

Wilshire Consulting

2009 Report on City & County Retirement Systems: Funding Levels and Asset Allocation

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September 8, 2009



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Summary of Findings

- The following study includes 104 city and county retirement systems. Of these 104 retirement systems, 73 systems reported actuarial values on or after June 30, 2008 and the remaining 31 systems last reported before June 30, 2008.
- Wilshire Consulting estimates that the ratio of pension assets-to-liabilities, or *funding ratio*, for all 104 city and county pension plans was 81 percent in 2008, significantly lower than the estimated 99 percent for all plans in 2007. (Exhibit 1)
- For the 73 city and county retirement systems which reported actuarial data on or after June 30, 2008, pension assets and liabilities were \$214.4 billion and \$274.3 billion, respectively. The ratio of pension assets-to-liabilities, or *funding ratio*, for all 73 city and county pension plans was 78 percent in 2008, down from 96 percent for the same 73 plans in 2007. (Exhibit 2)
- For the 73 city and county retirement systems which reported actuarial data on or after June 30, 2008, pension assets fell by -14 percent, or -\$33.8 billion, from \$248.1 billion in 2007 to \$214.4 billion in 2008 while liabilities grew 6 percent, or \$15.4 billion, from \$258.9 billion to \$274.3 billion. The decline in asset values with the continued steady growth in liabilities for the 73 city and county pension plans led to a significant increase in the aggregate shortfall, as the -\$10.8 billion shortfall in 2007 expanded to a -\$59.9 billion shortfall in 2008. (Exhibit 2)
- Of the 73 city and county retirement systems which reported actuarial data for 2008, 89 percent have market value of assets less than pension liabilities, or are *underfunded*. The aggregate ratio of pension assets-to-liabilities, or *funding ratio*, for all underfunded plans is 77%.
- City and county pension portfolios have a 63.6 percent average allocation to equities – including real estate and private equity – and a 36.4 percent allocation to fixed income. The 63.6 percent equity allocation is slightly higher than the 63.0 percent equity allocation five years prior in 2003. (Exhibits 12 and 13)
- Asset allocation varies widely by city and county retirement system. Thirty of the 104 retirement systems have allocations to equity that equal or exceed 70 percent, and eight systems have equity allocations below 50 percent. The 25th and 75th percentile range for equity allocation is 59 percent to 70 percent.
- Wilshire forecasts a long-term median return on city and county pension assets equal to 7.2 percent per annum. The 7.2 percent estimate is 0.8 percentage points below the average actuarial interest rate assumption of 8.0 percent.



Financial Overview

This is our seventh report on the financial condition of city- and county-sponsored defined benefit retirement systems and is based upon data gathered from the most recent financial and actuarial reports published by 104¹ retirement systems. Appendix A lists the 104 retirement systems included in this year's study.

The Data

Financial data on public retirement systems lack the timeliness and uniform disclosure governing pension plans sponsored by publicly traded companies, making it difficult to conclude a study with data that is both current and consistent across systems. For this reason, our study methodology involves collecting data during the third quarter of each calendar year with the objective of acquiring as many reports as possible with a June 30 valuation date from the previous year. Even for systems with the desire to report in a timely manner, it often takes six months to one year for actuaries to determine liability values. Seventy-three of the 104 systems, for which data is collected annually, reported actuarial values on or after June 30, 2008.

Assets versus Liabilities

Exhibit 1 shows the market value of assets, actuarial value of assets, and actuarial accrued liability values for all city and county retirement systems for which Wilshire has data. One hundred four retirement systems reported actuarial values for fiscal years 2001 through 2005, with 103, 98 and 73 of the 104 systems reporting values for fiscal year 2006, 2007 and 2008, respectively. With the exception of the two rows identifying Wilshire's estimated funded ratios, the data presented in each column of Exhibit 1 is limited to only those systems that reported on or after June of that year. For example, all 104 retirement systems reported actuarial values for 2005 while only 73 systems reported actuarial values for 2008. Note that Exhibit 1 includes both market value and actuarial value of assets. Unless otherwise noted, "assets" will refer to market value of assets for the remainder of this paper.

¹ The number of plans decreased by two last year due to two plans not reporting an accrued actuarial liability as a result of using the aggregate cost method. New GASB regulations require future disclosure of accrued actuarial liabilities by plans using the aggregate cost method. As a result we expect to include such plans in future studies.



Exhibit 1 Financial Overview of City & County Retirement Systems² (\$ billions)

	2001	2002	2003	2004	2005	2006	2007	2008
Total Pension Assets:								
- Market Value	\$291.3	\$262.5	\$273.2	\$306.6	\$330.5	\$358.0	\$307.0	\$214.4
- Actuarial Value	\$305.1	\$308.4	\$307.9	\$313.7	\$326.9	\$342.0	\$275.1	\$231.4
Total Pension Liabilities:	\$305.6	\$324.8	\$339.5	\$354.0	\$373.2	\$387.3	\$316.1	\$274.3
Difference:								
- Market Value	-\$14.3	-\$62.3	-\$66.2	-\$47.4	-\$42.7	-\$29.3	-\$9.1	-\$59.9
- Actuarial Value	-\$0.6	-\$16.3	-\$31.5	-\$40.3	-\$46.4	-\$45.4	-\$41.1	-\$43.0
Market Value of Assets as a % of Liabilities:								
All Plans (estimate)*	95%	81%	80%	87%	89%	92%	99%	81%
Reported Plans (actual)	95%	81%	80%	87%	89%	92%	97%	78%
Actuarial Value of Assets as a % of Liabilities								
All Plans (estimate)*	100%	95%	91%	89%	88%	88%	91%	89%
Reported Plans (actual)	100%	95%	91%	89%	88%	88%	87%	84%
Total No. of Retirement Systems:	104	104	104	104	104	103	98	73

Although the total pension asset and liability values for 2008 in Exhibit 1 are not directly comparable to earlier years because of the smaller number of retirement systems included (73 vs. 98), the funding ratios, or ratio of assets-to-liabilities, provide a measure of the financial health for these retirement systems during the last eight years. Market value funding ratios fell dramatically between 2001 and 2002, from 95 percent to 81 percent, stabilized between 2002 and 2003, and rebounded swiftly to 99 percent from 2004 to 2007. In this latest year of data, the market value funding ratio declined by -18 percent, the largest decrease in the seven years of this study. Our 2008 actuarial funded ratio estimate for all plans is 89%, a 1 percent increase from 2006 and a -2 percent decline from our 2007 estimate.

