

# Status of Local Pension Funding 1996

An Evaluation of Nine Local Pension Funds  
within Cook County & the Five Collar County Funds  
in the Illinois Municipal Retirement Fund



Prepared by  
The Civic Federation  
October 1997

*This study  
made possible  
through the  
generosity of the  
Arthur Rubloff  
Residuary Trust.*



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**Prepared By**

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## Foreword

FOR THE PAST 100 YEARS, THE CIVIC FEDERATION HAS MONITORED the revenues and expenditures of local governments within Cook County. During the last several years, The Civic Federation has specialized in the analysis of the status of public pension funds of nine local governments in Cook County. While our analysis is multifaceted, one consistent theme running throughout our years of analysis is the recommendation that government officials in charge of managing public pension funds must develop a financial plan that addresses both long and short term needs. Losing sight of either can have disastrous consequences. Our approach is conservative, but grounded in the realities of the peaks and valleys of funding sources such as the financial markets.

In terms of this year's report, the tremendous growth in the financial markets continues to improve the funding status of the local funds. This report shows that a number of these funds are over 100 percent funded. Even though a number of these funds appear to be more than adequately funded, we caution the reader against concluding that it is no longer necessary to maintain contributions to these funds. Financial markets that are strong one year can stagnate the next. Given past fluctuations in the financial markets, The Civic Federation continues to advocate that a prudent, steady course be maintained and that significant changes to the funds' income streams not be advanced at this time.

The Civic Federation owes its gratitude to Myer Blank, Director of Policy Analysis, who is the principal author of this report. His work and interest in this area is admirable. This report would not have been possible without the expert editorial comments from Dr. Woods Bowman, Cameron Clark, Dr. Penelope Wardlow, and earlier research conducted by Leonard Kazmerski. We would also like to thank the staff and actuaries of the nine local pension funds for providing additional information and editorial comments during the research process.

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John F. Ward, Jr.  
*Chairman*



Lance Pressl, Ph.D.  
*President*

## About The Civic Federation

The Civic Federation is a nonpartisan government and fiscal watchdog and research organization founded in 1894. The Federation provides three primary services. First, it promotes efficiency and economy in the organization and management of public business. Second, it guards against excessive taxation and wasteful expenditure of public funds. Finally, the organization serves as a technical resource providing objective information regarding state and local governmental revenues and expenditures.

The Civic Federation fulfills its mission by analyzing public finance and government service delivery through research reports and public commentary. Recent research reports have assessed the impact of tax increment finance in northeastern Illinois, looked at local government reliance on fees, and analyzed Cook County property tax trends.

The Federation is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code and is incorporated as a nonprofit Illinois corporation. For more information, please contact The Civic Federation at (312) 341-9603 or visit our website at <http://www.mcs.net/~civicfed/>.

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## Overview

As in 1995, significant growth in the 1996 financial markets continues to be the driving force behind the growth in assets of the local pension funds. Taken as a whole, these funds covered 123,404 active employees and 67,485 beneficiaries during that year. These funds invested and managed over \$18.1 billion in assets and had over \$23.3 billion in liabilities. As with many public pension funds, the liabilities of these funds are backed by the local governments through their respective property tax levies. In 1996, 42 percent of the City of Chicago's tax levy funded employer contributions to its four pension funds.<sup>1</sup>

The City of Chicago enrolls its employees in four different pension systems: the Laborers' and Retirement Board Employees' Annuity and Benefit Fund; the Firemen's Annuity and Benefit Fund; the Municipal Employees' Annuity and Benefit Fund; and the Policemen's Annuity and Benefit Fund. Cook County,<sup>2</sup> the Forest Preserve District, the Chicago Park District, and the Metropolitan Water Reclamation District (MWRD) each have their own pension systems. The Chicago Board of Education enrolls teachers in the Public School Teachers' Pension and Retirement Fund of Chicago. All other employees of the Board of Education are enrolled in the City of Chicago's Municipal Employees' Annuity and Benefit Fund.<sup>3</sup>

## Funding Requirements

There are two kinds of pension plans: 1) defined contributions, and 2) defined benefits.

1. In a defined contribution plan, fixed amounts are contributed by the employee and the employer. Upon retirement the employee receives an annuity and interest based upon the amount contributed to the plan over the term of his or her employment. Once the employee retires, the employer has no further liability to the employee (except, perhaps, for ancillary health benefits).
2. In the case of the local Cook County defined benefit plans in this report, fixed amounts are contributed just like the defined contributions plan. However, upon retirement, the employee receives an annuity based upon his or her highest salary (usually based on an average of several years) and length of service. If the amounts contributed to the plan over the term of the employee's employment plus accrued earnings are insufficient to support the benefits (including health and survivor's benefits) the former employer would be required to pay the difference. Consequently, accurate valuation of the potential future liability becomes essential to responsible management of such plans.

Historically, defined benefit plans were by far the most common for the pensions, but changes in tax laws encouraged numerous conversions in the private sector to defined contributions plans. These plans are known as 401(k) or 403(b) plans, named after the governing sections of the Internal Revenue Service Code. Few public pension plans have converted. All public pension plans surveyed in this report are of the defined benefits variety. Under Illinois law, all employer contributions to the local pension funds within Cook County in this report must be made with a levy on real property. These amounts are broken out and reported separately on property tax bills.

In order to meet benefit requirements, pension funds receive their assets from three sources: 1) employer contributions; 2) employee contributions; and 3) investment income. Pension funds primarily make expenditure payments to cover benefit and administrative costs. Included in benefit payments are disability payments, annuitant medical, and refunds to employees who have separated before becoming fully vested. Administrative expenses include the cost of paying for investment managers and the salaries of those responsible for administrating the fund. Each of these components plays a major role in determining the health and growth potential of a public pension fund.

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<sup>1</sup> Property taxes levied for the Chicago Public Library system were included in this calculation.

<sup>2</sup> Cook County's and the Forest Preserve's funds are under the same pension board.

<sup>3</sup> Two other major funds cover a number of local public employees but are not supported by property taxes and are not included in this analysis: the Chicago Transit Authority Employees' Pension Plan and the State University Employees' Pension Fund, in which some City College employees are enrolled.

The fundamental policy question inherent in an examination of pension funding is, “How shall the burden of payment be apportioned between current and future taxpayers?” If funding levels are too low, future taxpayers will receive a “due bill” which must be paid (pension benefits are constitutionally protected under Illinois law and, therefore, take precedence over all other obligations of government) and disparity between the level of taxes and services received from government will grow exponentially—the difference of course being the payments needed to support persons who are retired. On the other hand, if funding levels are too high, current taxpayers are being asked to endure a greater disparity between the level of taxes and services received from government than future generations of taxpayers by putting more “into the bank” than may be required.

