	\$8,750,237	\$3,052,831	\$1,228,753
HOUSTON CITY (TX)	\$3,895,960	\$11,592,213	\$4,339,146	\$2,177,208
AURORA CITY (IL)	\$308,346	\$566,201	\$212,704	\$147,640
CINCINNATI CITY (OH)	\$1,168,360	\$1,855,433	\$704,477	\$433,829
WORCESTER CITY (MA)	\$402,922	\$1,006,536	\$385,526	\$276,206
EL PASO CITY (TX)	\$418,005	\$2,187,087	\$852,446	\$438,113
EVANSTON CITY (IL)	\$166,052	\$310,408	\$122,025	\$71,240
NEW ORLEANS CITY (LA)	\$1,407,190	\$2,816,970	\$1,183,398	\$571,614
FORT WORTH CITY (TX)	\$1,530,483	\$3,150,748	\$1,395,277	\$690,784
MACON CITY (GA)	\$30,283	\$140,498	\$63,780	\$42,135
BALTIMORE CITY (MD)	\$1,585,028	\$4,351,716	\$2,015,744	\$1,375,796
PHILADELPHIA CITY (PA)	\$5,525,515	\$11,136,789	\$5,311,049	\$3,352,220
NEW YORK CITY (NY)	\$55,095,141	\$131,434,360	\$64,276,440	\$45,764,312
PORTLAND CITY (OR)	\$2,453,438	\$2,484,162	\$1,298,285	\$681,268
NEWPORT NEWS CITY (VA)	\$354,789	\$950,566	\$543,223	\$338,213
SIOUX FALLS CITY (SD)	\$56,231	\$413,763	\$254,582	\$158,050
GRAND RAPIDS CITY (MI)	\$30,001	\$432,475	\$282,637	\$124,093
KANSAS CITY CITY (MO)	\$377,285	\$1,866,513	\$1,309,814	\$773,680
BIRMINGHAM CITY (AL)	\$469,103	\$767,603	\$554,886	\$341,855
WILMINGTON CITY (DE)	\$144,637	\$287,066	\$210,526	\$117,326
BATON ROUGE				
CITY-PARISH (LA)	\$559,902	\$1,186,102	\$874,265	\$524,367
AUSTIN CITY (TX)	\$1,289,895	\$4,150,933	\$3,161,250	\$695,302
WICHITA CITY (KS)	\$44,121	\$660,275	\$546,680	\$169,219
PHOENIX CITY (AZ)	\$1,392,543	\$2,952,421	\$2,695,750	\$1,082,604
SEATTLE CITY (WA)	\$1,108,019	\$3,027,268	\$2,885,111	\$1,013,110
SHREVEPORT CITY (LA)	\$206,937	\$418,763	\$400,747	\$239,846
ST LOUIS CITY (MO)	\$125,149	\$921,711	\$905,166	\$567,122
BURLINGTON CITY (NC)	\$53,947	\$169,939	\$167,250	\$41,656
DENVER CITY				
AND COUNTY (CO)	\$922,110	\$2,810,675	\$3,134,917	\$1,276,779
TACOMA CITY (WA)	-\$10,368	\$753,103	\$908,422	\$177,635



Chart Values for Figure 12: Local Pension Liabilities in Relation to Own Revenues (continued)

