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## Tough Choices for the Illinois Pension System

Alexander Dhanraj sat in his office overlooking Lake Michigan pondering the various options for tackling Illinois' underfunded state pension systems. Dhanraj was a senior partner with Forest River Consulting, a firm focused on municipal finance. Forest River had been asked by the state of Illinois to provide recommendations on the state's pension problems before the governor submitted his 2010 fiscal year budget next month in March 2009. Dhanraj knew that he was in for a substantial challenge—the state's pension systems were currently underfunded by \$74 billion dollars, an amount that was 270% of the revenues that the state expected to collect that year. Moreover, given the lax accounting standards for governmental pensions, Dhanraj guessed that this funding gap was understated.

Dhanraj knew he had to examine all possibilities for maintaining the solvency of the state's pension systems—including issuing pension bonds, increasing taxes, requiring more employee contributions, changing asset allocations, or lowering benefits to future workers. As he looked over his options, he realized that there was no easy answer. Any changes to public sector benefits would be met by harsh resistance from the unions and the Democratic majority in the Illinois legislature. Similarly, any increase in taxes would be viewed with hostility by Republicans and the electorate, who were in the midst of the most gripping financial crisis since the Great Depression. Dhanraj hoped he could develop a compromise that was economically sensible and politically viable.

### History of the Illinois Pension Systems

Illinois' pension systems were created in the late 1930s to provide retirement benefits to state employees such as firefighters, police officers, teachers at the secondary and university levels, judges and General Assembly employees. Each constituency had established its own retirement system, which set membership benefits and managed the system's assets. The Teachers' Retirement System of Illinois (TRS) was the largest among the different public Illinois retirement systems with 258,531 active employees as of the fourth quarter of 2008.<sup>1</sup> **Exhibit 1** shows the number of current employees of each system along with retirees who received monthly payments.

Each retirement system offered a defined benefit (DB) plan to its employees. DB plans provided post-retirement payments that were typically calculated based on a percentage of the average salary of an employee for his or her last few working years, and took into account the number of years an employee had worked for an organization. For example, TRS retirement benefits were capped at the

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lower of: 75% of an employee's average salary over his or her last few working years, or 2.2% multiplied by the number of years employed by the State multiplied by an employee's average salary over his or her last few working years.<sup>2</sup>

Plan employees and the State of Illinois contributed to the plan in order to finance the eventual payments owed to retirees. These contributions were pooled and invested by each retirement system. The trustee of each retirement system, not the employees themselves, was responsible for the asset allocation of its pool, which was to be invested so that the system could make monthly payments to retiring employees.

The Illinois pension systems had been chronically underfunded; there were not enough assets in the pension systems to pay their liabilities—the present value of the obligations to future retirees. In 1950, an actuary for the TRS declared the system's funding "unsound" and reported that TRS had assets to back only 23% of the future liabilities owed to employees.<sup>3</sup> According to the actuary, the State of Illinois was not making yearly contributions to its pension systems in an amount large enough to finance future payments to eventual retirees—largely as a result of the lax accounting standards of the time.

Accounting standards for state and local municipalities were set by the Government Accounting Standards Board (GASB), a private, non-profit organization. GASB's generally accepted accounting principles (GAAP) were not federal laws, nor was the SEC allowed to enforce them. However, many states such as Illinois mandated compliance of their pension plans with GASB. Until 1986, GASB had not required states to make contributions to their DB plans based on their future retiree claims, only that they make the payments required for current retirees. In 1986, states were finally required to report the total unfunded balance (the portion of the liabilities not funded by existing assets) and an actuarial estimate of the total pension liabilities called the Pension Benefit Obligation (PBO). Although pension disclosures had improved, GASB had not required governmental pension systems to make additional payments other than those immediately due to retirees in the current period.

In 1989, the Illinois legislature made its first attempt at pension reform by endorsing a plan that called for the full funding of the PBO over 40 years after an initial seven-year phase-in. However, there was no continuing appropriation to finance pension contributions, so the State did not implement the funding plan.<sup>4</sup> In 1994, the Illinois legislature passed a similar law with continuing appropriations and required the State to make annual contributions to the pension according to a schedule that was designed to achieve a 90% funded ratio by 2045.<sup>5</sup> At the time the 1994 law passed, the funded ratio (the ratio of the assets divided by the net present value of the pension liabilities) was estimated at 52%.<sup>6</sup> **Exhibit 2** shows the proposed funding schedule according to the 1994 law.