Calculation of adequate funding levels is very sensitive to a host of factors including: assumptions made about expected length of continued service by current employees, expected pay raises, inflation, investment income, and the expected life of present and future annuitants. Two of the methods used to determine the required amount are the Unit Credit Actuarial Cost Method and the Entry Age Actuarial Cost Method. Entry Age is the most common method used to determine the liabilities of the local pension funds (GASB<sup>4</sup> requires Unit Credit for accounting disclosure). According to one actuary consulted:

*The Unit Credit method assigns in a particular year that portion of the ultimate benefit earned by an employee in that year. An Entry Age method assigns costs to a particular year as the amount which would fund an individual's projected benefit, including the effects of future salary increases, if it were contributed from date of entry until retirement date. Therefore, if all assumptions are realized, the Entry Age method levels out costs throughout the working lifetime of the participant while the Unit Credit would result in increasing costs as the employee nears retirement....i.e., costs under the Unit Credit method would initially be less than under Entry Age, but would cross over at some point and become higher.<sup>5</sup>*

An important point to note is that these assumptions can be different depending on the plan. For example, police and fire pension plans usually assume that their employees will earn more years of service than plans for areas of government that have higher rates of employee turnover. In addition to differences between plans, the actuarial assumptions of an individual plan can change over time. Recently, the overriding assumption was that once employed in government, the employee would hold that job for the majority of his or her employment career. Given the current downsizing and fluidity of government employment, an actuary using the Entry Age Normal calculation may need to decrease the assumption regarding years of service in the calculation of a fund's future liabilities.

Pension experts agree that the method of funding a public pension fund should prevent growth of the *unfunded liability*, or that portion of future projected costs and interest not currently covered by assets. Most experts concur that in the case of government funds, there is no real need to achieve full funding. The argument is that governments, unlike private corporations, are not at risk of dissolving and, therefore, can meet their obligations in perpetuity. The *normal cost plus interest method* creates a funding mechanism whereby the plan pays its obligations over time but does not attempt to decrease its unfunded liability. Paying the interest on the unfunded liability stabilizes it, and paying the “normal cost” covers the accruing costs of the fund as employees earn benefits through the span of their employment. Other methods of funding generally seek to systematically amortize the unfunded liability over a period of time.

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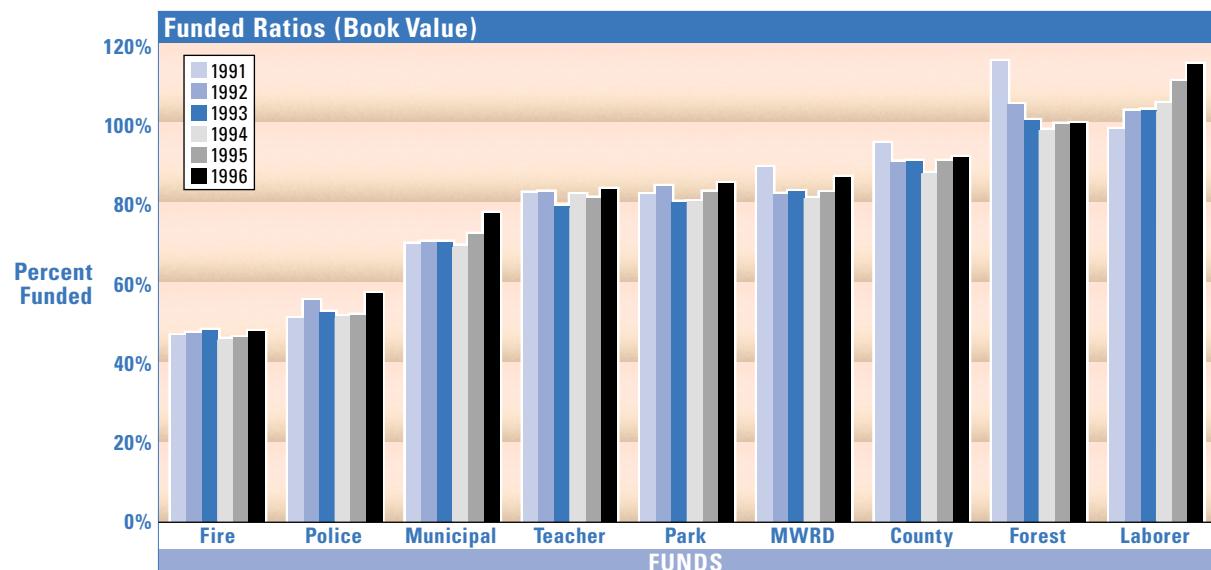
<sup>4</sup> GASB: *Government Accounting Standards Board*. GASB is currently changing its standards regarding reporting liabilities at Unit Credit versus Entry Age Normal.

<sup>5</sup> When looking at the cost of an entire fund, the Unit Credit cost may not be greater than the Entry Age cost.

## Status of Local Funding

### Book Value

Pension fund managers use two measurements for determining the net worth of assets, book value (recognizing investments at initial cost or amortized cost) and market value (recognizing investments at current value). GASB is currently changing its standards by requiring market value in investment reporting and recommends “smoothed”<sup>6</sup> market value in calculations for reporting pension costs and actuarial liabilities. The following graph shows the funded ratios for each of the nine local public pension funds for years 1991 to 1996 at book value, measured in terms of Entry Age Normal liability.<sup>7</sup>



The funds grouped toward the right of chart have had higher funded ratios between 1991 and 1996 than have those toward the left. In 1996, all of the funds in this report had higher funded ratios than experienced in 1995. The primary reason for this increase in funded ratios was the yield on investments realized by the funds (investment income will be discussed later in this report). For example, the Police Fund realized the greatest gain with an increase of 5.6 percent in its funded ratio. In 1996, the fund earned over \$510 million in investment income compared with \$152 million in 1995.

On the high end of the scale, the Laborers’ fund continues to be well over 100 percent funded. Its current funded ratio of almost 115 percent is 15 percentage points greater than the next healthiest fund which is the Forest Preserve at almost 100 percent. As with last year’s ratio of 110 percent, this ratio of 115 percent should be viewed cautiously. Although the 115 percent ratio means that the fund has more assets than projected liabilities accrued to date, The Civic Federation cautions against viewing this “surplus” as an opportunity to increase benefits or to decrease contributions, specifically the tax levy, during any given year. Rather, given that the statutory multiple<sup>8</sup> has not changed in over 15 years, now may be the time to make a determination as to whether the multiple can be reduced based on a 40-year amortization schedule. Any changes to the statutory multiple must be made by the Illinois General Assembly.

The aggregate funded ratio of the nine funds increased to 78 percent in 1996 from 74 percent in 1995 (Appendix A). A major part of that increase is attributable to the fact that all of the funds had annual yields well above their actuarially assumed yields. In 1996, 6 out of the 9 funds in this report were above 80 percent funded. Of concern, however, are the Fire and Policemen’s pension funds which are below 60 percent<sup>9</sup> in their funded ratios at 47.8 percent and 57.2 percent, respectively. The low ratios of

<sup>6</sup> Accounting for assets at market values by averaging unexpected gains and losses over a period of 3–5 years.