\$ Amounts in Thousands

City/County	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
SPOKANE CITY (WA)	\$205,620	\$315,884	\$384,867	\$148,876
ATLANTA CITY (GA)	\$470,804	\$1,590,893	\$2,027,439	\$589,215
RICHMOND CITY (VA)	\$309,380	\$636,339	\$840,354	\$433,049
NORFOLK CITY (VA)	\$161,287	\$542,683	\$775,252	\$436,907
MEMPHIS CITY (TN)	\$361,899	\$1,753,405	\$2,656,891	\$539,527
AURORA CITY (CO)	\$8,991	\$291,091	\$503,573	\$249,511
MINNEAPOLIS CITY (MN)	\$221,223	\$593,299	\$1,060,503	\$519,803
SAN ANTONIO CITY (TX)	\$304,638	\$2,059,538	\$4,129,418	\$838,892
KNOXVILLE CITY (TN)	\$148,600	\$459,677	\$938,246	\$169,662
SPRINGFIELD CITY (MO)	\$120,383	\$320,641	\$675,582	\$157,885
CHATTANOOGA CITY (TN)	\$154,574	\$441,363	\$979,585	\$144,459
TULSA CITY (OK)	\$109,778	\$354,689	\$801,707	\$355,513
LITTLE ROCK CITY (AR)	\$73,294	\$128,755	\$299,182	\$130,714
DOVER CITY (DE)	\$29,313	\$59,123	\$139,837	\$16,772
LONGMONT CITY (CO)	\$4,337	\$77,829	\$187,287	\$66,480
FULTON				
SCHOOL DISTRICT (GA)	\$110,724	\$290,267	\$828,039	\$773,729
LINCOLN CITY (NE)	\$62,591	\$181,313	\$562,078	\$153,272
LUBBOCK CITY (TX)	\$56,603	\$187,305	\$582,462	\$143,942
INDIANAPOLIS CITY (IN)	\$958,819	\$828,524	\$2,628,927	\$942,859
FAYETTEVILLE CITY (AR)	\$27,285	\$31,677	\$106,705	\$51,887
ENGLEWOOD CITY (CO)	\$6,080	\$20,918	\$75,971	\$36,084
WASHINGTON DC CITY	-\$477,193	\$2,294,608	\$8,656,988	\$6,611,147
WINSTON-SALEM CITY (NC)	\$19,205	\$71,586	\$323,200	\$143,377
CHARLOTTE CITY (NC)	\$4,638	\$224,751	\$1,332,083	\$640,865
SOUTHEAST ALABAMA				
GAS DISTRICT (AL)	\$6,833	\$20,290	\$152,737	\$0
BOULDER CITY (CO)	\$1,134	\$10,083	\$260,994	\$172,931
OKLAHOMA CITY (OK)	\$60,989	\$14,133	\$1,196,470	\$629,466
TUCSON CITY (AZ)	\$305,836	-\$287,113	\$683,276	\$307,453

Chart Values for Figure 13: Worst 50 Cities: Actual vs Required Contributions to Prevent Rise in Unfunded Liability

% Share of Own Revenue

Municipality	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
ST PAUL SCHOOL DIST (MN)	25.6%	36.5%	57.0%
CHICAGO SCHOOL DISTRICT (IL)	20.3%	31.3%	56.5%
CHICAGO CITY (IL)	7.5%	29.9%	31.8%
MILWAUKEE CITY (WI)	10.9%	2.3%	30.9%
MACON CITY (GA)	12.5%	15.7%	27.6%
OMAHA SCHOOL DISTRICT (NE)	11.8%	11.8%	27.6%
JOLIET CITY (IL)	15.5%	18.2%	25.4%
SPRINGFIELD CITY (MA)	19.9%	25.0%	24.6%
AUSTIN CITY (TX)	4.6%	4.7%	24.6%
ST LOUIS BOARD OF EDUCATION (MO)	20.5%	11.4%	22.9%
KANSAS CITY SCHOOL DISTRICT (MO)	9.9%	8.1%	22.8%
CHICAGO TRANSIT AUTHORITY (IL)	13.0%	14.9%	21.0%
NEW YORK CITY (NY)	15.1%	14.0%	18.5%
OMAHA CITY (NE)	9.1%	12.4%	18.0%
ROCKFORD CITY (IL)	9.8%	12.7%	17.9%
CHICAGO WATER RECLAMATION (IL)	11.4%	12.2%	17.0%
HOUSTON CITY (TX)	6.8%	11.0%	16.8%
DETROIT CITY (MI)	1.3%	12.1%	16.3%
AURORA CITY (IL)	8.5%	12.3%	16.2%
DALLAS CITY (TX)	5.2%	8.9%	16.1%
WORCESTER CITY (MA)	10.7%	9.8%	15.8%
EVANSTON CITY (IL)	5.3%	13.1%	15.7%
PITTSBURGH CITY (PA)	11.3%	15.0%	14.9%
FORT WORTH CITY (TX)	2.3%	6.5%	14.6%
EL PASO CITY (TX)	5.6%	3.7%	14.4%
BALTIMORE CITY (MD)	10.4%	9.5%	14.0%
BIRMINGHAM CITY (AL)	3.3%	7.7%	14.0%
NEW ORLEANS CITY (LA)	13.3%	11.2%	13.7%
PORTLAND CITY (OR)	8.8%	13.9%	12.9%
SIoux FALLS CITY (SD)	5.8%	4.2%	12.2%
CINCINNATI CITY (OH)	5.4%	7.4%	12.1%
WICHITA CITY (KS)	4.4%	3.2%	11.0%
GRAND RAPIDS CITY (MI)	5.3%	2.5%	10.1%
PHILADELPHIA CITY (PA)	10.4%	9.6%	9.3%
NEWPORT NEWS CITY (VA)	5.4%	5.7%	8.9%
BURLINGTON CITY (VT)	5.0%	4.9%	8.6%
PHOENIX CITY (AZ)	4.1%	5.9%	8.5%
TACOMA CITY (WA)	2.6%	1.9%	8.1%
NORFOLK CITY (VA)	5.5%	5.1%	8.1%
SEATTLE CITY (WA)	3.1%	3.7%	7.2%
WILMINGTON CITY (DE)	9.0%	6.7%	7.1%
BATON ROUGE CITY (LA)	4.8%	4.9%	6.7%
ATLANTA CITY (GA)	2.5%	9.7%	5.7%
KANSAS CITY (MO)	2.6%	3.1%	5.6%
ST LOUIS CITY (MO)	4.2%	2.6%	5.5%
MEMPHIS CITY (TN)	0.7%	2.7%	5.5%
WASHINGTON DC	1.6%	1.6%	5.1%
TULSA CITY (OK)	1.5%	2.2%	4.9%
SPOKANE CITY (WA)	1.8%	2.4%	4.8%
RICHMOND CITY (VA)	5.0%	4.0%	4.6%
DENVER CITY (CO)	2.4%	2.3%	4.4%