Exhibit 2 shows asset and liability values for the 73 retirement systems which reported actuarial values for 2008 and compares them with the same totals from the previous seven years.

² As disclosed in the comprehensive annual financial reports (most annual reports use a June 30 or December 31 fiscal year). Liabilities are the reported actuarial accrued liabilities and assets are the actuarial values as of the same valuation date as liabilities and the current market values as of the fiscal date of the report.



Exhibit 2 Financial Overview of 73 City & County Retirement Systems (\$ billions)

	2001	2002	2003	2004	2005	2006	2007	2008	Annualized Growth %	
									2001-2008	2007-2008
Total Pension Assets:										
- Market Value	\$163.1	\$149.2	\$158.6	\$179.5	\$195.9	\$215.1	\$248.1	\$214.4	4%	-14%
- Actuarial Value	\$166.8	\$169.5	\$170.3	\$176.8	\$187.0	\$201.9	\$221.9	\$231.4	5%	4%
Total Pension Liabilities:	\$170.2	\$185.6	\$199.2	\$213.0	\$227.7	\$242.2	\$258.9	\$274.3	7%	6%
Difference:										
- Market Value	-\$7.1	-\$36.4	-\$40.6	-\$33.5	-\$31.7	-\$27.1	-\$10.8	-\$59.9		
- Actuarial Value	-\$3.4	-\$16.0	-\$28.9	-\$36.2	-\$40.6	-\$40.3	-\$37.0	-\$43.0		
Assets as a % of Liabilities:										
- Market Value	96%	80%	80%	84%	86%	89%	96%	78%		
- Actuarial Value	98%	91%	85%	83%	82%	83%	86%	84%		
Underfunded Plans as % of All Plans:										
- Market Value	63%	88%	86%	78%	72%	72%	57%	89%		
- Actuarial Value	59%	71%	85%	85%	89%	89%	84%	89%		
Total No. of Systems:	73	73	73	73	73	73	73	73		

In 2007, the pension liabilities of these 73 systems exceeded assets by \$10.8 billion and the funding ratio, or ratio of assets-to-liabilities, one measure of pension fund health, stood at 96 percent. One year later, assets have fallen by -14 percent, to \$214.4 billion, while liabilities have grown 6 percent, to \$274.3 billion. The result has been an increase in the shortfall between assets and liabilities from a -\$10.8 billion deficit to a -\$59.9 billion deficit, a -\$49.2 billion decline, and a decrease in the ratio of assets-to-liabilities from 96 percent to 78 percent.

In 2003, pension assets trailed liabilities by \$40.6 billion and the funding ratio, or ratio of assets-to-liabilities, stood at 80 percent. During the next five years, assets grew by 35 percent while liabilities grew 38 percent. The result has been an increase in the shortfall between assets and liabilities from -\$40.6 billion in 2003 to -\$59.9 billion in 2008, a \$19.4 billion difference, and a decrease in the ratio of assets-to-liabilities from 80 percent to 78 percent.

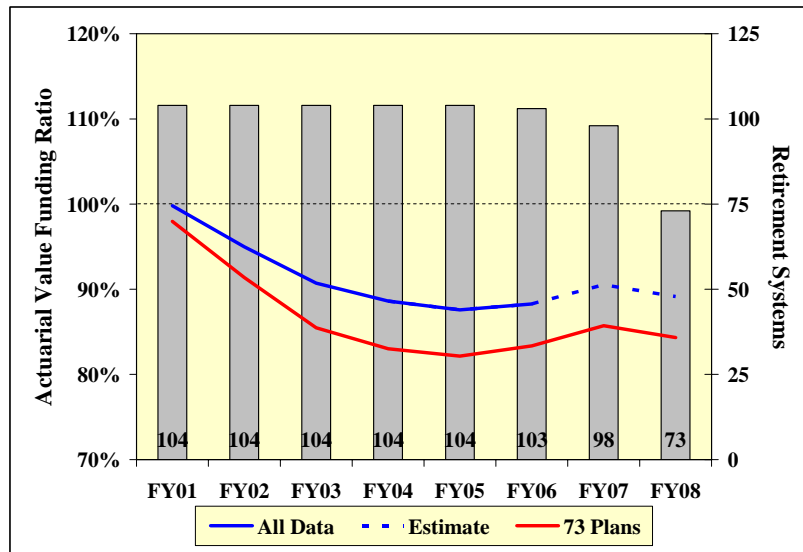
Aggregate statistics such as these can mask the underlying fiscal strength or weakness of individual plans because assets in well-funded retirement systems are not transferable to underfunded systems. Exhibit 2 shows that 89 percent of these 73 city and county pension systems, or 65 pension systems, have assets less than liabilities. If we look only at these 65 underfunded systems, their combined assets as a percentage of liabilities equals 77 percent and their combined unfunded liabilities total -\$61 billion. Conversely, if we look only at the 8 city and county pension systems which have assets greater than liabilities, their combined assets as a percentage of liabilities equals 111 percent and their combined overfunded liabilities total \$1.1 billion.

It is important to note, as with any sample, there exists some level of statistical error. As can be seen by comparing Exhibits 1 and 2, the sample of 73 retirement systems which reported 2008 data had lower funded status based on actuarial value of assets than seen historically in the complete set of 104 city and county retirement plans. Exhibit 3 provides a graphical comparison between the historical data of all plans versus the subset of 73 plans with more recently reported data. The dotted line represents Wilshire's



estimated actuarial funding ratio for the complete set of 104 plans, which is derived from the historical relationship between the 73 plan sample and the complete set of 104 plans. Using this approach one can reasonably expect an actuarial funding ratio of approximately 89 percent once all plans have reported 2008 actuarial data. This estimation approach and graphical representation of estimated data will be used throughout the remainder of this report.