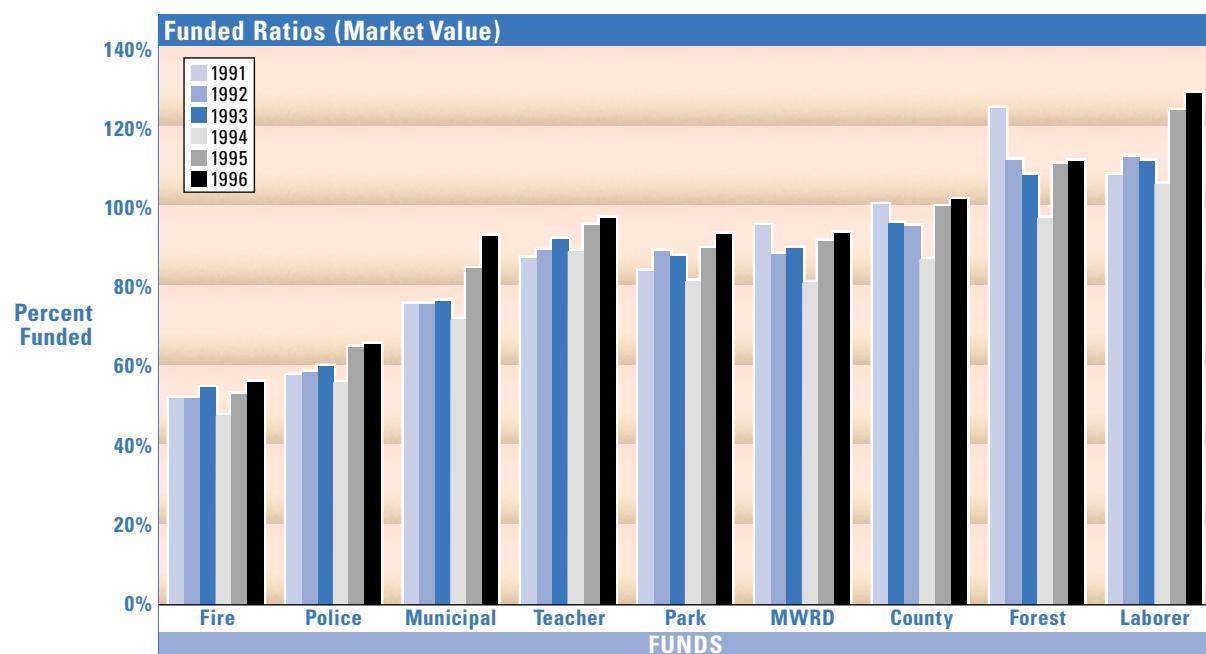
<sup>7</sup> Unless otherwise noted, “County” in a descriptive table signifies that the data is for the County Employees’ and Officers’ Annuity and Benefit Fund of Cook County and does not include other counties.

these two funds are a continuing concern, requiring attention at both the local and State levels. The funded ratios of these funds will continue to improve provided that the financial markets remain strong and other factors remain equal. However, if the markets do not remain strong, the other sources of funding for these funds will not be sufficient to compensate for substantial increase in salary in or additional, unanticipated years of service earned by the employees.

#### **Market Value**

Overall, the market values of the nine pension funds were higher than the book value of the funds from 1991 to 1996 (See Appendix B). On average, market values exceeded book values by almost 11 percent during the six-year period (see Appendix C for a comparison of market and book values for the nine funds between 1991 and 1996). The difference between the two figures, market and book, can change the reported available assets of a fund by hundreds of millions of dollars. For example, the difference between the book value of the Teachers' Fund and its market value was over \$900 million in 1996. In addition, the investment decisions made by pension boards can also increase or decrease the difference between market and book values for any given year.

The following graph shows the funded ratios for years 1991 to 1996 at market value, measured in terms of Entry Age Normal:



Between 1991 and 1996, the funded ratios of the nine funds at market value ranged from a high of 128.1 percent realized by the Laborers' Fund in 1996 to a low of 47.7 percent realized by the Firemen's Fund in 1994. As evidenced by the above chart, all nine of the funds had increased funded ratios based upon market values in 1996 as a result of increasing value of markets (this will be discussed further in the Investment Income Performance section). In addition, 7 of the 9 funds now have market values above 90 percent. Similar to its book value, the Firemen's funds was below 60 percent. Although the above market value increases are good news, caution is still advised in how these numbers should be evaluated. Positive investment returns realized one year can reverse the next; 1994 is an example of that.

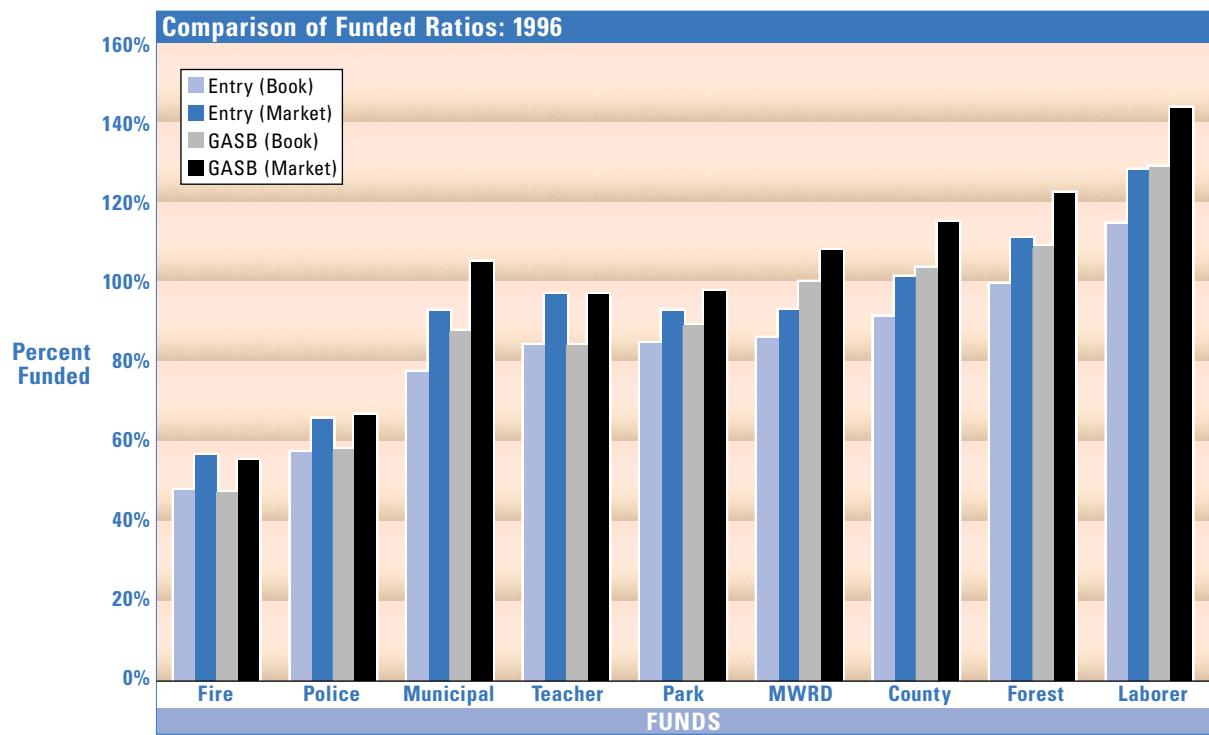
**8** The statutory multiple is used to determine the employer contribution, manifest in the tax levy. The employer contribution equals the statutory multiple times the total amount of contributions made by employees in the calendar year 2 years prior to the year of levy.

**9** 60% is considered by some to be the benchmark below which funds are seen as being underfunded. Some actuaries would argue that funds should be at the 75–80% funded level.