Chart Values for Figure 13: Worst 50 Cities: Actual vs Required Contributions to Prevent Rise in Unfunded Liability (continued)

% Share of Own Revenue

Municipality	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
SHREVEPORT CITY (LA)	2.0%	3.4%	4.4%
AURORA CITY (CO)	1.1%	0.8%	4.3%
SAN ANTONIO CITY (TX)	1.8%	1.4%	4.3%
CHATTANOOGA CITY (TN)	2.1%	2.7%	4.0%
KNOXVILLE CITY (TN)	1.6%	2.3%	3.9%
LONGMONT CITY (CO)	1.3%	0.7%	3.5%
LITTLE ROCK CITY (AR)	3.4%	2.5%	3.2%
SPRINGFIELD CITY (MO)	5.5%	2.0%	2.9%
LINCOLN CITY (NE)	1.4%	1.9%	2.7%
WINSTON-SALEM CITY (NC)	10.6%	2.2%	2.2%
LUBBOCK CITY (TX)	1.1%	0.9%	2.2%
CHARLOTTE CITY (NC)	0.6%	0.6%	2.1%
OKLAHOMA CITY (OK)	0.7%	1.6%	2.0%
DOVER CITY (DE)	3.4%	1.8%	2.0%
MINNEAPOLIS CITY (MN)	5.2%	1.9%	1.7%
ENGLEWOOD CITY (CO)	1.5%	0.7%	1.5%
SOUTHEAST ALABAMA GAS DISTRICT (AL)	1.4%	0.8%	1.4%
INDIANAPOLIS CITY (IN)	2.2%	1.4%	1.2%
FAYETTEVILLE CITY (AR)	1.2%	1.2%	0.9%
BOULDER CITY (CO)	0.1%	0.0%	0.1%
TUCSON CITY (AZ)	5.0%	4.4%	-0.5%