Exhibit 3
Funding Ratio Comparison of 73 Plan Sample vs. Complete Set of 104 Plans



Funding Ratios

Expanding on Exhibit 3, Exhibit 4 shows the aggregate, average, median, 25th, and 75th percentile market value funding ratios for the city and county pension systems by fiscal year. Market value funding ratios fell between 2001 and 2002, and generally improved from 2002 to 2007. The rate of change in the most recent year however, erased all the gains earned in the preceding five year period.



Exhibit 4
Market Value Funding Ratios by Fiscal Year for 104 Plans

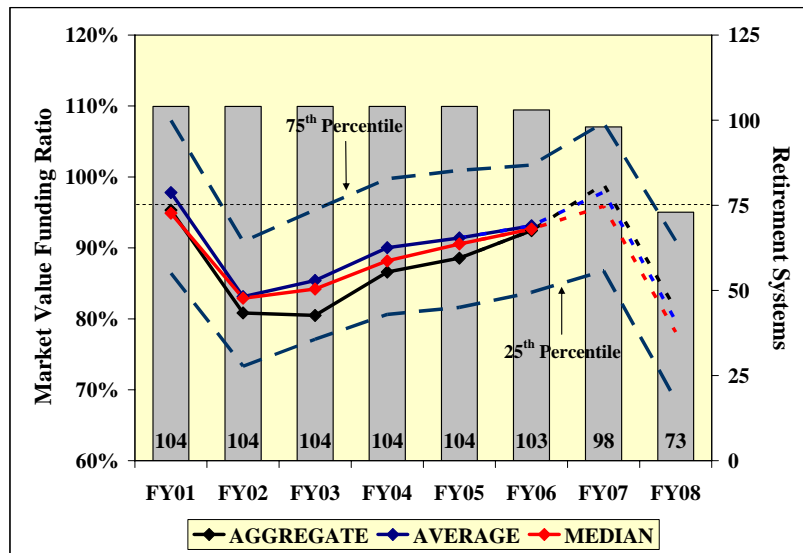
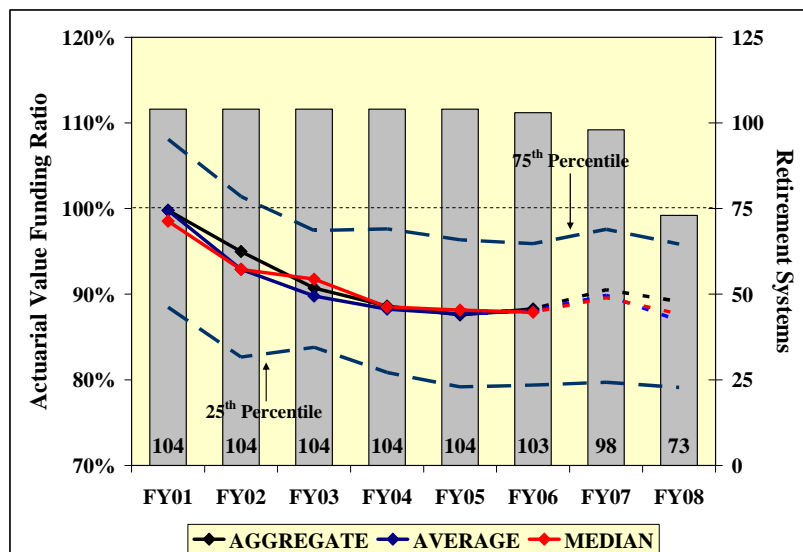


Exhibit 5 shows the same information as Exhibit 4, except uses actuarial value of assets to determine funding ratios. Similar to Exhibit 4, funding ratios generally fell between 2001 and 2002. However, unlike Exhibit 4, funding ratios based on actuarial value of assets continued to fall through 2005 and only stabilized in 2006 to experience a slight increase during 2007 only to retrace back to 2006 levels in 2008. In contrast to market value funding ratios, actuarial value funding ratios tend to move slower as a result of the smoothing of values.

Exhibit 5
Actuarial Value Funding Ratios by Fiscal Year for 104 Plans





The graph in Exhibit 6 gives a more detailed picture of the fiscal condition for the 73 city and county retirement systems which reported actuarial values for 2008.