## Status of Local Funding, continued

### Book and Market (Unit Cost)

The previous two sections, *Book (Entry Age)* and *Market (Entry Age)*, calculated the funded ratios based upon the dates that an employee enters employment and leaves employment. The chart below shows the funded ratios using the second method discussed earlier, Unit Credit (GASB No. 5) (See Appendix A).



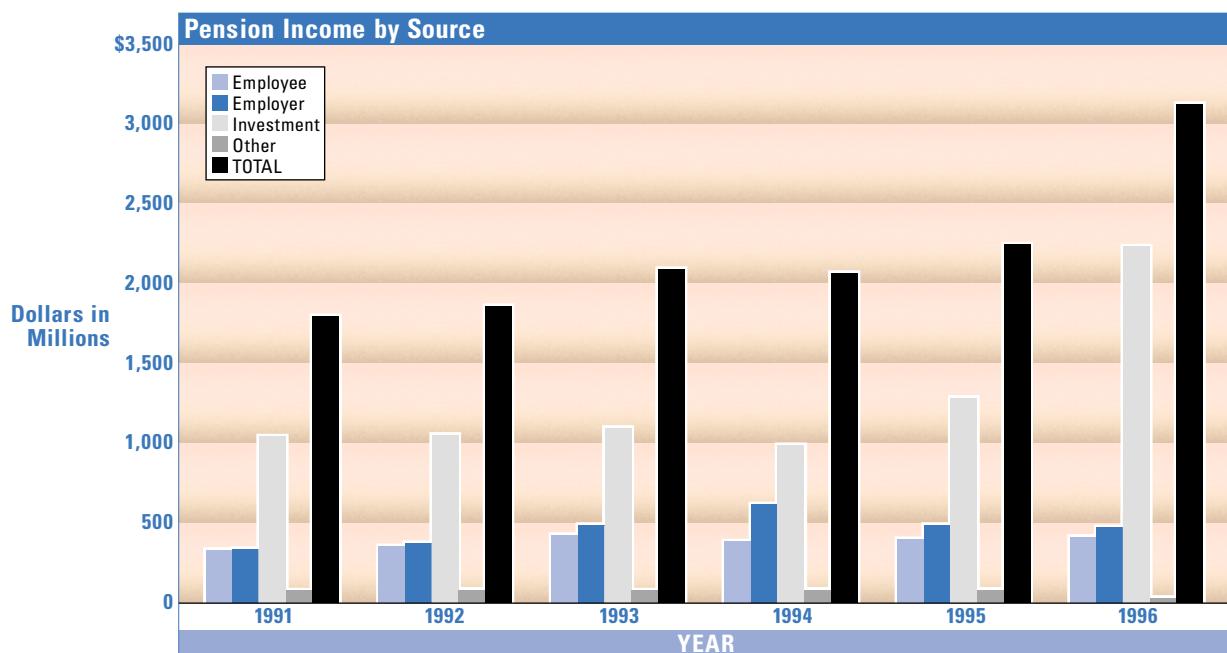
Of special interest in this chart is how the difference between the Unit Credit and Entry age calculations increases moving from the left, the Firemen's side of the chart to the right, the Laborers' side of the chart. One reason for this increase is that the employees of the funds to the right of the chart, closest to the Laborers', may be assumed to have fewer years of service, which would decrease the actuarial projected liability, thereby decreasing the funded ratio of the Entry Age calculation. A second point of interest is the significant difference between the Market Unit Credit (GASB) funded ratios and the Book Entry Age funded ratios. In the case of the Laborers' fund, there is a 29 percentage point difference between the two calculations. This difference in funded ratios illustrates the point that actuarially determined calculations do vary depending on assumptions. Given this variance depending on measurement, it is ill-advised to label a fund as adequately funded or underfunded based on one measurement. Rather, the health of funds should be measured in terms of long term indicators such as the change in the unfunded pension benefit obligation, and the unfunded actuarial accrued liability, as a percent of covered payroll.

## Revenues

There are three primary sources of revenue for meeting the funding requirements of public pension funds:

1. *The Employee's Share* is the amount contributed by or on behalf of the employee. It is deducted from the employee's paycheck. The amount is determined by a rate of salary as specified by statute.
2. *The Employer's Share* is the amount contributed by the employer. The employer's share is usually calculated by multiplying the employee's share from two years prior to the current year by a constant multiplier that is set for each fund by the Illinois General Assembly. In the case of the local funds, property taxes are then used to pay this share.
3. *Investment Income* is the third major source of revenue. In recent years, income earned on the invested assets of local public pension funds has become the largest of the three sources. It remains the most volatile and difficult revenue source to forecast.

The next graph shows pension revenue by source for 1991 through 1996.

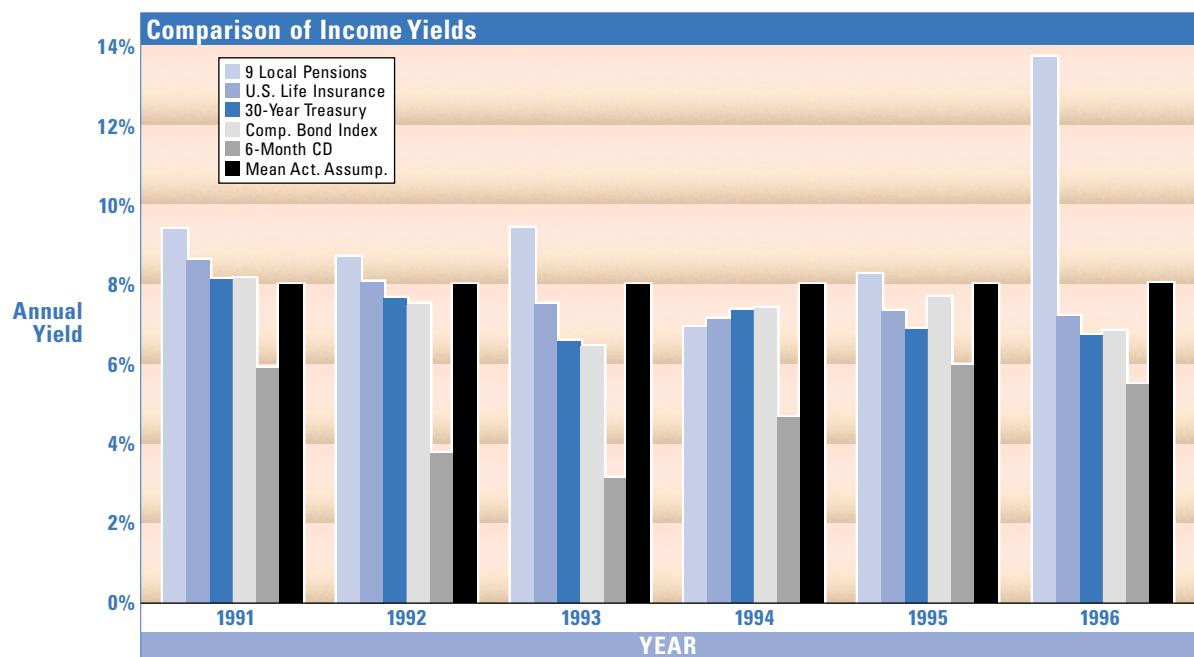


Total revenues for the nine local public pension systems increased during the past year, by approximately \$954 million or 42 percent, from \$2.247 billion in 1995 to \$3.201 billion in 1996. Much of that increase occurred because of the continued strong performance of the financial markets. As with the previous year, the aggregate amount of income for the nine funds would have been higher if it had not been for the decrease in employer contributions. Part of the reason for this continuing decrease in employer contributions is a result of reduced salary deductions and early retirement programs.