Chart Values for Figure 14: County Pensions in Relation to Own Revenues

\$ Amounts in Thousands

City/County	Stated Net Pension Liability	Market Value Unfunded Liability	Own Revenue	Tax Revenue
COOK COUNTY (IL)	\$12,826,494	\$16,153,983	\$2,602,195	\$1,874,740
EL PASO COUNTY (CO)	\$621,463	\$1,969,762	\$168,136	\$128,476
ALLEGHENY COUNTY (PA)	\$261,032	\$3,377,889	\$589,148	\$452,876
WAYNE COUNTY (MI)	\$1,991,289	\$8,361,686	\$732,432	\$421,625
FAIRFAX COUNTY (VA)	\$124,790	\$400,983	\$4,142,119	\$3,258,293
SHELBY COUNTY (TN)	\$348,385	\$1,195,717	\$1,714,553	\$1,161,205
DEKALB COUNTY (GA)	\$283,957	\$764,522	\$1,038,080	\$553,853
JACKSON COUNTY (MI)	\$417,372	\$1,550,040	\$83,093	\$25,814
MILWAUKEE COUNTY (WI)	\$46,314	\$140,341	\$979,148	\$323,187
ADAMS COUNTY (CO)	\$552,118	\$1,260,935	\$222,774	\$187,541
ST LOUIS COUNTY (MO)	\$485,063	\$1,772,225	\$632,580	\$506,125
BALTIMORE COUNTY (MD)	\$1,183,953	\$2,549,861	\$2,171,624	\$1,740,639
FULTON COUNTY (GA)	\$842,225	\$1,515,523	\$1,018,617	\$821,807
ANNE ARUNDEL COUNTY (MD)	\$305,502	\$4,407,281	\$1,628,692	\$1,212,571
MONTGOMERY COUNTY (MD)	\$160,887	\$331,886	\$4,839,091	\$3,434,684
PRINCE GEORGES COUNTY (MD)	\$895,277	\$1,942,245	\$2,231,527	\$1,578,484
HARRIS COUNTY TRANSIT AUTHORITY (TX)	\$319,075	\$1,481,717	\$687,526	\$608,026
NASHVILLE-DAVIDSON COUNTY (TN)	\$177,962	\$322,738	\$3,167,317	\$1,265,683
OAKLAND COUNTY (MI)	\$21,428	\$77,198	\$483,554	\$244,258
AUGUSTA-RICHMOND COUNTY (GA)	-\$63,852	\$190,098	\$313,756	\$116,906
MACOMB COUNTY (MI)	\$15	\$212	\$400,876	\$124,169



**Chart Values for Figure 15: County Contributions: Actual vs Required
to Prevent Rise in Unfunded Liability**

% Share of Own Revenue

County	Actually Contributed	Required to Prevent Rise in Unfunded Liability under Expected Return	Required to Prevent Rise in Unfunded Liability under Expected MVL
COOK COUNTY (IL)	7.3%	25.0%	37.6%
FAIRFAX COUNTY (VA)	7.1%	7.7%	16.8%
EL PASO COUNTY (CO)	6.1%	6.6%	15.3%
ALLEGHENY COUNTY (PA)	5.1%	6.6%	14.3%
SHELBY COUNTY (TN)	1.9%	2.3%	11.6%
DEKALB COUNTY (GA)	3.8%	5.3%	11.2%
JACKSON COUNTY (MI)	7.0%	4.7%	9.4%
WAYNE COUNTY (MI)	11.0%	9.5%	9.3%
ADAMS COUNTY (CO)	4.0%	5.7%	9.2%
ST LOUIS COUNTY (MO)	5.7%	5.0%	7.7%
BALTIMORE COUNTY (MD)	3.7%	5.1%	7.3%
PRINCE GEORGES COUNTY (MD)	4.5%	4.9%	7.2%
ANNE ARUNDEL COUNTY (MD)	4.0%	2.9%	7.0%
MILWAUKEE COUNTY (WI)	1.9%	2.8%	6.8%
MONTGOMERY COUNTY (MD)	3.0%	1.8%	6.5%
NASHVILLE-DAVIDSON COUNTY (TN)	3.9%	2.4%	5.3%
FULTON COUNTY (GA)	5.6%	2.3%	4.0%
HARRIS COUNTY TRANSIT AUTHORITY (TX)	3.3%	2.8%	3.4%
OAKLAND COUNTY (MI)	1.2%	-0.3%	3.2%
AUGUSTA-RICHMOND COUNTY (GA)	0.8%	0.6%	0.8%
MACOMB COUNTY (MI)	0.1%	0.0%	0.0%



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