Exhibit 6
Distribution of 73 City & County Pension Systems by FY08 Funding Ratio

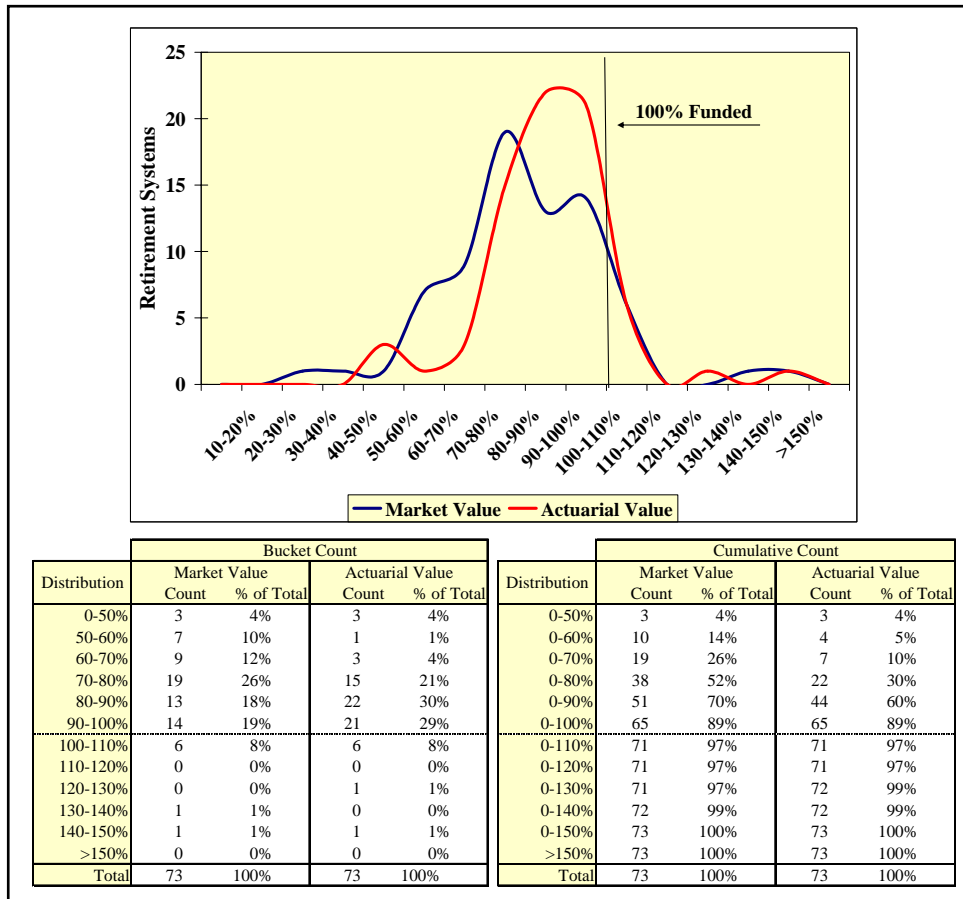
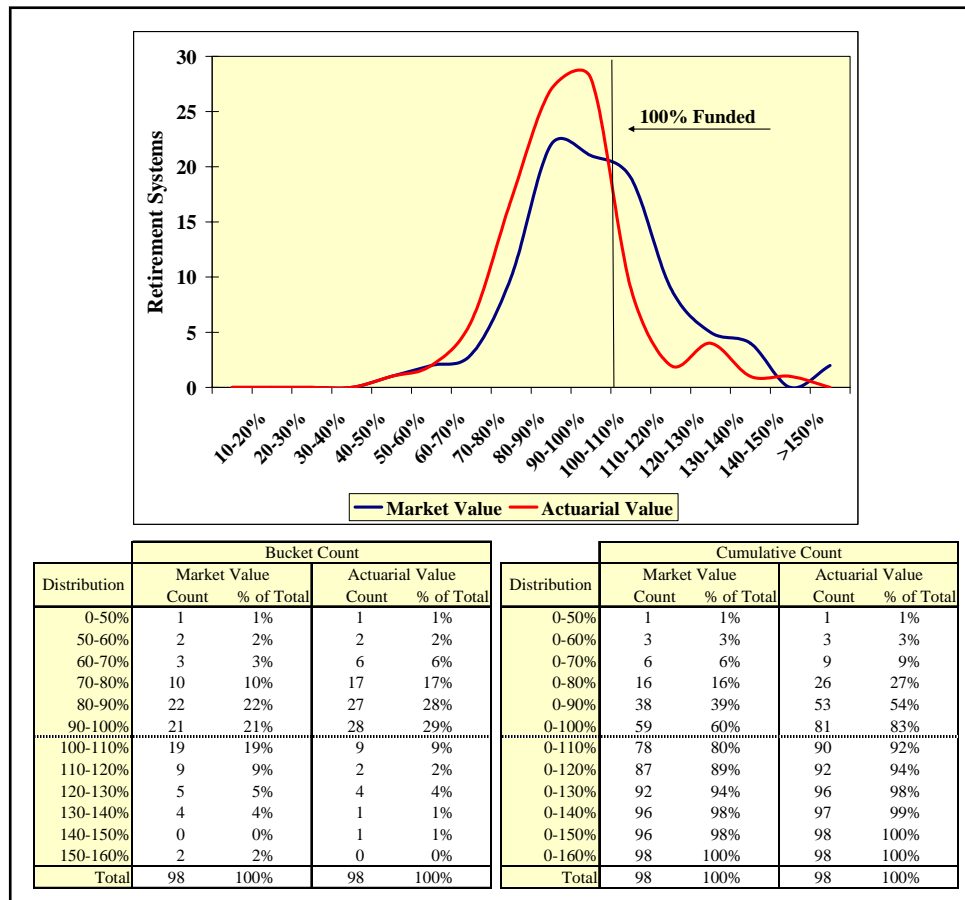


Exhibit 6 shows the distribution of plan funded ratios. Of the 65 plans that are underfunded, three plans have assets less than 50 percent of liabilities; 19 plans have assets less than 70 percent of liabilities; and 38 plans have assets less than 80 percent of liabilities. Using actuarial value of assets to determine funding ratios, 65 of the 73 plans, or 89 percent, have assets below liabilities. Three plans have assets less than 50 percent of liabilities; seven plans have assets less than 70 percent of liabilities; and 22 plans have assets less than 80 percent of liabilities.

Similar to Exhibit 6, the graph in Exhibit 7 examines the fiscal condition of the 98 city and county retirement systems which provided actuarial values for 2007.



Exhibit 7 Distribution of 98 City & County Pension Systems by FY07 Funding Ratio



Using market value of assets to determine funding ratios, 59 of the 98 plans, or 60 percent, had assets below liabilities. One plan had assets less than 50 percent of liabilities; six plans had assets less than 70 percent of liabilities; and 16 plans had assets less than 80 percent of liabilities. Using actuarial value of assets to determine funding ratios, 81 of the 98 plans, or 83 percent, had assets below liabilities. One plan had assets less than 50 percent of liabilities; nine plans had assets less than 70 percent of liabilities; and 26 plans had assets less than 80 percent of liabilities.

Unfunded Actuarial Accrued Liability

The financial health of retirement systems can also be measured by comparing the size of the unfunded actuarial accrued liability (UAAL) to different metrics. Since assets under Governmental Accounting Standards Board (GASB) Statement No. 25³ are based on actuarial value, this section calculates the UAAL using actuarial value of assets.

³ GASB No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*.



Exhibit 8 shows the median size of the UAAL relative to the covered payroll over the last eight years for the 104 retirement systems. Exhibit 8 also shows the 25th and 75th percentile for each year.