In addition, the recent changes to the State law governing the tax levy collected by the Board of Education of the City of Chicago for the benefit of the Teachers' Fund are still in effect. These changes decreased tax revenues to the Teachers' Fund by approximately \$70 million for three years starting in 1990 and for four more years starting in 1995.

## Investment Income Performance

Investment income is money earned on the assets of the pension fund, including investments in such vehicles as stocks, bonds, real estate, mortgages, and venture capital. The Illinois General Assembly has imposed some restrictions on the investments of the public pension funds in Illinois, but the fund managers still have considerable discretion in determining the kinds of investments that can be made.<sup>10</sup> The following graph compares the performance of the nine public funds' aggregate yield to the yields of other similar institutions and indices from 1991 through 1996.



The nine funds achieved an aggregate yield<sup>11</sup> of 13.7 percent in 1996. This figure represents the total of investment income, net investment management and custodial fees, earned by all funds divided by these funds' total combined assets at book. The Policemen's Fund and the Teachers' Fund had the highest returns on investment at 25.1 percent and 14.2 percent, respectively.

The degree to which investment income for the fiscal year exceeds actuarially assumed rates of return for the year helps to reduce a pension system's unfunded liability. Actuarially-assumed investment returns were 8.0 percent for each of the nine funds in 1996. All of the funds had higher than assumed yields.<sup>12</sup> One explanation for the higher-than-expected yields is the continued strong performance of the stock and bond markets during 1996. For example, the value of the Dow Jones Industrials increased by 26 percent, the Standard and Poor's 500 Index gained 20 percent of its value, and the NASDAQ Composite jumped 23 percent. In terms of less risky investments, 30-Year Treasury Notes and 3-Month Treasury Bills remained low at 6.71 percent and 5.02 percent, respectively. Market values are not an indicator of poor investment decisions. Differences in investment performance can also be the result of funds selling investments to realize gains, while others can realize similar gains later. The above discussion of investment returns is based on 1996 data. As was mentioned above, even though 1995 and 1996 were strong years for the financial markets, these markets do fluctuate. It would be ill-advised to assume that the strong performances realized in the late 1990's can be counted on to assist funds in making progress on their unfunded liabilities over the next 40 years.

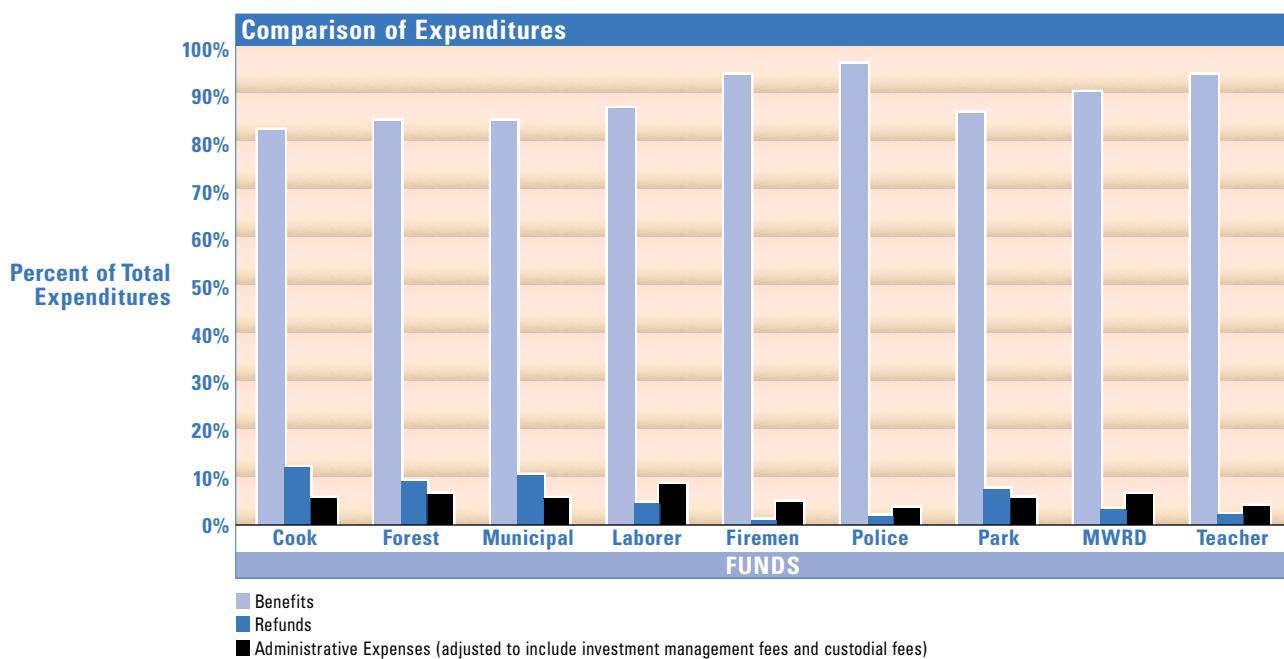
<sup>10</sup> State law restricts the investment policies of the local funds. These restrictions vary by fund. According to the Illinois Department of Insurance, the Municipal, Cook County, Forest Preserve, Laborers' Park District, and the MWRD funds are limited by a list of investment categories.

<sup>11</sup> The yield represents capital gains and losses on the sale of investments, dividends, interest, and other investment-related distributions made during the fiscal year for the pension fund. The yield does not account for increases or decreases in the value of investments that have not yet been sold.

<sup>12</sup> Most pension funds have additional sources of investments other than the financial markets. Annual investment yields only tell one part of a fund's investment income over time.

## Expenditures

Pension fund disbursements include pension benefits, refund payments, death benefits (often categorized with regular benefits), health insurance refunds, and administrative expenses. The following chart shows the breakdown of these expenditures for the nine local public pension funds (see Appendix D).



There is a wide range in the proportions of total expenditures represented by each of the three major expense categories shown. Refunds, for example, range from a high of 12.2 percent of total expenses for Cook County Employees' Pension Fund, to a low of 1.2 percent and 2.1 percent for the Firemen's and Policemen's Funds, respectively. A high ratio of refunds to total expenses generally indicates a high degree of employee turnover. In other words, employment terminates before the employee is eligible for a full pension and thus receives a refund of his or her own contributions made to the fund.

Administrative expense as a percent of the total expenditures also varies widely between funds. The Laborers' and the MWRD funds had the highest administrative expense percentages at 8.5 percent and 6.5 percent, respectively. It is important to note that for some systems, commissions on investments are included in the administrative expense category, while other systems include these fees in the purchase cost or sale proceeds of investments. The Teachers' Fund had the lowest percentage expense at 3.9 percent. It is difficult to determine which funds fully account for investment commissions as administrative expenses since previous accounting principles did not require a breakout of investment expenses from income revenue or require that they be separately listed as an expense. GASB is currently reviewing its investment reporting standards and will likely be recommending that investment costs be reported on the revenue side of the equation and netted out from investment income. Obviously, those systems that do not account for all commissions and costs of investments as administrative expenses account for these costs by reducing investment income and the value of the asset base.

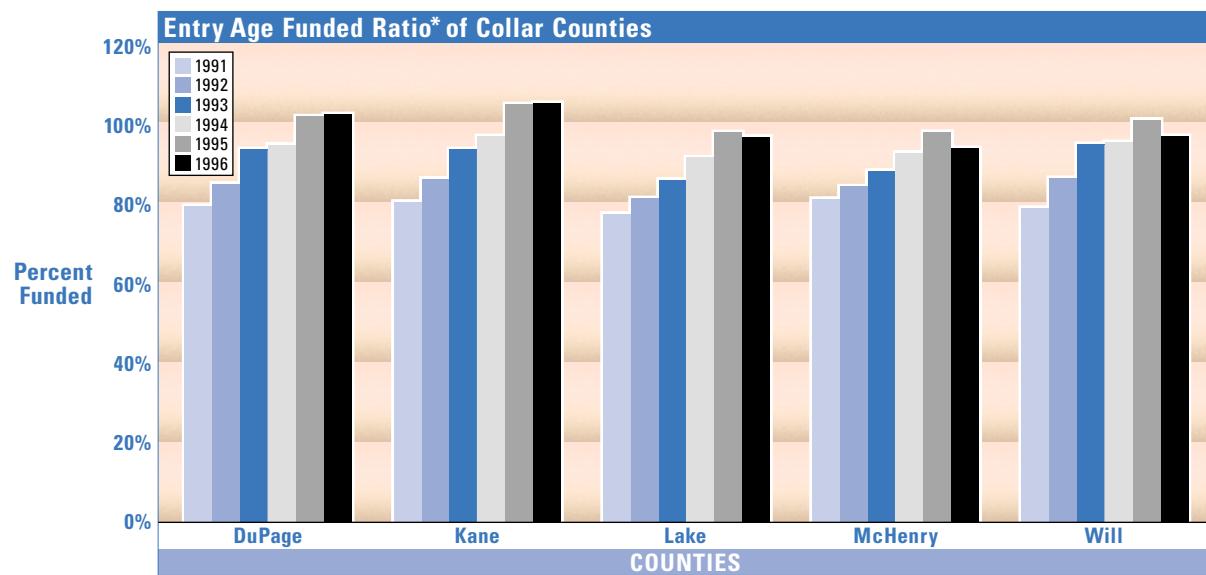
The greatest outflow for the pension systems is the payment of benefits to annuitants. The amount of annuities and benefits paid varies from fund to fund based on the type of plan that has been established in the Illinois Compiled Statutes. The Policemen's, Firemen's, and Teachers' funds continue to be the highest of the nine funds in the percentage of expenses that are benefits. Benefits per individual member can vary dramatically, depending on such considerations as the type of occupation covered, the average salary levels of employees, age of eligibility for full retirement, and level of health care benefits provided to members.

## Collar Counties

The Civic Federation has traditionally analyzed the local governments within Cook County. As part of our effort to expand our focus to taxation policy in the Northeastern Illinois region, The Civic Federation has expanded its database on pension funding to include information regarding the collar counties. These counties are:

- DuPage County;
- Kane County;
- Lake County;
- McHenry County; and
- Will County.

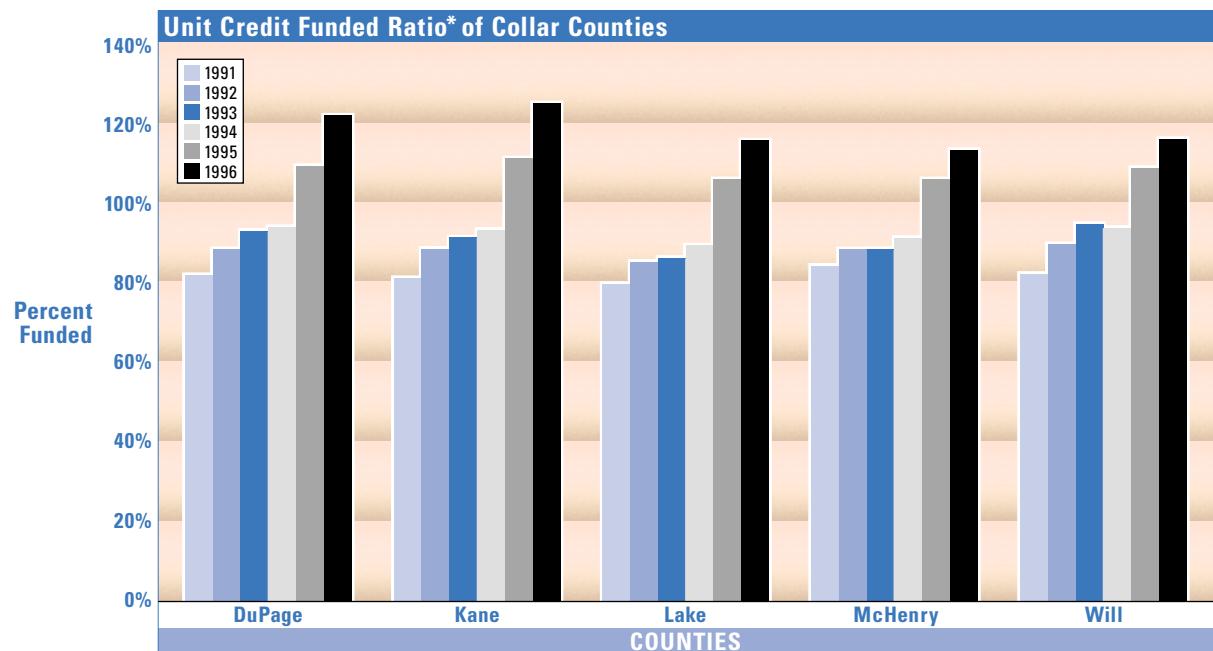
Unlike Cook County, these counties do not have their own self-contained pension funds. Rather, they are all part of the Illinois Municipal Retirement Fund (IMRF). Even though they are part of this larger pool, the funds have their own funded ratios. Each of these funds has assets based on an employer contribution from the county, an employee contribution, and income generated from the IMRF's investments.



\* Values from 1995 and 1996 are based on market value rather than book value.

In terms of funded ratios measured using Entry Age, funded ratios in 3 of the 5 counties decreased in 1996: Lake, McHenry, and Will.<sup>13</sup> One reason for this decrease in funded ratios is the increase in actuarial liability resulting from recent higher-than-expected salary increases such as the ones in McHenry County. The other 2 funds, DuPage and Kane, saw minimal increases.

<sup>13</sup> The assets and liabilities of the Sheriff's Law Enforcement Employees are not included in the data for each of the respective counties other than Cook, which does not participate in the IMRF.



\* Values from 1995 and 1996 are based on market value rather than book value.