Exhibit 8
UAAL as a Percentage of Covered Payroll by Fiscal Year for 104 Plans

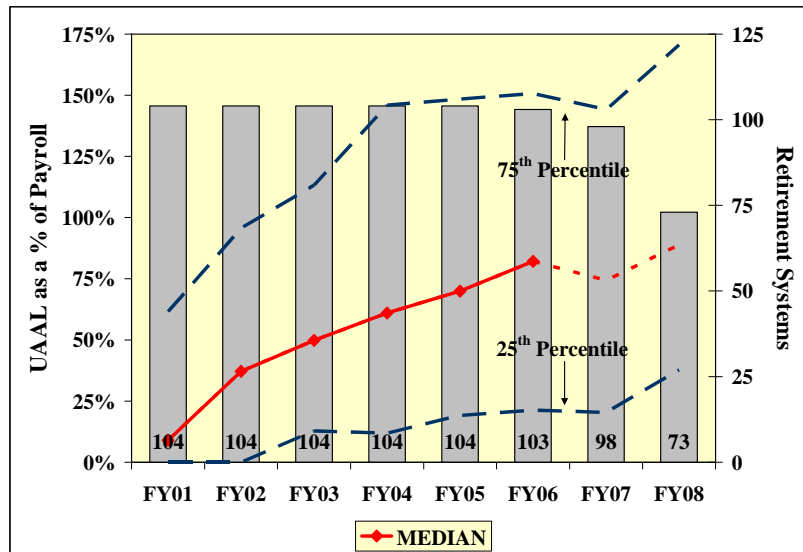


Exhibit 9 shows the median size of the UAAL relative to the actuarial value of assets over the last eight years for the 104 plans. Exhibit 9 also shows the 25th and 75th percentile for each year.

Exhibit 9
UAAL as a Percentage of Actuarial Value of Assets by Fiscal Year for 104 Plans

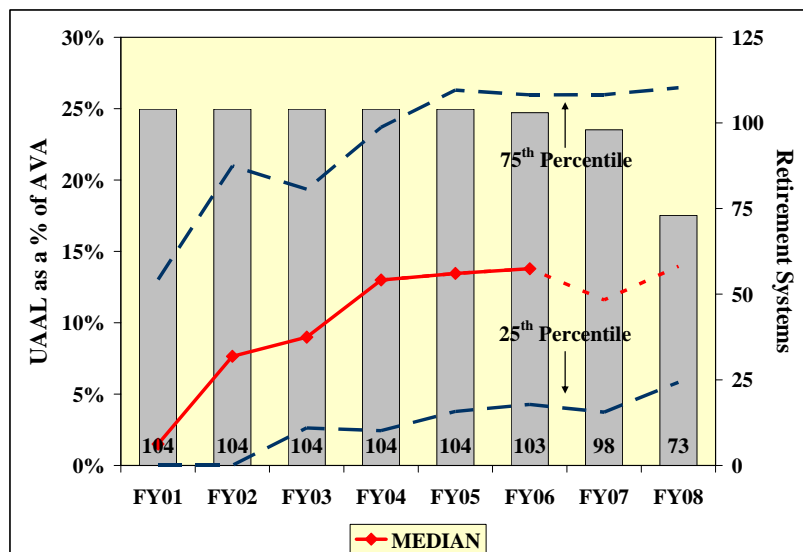
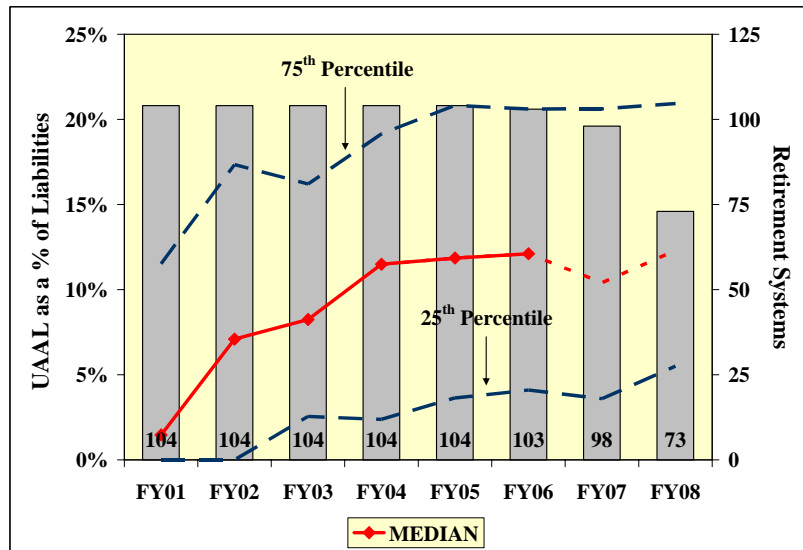




Exhibit 10 shows the median size of the UAAL relative to the actuarial accrued liability over the last eight years for the 104 plans. Exhibit 10 also shows the 25th and 75th percentile for each year.

Exhibit 10
UAAL as a Percentage of Accrued Liability by Fiscal Year for 104 Plans



The median and 25th percentile ratios of UAAL to actuarial accrued liability and actuarial value of assets have risen since last year, while the 75th percentile ratio has appeared to stabilize. Relative to covered payroll however, UAAL has increased relative to all three summary measures displayed. These trends would appear to indicate a continuation of the slow historical decline of earlier years. Yet, if the UAAL were calculated using the market value of assets, the negative market return during 2008 would have led to a much larger increase in the UAAL relative to these metrics, indicating a substantial deterioration in the financial health for most city and county retirement systems. Furthermore, as the market declines experienced in the second half of 2008 are not yet recognized in the UAAL, the graphical effect of the deterioration will be much more pronounced in next year's report.

Market Value of Assets versus Actuarial Value of Assets

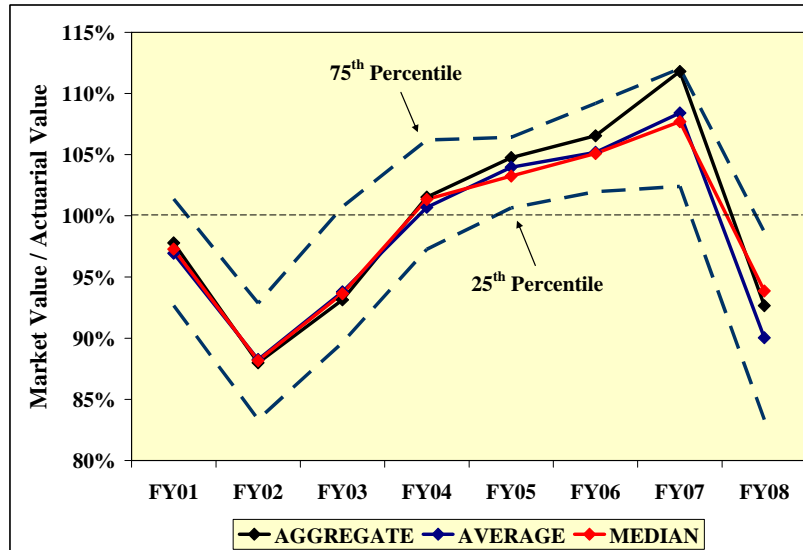
As mentioned previously, the actuarial value of assets is often calculated using a smoothing method in order to reduce the effects of market volatility when determining contribution rates. For example, a 5-year smooth market value method would recognize 20 percent of the gain or loss⁴ in the market value of assets over 5 years. Therefore, the poor market returns from 2008 will still be recognized when calculating the actuarial value of assets in future periods through FY 2012.