When the five collar county funds are compared based on Projected Unit, all five of the funds are well-above 100% funded, when compared based on market value. Each of the funds' funded ratios increased by approximately 15% when market values are used rather than book values for assets.

## Recommendations

1. Policymakers should view any recent gains in the funded ratios of the local pension funds with reasonable caution. Financial markets that are strong one year can be weak the next.
2. Policymakers should avoid the use of one "trigger" or trend measurement, such as a fund's funded ratio, in determining when and how much to contribute in any given year. Funding should be based on an amortization schedule of not more than 30 to 40 years.
3. A number of local funds are becoming increasingly overfunded. Much in the same way that an unfunded liability can be amortized over 30 to 40 years, possibly resulting in an increase in contributions, an excess of assets over a benefit obligation can be amortized over 40 years, possibly resulting in a decrease in contributions. The Civic Federation cautions against deciding such decreases on a short term basis. Government officials should examine means to decrease contributions, specifically tax-based contributions, to overfunded funds according to a 30 to 40-year amortization schedule.

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10. *The Wall Street Journal*, January 1, 1997, The Dow Jones Company (Market Year End).
11. Personal Contact with the American Life Insurance Company (Net Investment Income).
12. *Federal Reserve Bulletin*, June 1997, Table A23.
13. *Illinois Municipal Retirement Fund, Prepared Calculations*.

## Appendix A: Fiscal Year 1996 Pension Fund Data with Comparable 1995 Year End Totals (in thousands of dollars)

Pension Fund	Annual Yield (1)	Annual Yield (2)	Total Income	Total Outlays	Year-End Assets (3)	Accrued Liability	Book Funded Ratio (Entry)	Market Funded Ratio (Entry)	Book Funded Ratio (Unit)	Market Funded Ratio (Unit)
<b>Laborer</b>	11.82%	12.16%	\$151,868	\$56,592	\$1,074,699	\$936,624	114.74%	128.14%	128.88%	143.92%
<b>Forest</b>	9.78%	10.04%	\$15,027	\$5,110	\$100,504	\$100,943	99.57%	111.28%	109.22%	122.07%
<b>Cook</b>	9.47%	9.67%	\$500,412	\$147,014	\$3,202,293	\$3,509,378	91.25%	101.35%	103.52%	114.98%
<b>MWRD</b>	12.08%	12.35%	\$120,839	\$45,098	\$753,812	\$875,462	86.10%	93.19%	92.19%	99.78%
<b>Park</b>	11.75%	12.10%	\$71,324	\$44,429	\$444,419	\$525,369	84.59%	92.78%	89.08%	97.70%
<b>Teacher</b>	14.20%	14.35%	\$913,321	\$384,527	\$5,805,333	\$6,949,832	83.53%	96.68%	83.53%	96.68%
<b>Municipal</b>	10.81%	11.28%	\$600,173	\$283,413	\$3,482,671	\$4,514,208	77.15%	92.65%	87.53%	105.11%
<b>Police</b>	25.08%	25.37%	\$674,089	\$222,511	\$2,496,985	\$4,367,030	57.18%	65.51%	57.92%	66.36%
<b>Firemen</b>	12.20%	12.71%	\$153,859	\$107,694	\$752,743	\$1,575,790	47.77%	56.12%	47.09%	55.32%
<b>1996</b>	13.65%	13.93%	\$3,200,913	\$1,296,388	\$18,113,460	\$23,354,635	77.56%			
<b>1995</b>	8.27%	8.54%	\$2,246,871	\$1,222,635	\$16,201,733	\$21,899,108	73.98%			

**Notes:**

(1) Average Yield =  

$$\frac{(\text{Investment Income} - \text{Investment Expenses})}{(1/2(\text{Beginning Assets} + \text{Ending Assets} - \text{Investment Income} - \text{Investment Expenses}))}$$

(2) Average Yield =  

$$\frac{\text{Gross Investment Income}}{(1/2(\text{Beginning Assets} + \text{Ending Asset} - \text{Gross Investment Income}))}$$

(3) Assets determined at book value.

**\*NOTE:** The total funded ratios shown at the bottom of the columns are computed separately,  
dividing total assets by total liabilities.

(Entry) = Entry Age Normal

(Unit) = Unit Credit

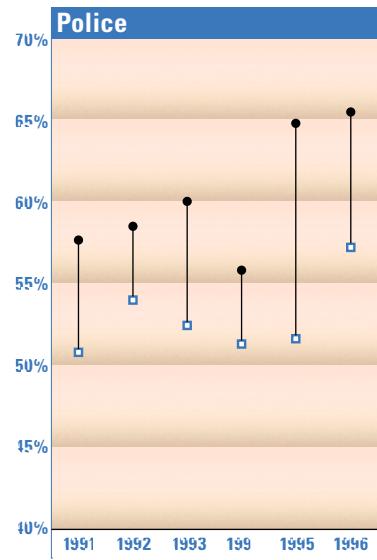
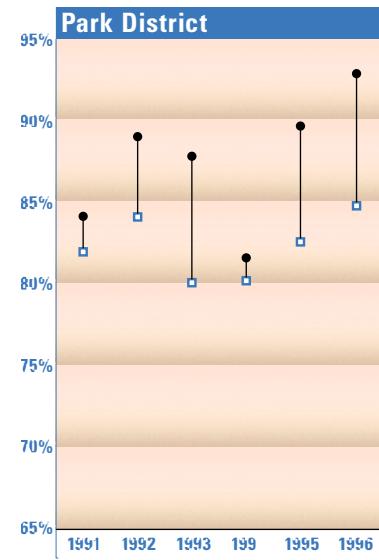
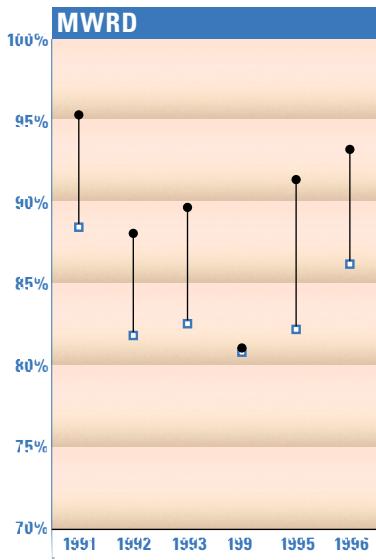
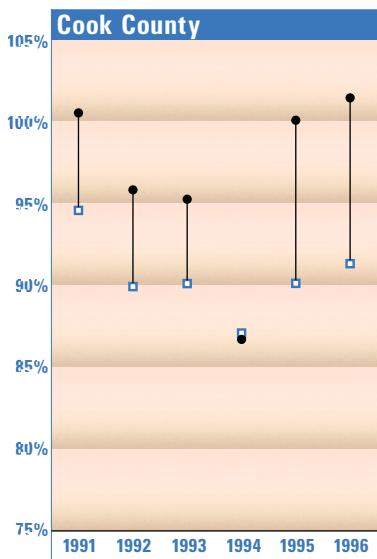
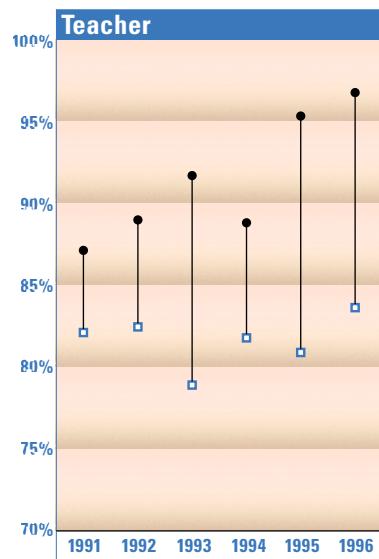
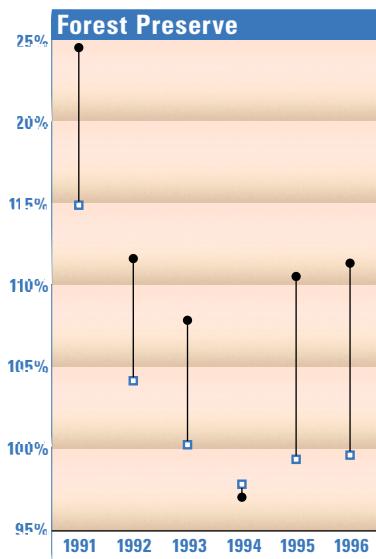
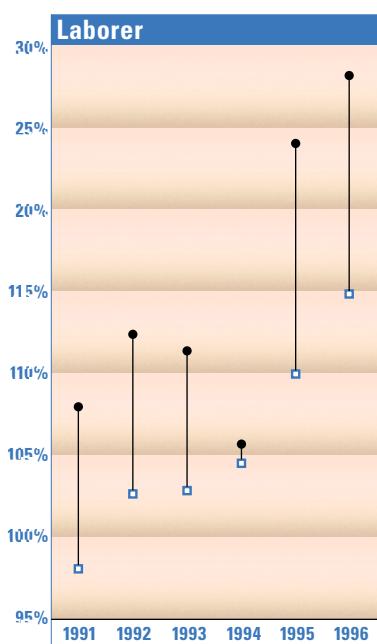
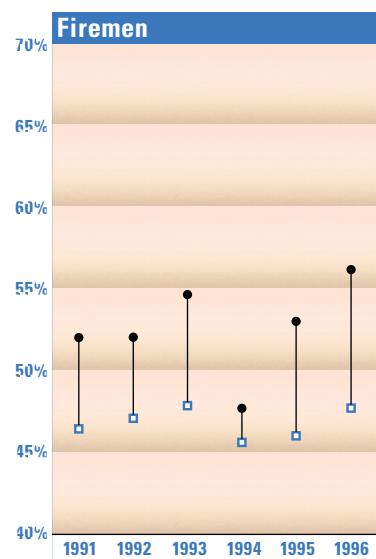
**Source:** Information derived from pension funds' 1996 Actuarial Statements and Annual Reports.