⁴ A gain (loss) occurs when the actual rate of return is greater than (less than) the assumed rate of return.



Exhibit 11 shows the aggregate, average, and median ratio of the market value of assets (MVA) to the actuarial value of assets (AVA) over the last eight years for the 73 retirement systems which reported actuarial values for 2008. Exhibit 11 also shows the 25th and 75th percentile for each year. During FY02, market values fell dramatically relative to actuarial values since only a fraction of the poor market return during the year was recognized when calculating the actuarial value of assets. From FY03 to FY06, market values increased relative to actuarial values for the same reason, particularly since the actuarial value of assets was still recognizing the poor market returns from 2002. In 2008, the market value of assets fell sharply relative to actuarial values, and similar to FY 02, the actuarial value of assets for FY08 reflects only a portion of the decline in 2008 and a greater proportion of the positive performance experienced from 2003 to 2007.

Exhibit 11
MVA as a Percentage of AVA by Fiscal Year for 73 Retirement Systems



Asset Allocation

In this section we examine the investment strategies employed by city and county retirement systems. The average asset allocation across all 104 city and county retirement systems is shown below in Exhibit 12.



Exhibit 12
Average Asset Allocation for City & County Pension Plans⁵

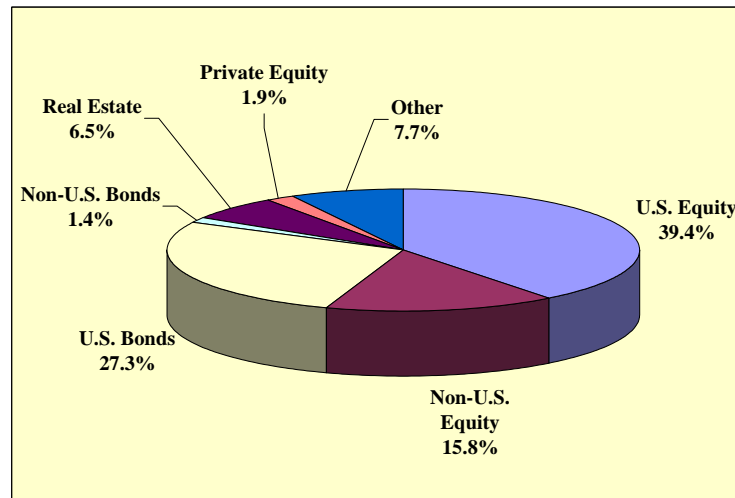


Exhibit 13 examines the change in average asset allocation for city and county pension plans from 2003 to present. During this period, the average allocations to U.S. Bonds decreased sharply by -7.5 percent as did allocations to U.S. Equities by -6.4 percent. Conversely, the average allocation to non-US equities increased from 12.0 percent to 15.8 percent continuing the trend toward reducing the home country bias⁶ in institutional portfolios. In addition, allocations to real estate rose 2.6 percent.

Exhibit 13
Average Asset Allocation for City & County Pension Plans⁷

	<u>2003</u>	<u>2008</u>	<u>Change</u>
Equity			
U.S. Equity	45.8 %	39.4 %	-6.4 %
Non-U.S. Equity	12.0	15.8	3.8
Real Estate	3.9	6.5	2.6
Private Equity	1.3	1.9	0.6
Equity Subtotal	63.0	63.6	0.6
Debt			
U.S. Bonds	34.8	27.3	-7.5
Non-U.S. Bonds	1.7	1.4	-0.3
Other	0.5	7.7	7.2
Debt Subtotal	37.0	36.4	-0.6
Return	7.3	7.2	-0.1
Risk	10.1	9.9	-0.2

* Return and Risk are based on Wilshire Consulting's current asset class assumptions (exhibit 14)

⁵ As of each retirement system's most recent financial report

⁶ For more discussion on home country bias, see Foresti and Rush: "Examining the Home-Country Bias: There's No Place Like Home. There's No Place Like Home ... Or is there?" Wilshire Consulting, April 16, 2008.

⁷ As of each retirement system's most recent financial report.

Portfolio return and risk expectations can be calculated using assumptions for the major asset classes together with each retirement system's actual asset allocation. Exhibit 14 gives Wilshire's long-term return and risk assumptions for each asset class. We view these as being fairly mainstream assumptions among investment professionals.

Exhibit 14
Wilshire Consulting's 2009 Mid-Year Asset Class Assumptions

	Expected	
	<u>Return</u>	<u>Risk</u>
U.S. Equity	8.00 %	16.00 %
Non-U.S. Equity	8.00	17.00
Private Equity	11.15	26.00
Real Estate	7.25	15.00
U.S. Bonds	4.25	5.00
Non-U.S. Bonds	4.00	10.00

Exhibit 15 contains summary statistics on asset allocation for all city and county retirement systems. The median allocation to U.S. equities is 39 percent and 17 percent to non-U.S. equities. However, as the lowest and highest columns suggest, there is considerable variability in allocations among individual systems. The median city and county pension fund has an expected return, by Wilshire's estimate, of 7.2 percent, which is 0.8 percentage points less than the current average actuarial interest rate of 8.0 percent.