## Appendix B: Comparison of Funded Ratios: 1991–1996 Market vs. Book<sup>1</sup>

Pension Fund	Valuation Method	1991	1992	1993	1994	1995	1996
<b>Fire</b>	Market	52.02%	52.10%	54.63%	47.66%	53.00%	56.12%
	Book	46.45%	47.10%	47.90%	45.63%	46.06%	47.77%
<b>Police</b>	Market	57.62%	58.49%	60.02%	55.80%	64.79%	65.51%
	Book	50.77%	53.99%	52.41%	51.28%	51.59%	57.18%
<b>Municipal</b>	Market	75.56%	75.54%	76.27%	71.69%	84.36%	92.65%
	Book	69.39%	69.86%	69.91%	68.96%	71.80%	77.15%
<b>Teacher</b>	Market	87.12%	88.99%	91.72%	88.81%	95.34%	96.68%
	Book	82.14%	82.44%	78.89%	81.73%	80.88%	83.53%
<b>Park</b>	Market	83.96%	88.77%	87.55%	81.37%	89.47%	92.78%
	Book	81.77%	83.92%	79.85%	79.98%	82.40%	84.59%
<b>MWRD</b>	Market	95.31%	88.06%	89.62%	80.94%	91.33%	93.19%
	Book	88.44%	81.81%	82.52%	80.84%	82.19%	86.10%
<b>County</b>	Market	100.51%	95.78%	95.21%	86.73%	100.07%	101.35%
	Book	94.54%	89.86%	90.06%	87.05%	90.01%	91.25%
<b>Laborer</b>	Market	107.94%	112.40%	111.38%	105.66%	124.04%	128.14%
	Book	98.06%	102.61%	102.90%	104.49%	109.96%	114.74%
<b>Forest</b>	Market	124.51%	111.64%	107.84%	97.10%	110.51%	111.28%
	Book	114.92%	104.16%	100.23%	97.79%	99.34%	99.57%

(1) Market and Book Funded Ratios are calculated using Entry Age liability figures.

## Appendix C: Market (●) vs. Book (□) Funded Ratios (%)



## Appendix D: Breakdown of Local Pension Funds' Expenditures Fiscal Year 1996 (in thousands of dollars)

Pension Fund		Benefits	Refunds	Admin. Expenses	Invest. Exp. (1)	TOTAL
Cook County		\$120,713.7	\$17,906.5	\$2,444.9	\$5,949.3	\$147,014.5
	% of Total	82.1%	12.2%	1.7%	4.0%	100.0%
Forest		\$4,307.8	\$471.6	\$80.5	\$250.0	\$5,109.9
	% of Total	84.3%	9.2%	1.6%	4.9%	100.0%
Municipal		\$238,254.9	\$29,370.1	\$3,246.2	\$12,541.4	\$283,412.5
	% of Total	84.1%	10.4%	1.1%	4.4%	100.0%
Laborer (2)		\$49,129.2	\$2,661.0	\$1,294.1	\$3,504.4	\$56,591.7
	% of Total	86.8%	4.7%	2.3%	6.2%	100.0%
Fire (3)		\$101,104.0	\$1,339.4	\$1,558.8	\$3,692.0	\$107,694.1
	% of Total	93.9%	1.2%	1.4%	3.4%	100.0%
Police		\$209,898.8	\$4,257.4	\$1,764.4	\$6,590.4	\$222,511.0
	% of Total	96.0%	2.1%	0.8%	3.0%	100.0%
Park		\$37,808.6	\$4,040.8	\$1,068.8	\$1,510.8	\$44,429.0
	% of Total	85.8%	7.5%	2.4%	3.4%	100.0%
MWRD		\$40,677.5	\$1,496.8	\$1,046.3	\$1,877.6	\$45,098.2
	% of Total	90.2%	3.3%	2.3%	4.2%	100.0%
Teacher		\$361,103.8	\$8,646.6	\$2,730.6	\$12,046.2	\$384,527.2
	% of Total	93.9%	2.2%	0.7%	3.1%	100.0%
NINE FUNDS' TOTALS		\$1,162,998.3	\$70,190.2	\$15,234.6	\$47,962.1	\$1,296,388.2
	% of Total	89.7%	5.4%	1.2%	3.7%	100.0%

(1) Investment Expenses include investment management fees and custodial fees.

(2) Total includes \$3,045 in litigation expenses.

(3) Total includes \$392,800 in gift fund payments.



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