Exhibit 15
Summary Asset Allocation Statistics for City & County Systems

	<u>Lowest (%)</u>	<u>Median (%)</u>	<u>Highest (%)</u>
U.S. Equity	12.0 %	39.0 %	65.0 %
Non-U.S. Equity	0.0	17.0	35.0
Private Equity	0.0	0.0	28.0
Real Estate	0.0	6.0	37.0
U.S. Bonds	5.0	28.0	49.0
Non-U.S. Bonds	0.0	0.0	12.0
Other	0.0	4.0	59.0
Expected Returns	5.1 %	7.2 %	9.0 %

Exhibit 16 plots the expected return and risk for each of the 104 city and county retirement systems based upon their actual asset allocation. Systems which plot in the upper right employ more aggressive asset mixes while points in the lower left represent systems with more conservative mixes. The horizontal line is positioned at a return equal to 8.0 percent, the current average actuarial interest rate assumption used by city and county pension plans.



Using Wilshire's long-term return and risk forecasts, only two of the 104 city and county retirement systems are expected to earn long-term asset returns that equal or exceed their actuarial interest rate assumption. This is down from the eleven city and county retirement systems that were expected to earn long-term returns that equaled or exceeded their actuarial interest rate assumption in last year's report.

Exhibit 16
Projected Return & Risk by City & County Pension System

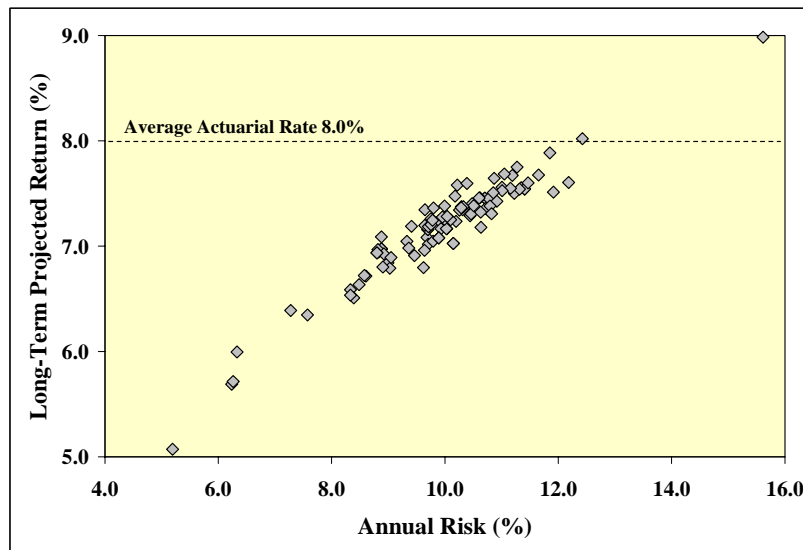
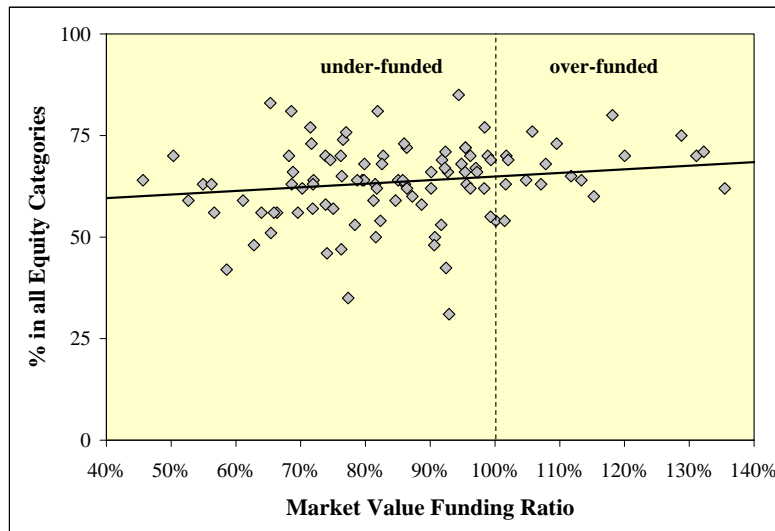


Exhibit 17 addresses the relationship between asset allocation and funding for all city and county systems. The allocation to equity asset classes, a proxy for investment aggressiveness, is plotted on the vertical scale. The market value funding ratio is shown on the horizontal scale. A linear trend line is drawn through the scatter plot of data to provide a signal of the relationship between the two metrics and a vertical dotted line separates overfunded plans from underfunded plans.



Exhibit 17 Asset Allocation & Actuarial Funding



Casual observation reveals that overfunded plans have a tighter range of equity allocations than underfunded plans. While the horizontal linear trend line in Exhibit 17 has a slight upward slope, the number of over-funded plans versus the sample and the extreme market conditions of 2008 leave some room to question the mildly positive relationship. Statistically, the correlation between the allocation to equity and plan funding ratio is quite small. In summary, city and county retirement systems have a broad spectrum of asset allocations that appear to be unrelated to the size of their unfunded liabilities.

We would like to thank Mark Peng for his substantial contribution and expertise in database construction.
We would also like to thank Juan Lozano for his diligent efforts in data collection.



Appendix A: City and County Retirement Systems

<u>Retirement System</u>	<u>Report Date</u>
Alameda County Employees' Retirement Association (ACERA)	12/31/2007
Anne Arundel County Detention Officers' & Deputy Sheriffs' Service Retirement Plan	12/31/2008
Anne Arundel County Employees' Retirement Plan	12/31/2008
Anne Arundel County Fire Service Retirement Plan	12/31/2008
Anne Arundel County Police Service Retirement Plan	12/31/2008
Arlington County Employees' Retirement System	6/30/2007
Charlotte Firefighters' Retirement System	6/30/2008
City & County Of San Francisco Retirement System (SFERS)	6/30/2007
City Of Austin Employees' Retirement System (COA ERS)	12/31/2008
City Of Baton Rouge & Parish Of East Baton Rouge Employees' Retirement System (CPERS)	12/31/2008
City Of Birmingham Retirement & Relief System	6/30/2008
City Of Boston Retirement System	6/30/2007
City Of Cincinnati Retirement System	12/31/2008
City Of Fresno Employees Retirement System	6/30/2008
City Of Fresno Fire & Police Retirement System	6/30/2008
City Of Gainesville General Employees' Pension Plan	9/30/2008
City Of Gainesville Police Officers & Firefighters Consolidated Retirement Plan	9/30/2008
City Of Grand Rapids General Retirement System	6/30/2008
City Of Grand Rapids Police & Fire Retirement System	12/31/2008
City Of Jacksonville General Employees Pension Plan	9/30/2008
City Of Jacksonville Police & Fire Pension Plan	9/30/2008
City Of Los Angeles Water & Power Employees' Retirement Plan	6/30/2008
City Of Memphis Retirement System	6/30/2007
City Of Oakland Police & Fire Retirement System (PFRS)	6/30/2007
City Of Phoenix Employees' Retirement Plan (COPERS)	6/30/2008
City Of Richmond Retirement System	6/30/2008
City Of Sacramento Employees' Retirement System (SCERS)	6/30/2008
City Of San Jose Police & Fire Department Retirement Plan	6/30/2008
City Of Tallahassee Pension Plan	9/30/2005
Contra Costa County Employee'S Retirement Association (CCCERA)	12/31/2008
Dallas Police & Fire Pension System	12/31/2008
Denver Employees Retirement Plan (DERP)	12/31/2007
Denver Public Schools Retirement System (DPSRS)	12/31/2008
El Paso City Employees Pension Fund (CEPF)	8/31/2008
El Paso City Firemen & Policemen's Pension Fund (FPPF)	8/31/2008
Elected Officials' Retirement System Of The City Of Baltimore	6/30/2008
Employees' Retirement Fund Of The City Of Dallas	12/31/2008
Employees' Retirement Fund Of The City Of Fort Worth	12/31/2007
Employees' Retirement System Of Baltimore County	6/30/2008
Employees' Retirement System Of The City Of Baltimore	6/30/2008
Employees' Retirement System Of The City Of Milwaukee (MERS)	12/31/2007
Employees' Retirement System Of The City Of Norfolk	6/30/2008
Employees' Retirement System Of The County Of Milwaukee	12/31/2007
Fairfax County Employees' Retirement System (ERS)	6/30/2007
Fairfax County Police Officers Retirement System (PORS)	6/30/2007
Fairfax County Uniformed Retirement System (URS)	6/30/2007
Federated City Employees' Retirement System Of San Jose (FCERS)	6/30/2008
Fire & Police Employees' Retirement System Of The City Of Baltimore	6/30/2008
Fire & Police Pension Fund, San Antonio	9/30/2008
Firemen's Annuity & Benefit Fund Of Chicago	12/31/2008
Fresno County Employees' Retirement Association (FCERA)	6/30/2008
Fulton County Employees Retirement System Pension Plan	12/31/2008



Appendix A: (cont.)

General Retirement System Of The City Of Detroit (DGRS)	6/30/2008
Houston Firefighters' Relief & Retirement Fund (HFRRF)	6/30/2008
Houston Municipal Employees Pension System (HMEPS)	6/30/2008
Houston Police Officers' Pension System (HPOPS)	6/30/2008
Howard County Police & Fire Employees' Retirement Plan	6/30/2007
Howard County Retirement Plan	6/30/2007
Imperial County Employees' Retirement System (ICERS)	6/30/2008
Kansas City Police Employees' Retirement System (KCPERS)	4/30/2008
Kern County Employees' Retirement Association (KCERA)	6/30/2008
Knox County Teachers' DB Plan	6/30/2008
Los Angeles City Employees' Retirement System (LACERS)	6/30/2008
Los Angeles County Employees Retirement Association (LACERA)	6/30/2008
Los Angeles County Metropolitan Transportation Authority	6/30/2008
Los Angeles Fire & Police Pension Systems	6/30/2008
Marin County Employees Retirement Association (MCERA)	6/30/2006
Minneapolis Employees' Retirement Fund (MERF)	6/30/2008
Montgomery County Employees' Retirement System	6/30/2008
Montgomery County Public Schools Employees' Retirement & Pension System (MCPS)	6/30/2007
Municipal Employees' Annuity & Benefit Fund Of Chicago	12/31/2008
New York City Employees' Retirement System (NYCERS)	6/30/2006
New York City Police Pension Fund (NYCPPF)	6/30/2006
Oakland County Public Employees' Retirement System	9/30/2007
Oakland County Road Commission Public Employees' Retirement System	12/31/2006
Orange County Employees Retirement System (OCERS)	12/31/2008
Orlando Firefighter Pension Fund	9/30/2008
Orlando General Employees' Pension Fund	9/30/2008
Orlando Police Pension Fund	6/30/2008
Police & Firemen Retirement System Of The City Of Detroit (PFRS)	6/30/2008
Policemen's Annuity & Benefit Fund Of Chicago	12/31/2008
Prince George's County, Maryland Pension Trust Fund	6/30/2007
Public School Retirement System Of The City Of St. Louis (PSRSSTL)	12/31/2007
Public School Teachers' Pension & Retirement Fund Of Chicago (CTPF)	6/30/2008
Retirement System For City Of Philadelphia	6/30/2008
Sacramento County Employees' Retirement System (SCERS)	6/30/2008
San Bernardino County Employees' Retirement Association (SBCERA)	6/30/2008
San Diego City Employees Retirement System (SDCERS)	6/30/2008
San Diego County Employees Retirement Association (SDCERA)	6/30/2008
San Joaquin County Employees' Retirement Association (SJCERA)	12/31/2007
San Luis Obispo County Pension Trust	12/31/2007
San Mateo County Employees' Retirement Association (SamCERA)	6/30/2008
Santa Barbara County Employees' Retirement System (SBCERS)	6/30/2008
Santa Clara Valley Transportation Authority Amalgamated Transit Union Pension Plan	6/30/2008
Seattle City Employees' Retirement System (SCERS)	12/31/2007
Sonoma County Employees' Retirement Association (SCERA)	12/31/2007
St. Louis County, Missouri County Employees' Retirement Plan	12/31/2007
St. Paul Teachers' Retirement Fund Association (SPTRFA)	6/30/2008
Tacoma Employees' Retirement System (TERS)	12/31/2008
Teachers' Retirement System Of The City Of New York (TRS)	6/30/2006
Texas County & District Retirement System (TCDRS)	12/31/2008
The Oklahoma City Employee Retirement System (OCERS)	6/30/2008
Tulare County Employees' Retirement Association (TCERA)	6/30/2008
Ventura County Employees' Retirement Association (VCERA)	6/30/2008



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