While the funded ratio had been lower than 52% historically, Illinois legislators felt that they had to pass a funding law, because the State could not look forward to the positive demographic trends it had experienced in the past. The total population of the State had grown by 20% from 1970 to 2000, which meant that there were more taxpayers and employee contributions to fund the pension plans.<sup>7</sup> But the State's growth rate was expected to decrease over the foreseeable future. As **Exhibit 1** shows, there were currently 2.7 employees for every retiree. However, with baby boomers retiring and with the average remaining service life of employees at only 17 years, this ratio would certainly decline.

The 1994 law allowed for a slow ramp up of state contributions to the pension plans; as a result, the required payments were low from 1995-2000, a period during which the State was running budget surpluses due to strong economic growth. Despite the positive fiscal situation during these years, Illinois only made the payments required by the 1994 law. Nevertheless, because of the rise in

equity markets in the late 1990s, the state's funded ratio had risen to 74.7% by 2000. (See Exhibit 3 for the funded ratios for the years between 1983 through 2009).

The recession of 2001 and the concurrent decline in equity markets caused the state's pension situation to deteriorate—resulting in a 48.6% funded ratio by the end of 2003. Additionally, the administrations of Illinois governors Edgar and Ryan had approved an increase of roughly \$5.8 billion in benefits to state workers between 1995 and 2003. Of this increase, \$2.25 billion came through changing the way that retirement payments were calculated—by basing retiree payments on an employee's salary in his or her last year, rather than on the average salary in their last four employed years. Next, in 2003, the State allocated \$2.4 billion to its employees in the form of an early retirement initiative, which was not funded. Initially, the program was expected to add only \$622 million to the unfunded balance. However, the formula was altered whereby retirees in “high stress” jobs were given a higher percentage of their later year's earnings than the historical rate, and roughly one-third of employees were deemed to be in “high-stress” positions. Finally, the State waived the penalty associated for state employees who retired before the age of sixty. Historically, every year that a state employee retired before sixty meant a 6% decrease in monthly pension payments. With this penalty waived, workers were incentivized to retire early—thus adding to the costs of the pension systems and reducing employee contributions.<sup>8</sup>

One reason that retirement benefits were expanded for public employees, despite the troubled fiscal situation of the State, was the collective bargaining agreements in place in Illinois. Under legislation passed in 1984, the State mandated collective bargaining between state employers and their employees. In Illinois, collective bargaining was mandated only for the subjects of wages, hours and the condition of employment, although issues such as class size, teacher measurement, and worker safety could be brought up in negotiations. Any grievances between the employee union and the employers were delegated to the Illinois Education Labor Relations Board, which arbitrated the decision as long as both parties behaved in “good faith.” Illinois teachers were allowed to strike under the 1984 statutes if four conditions were met—the employees were represented by a bargaining agent, contract mediation had failed, the Teachers' union had notified the district it planned to strike, and the union had not submitted unresolved issues for arbitration.<sup>9</sup>

Since the unions had a well-centralized structure and their leaders were aware of the nuances of collective bargaining agreements, they often succeeded in negotiating higher contractual payments from local school boards. Additionally, since public sector employees represented a huge voting block for the Democratic Party, the state's political leadership was receptive to increasing benefits. The Illinois Teachers' union was extremely effective relative to unions in other states. For example, a study by the National Education Association in 2008 showed that, while twenty-six states saw declines in real wages for teachers over the last thirty years, Illinois teachers' salaries rose by 3.8% in real terms. As a result, Illinois ranked fifth among all states in average teacher salary in 2008.<sup>10</sup>

## Prior Attempts at Pension Reform

### *Pension Bonds*

By 2003, the Illinois legislature and Governor Rod Blagojevich recognized the necessity of advance funding the pension systems and put forward a variety of proposals to deal with the problem. Governor Blagojevich authorized the State to issue \$10 billion dollars of pension obligation bonds to help finance some of the balance of the unfunded PBO. Such bonds allowed Illinois to take advantage of GASB's accounting rules in order to fund its pension plan.

In 1995, GASB adopted Statement No. 25 which provided guidance to municipalities on how they should account for their pension liabilities. Under GASB's rules, government units were allowed to calculate the net present value of their pension liabilities using a discount rate based on the expected return of assets, instead of the interest rate on US Treasury bonds as required for corporate pension plans. By using the higher discount rate based on the expected asset return, the net present value of liabilities was lower, visually improving the funded status of the plan. Illinois used an 8.5% rate to discount its pension liabilities, a rate that reflected its expectations about its long-term investment return. This was much higher than the interest rate on 10-year US Treasury bonds of 3.5% in 2003.<sup>11</sup>

Pension bonds were general obligations of the state, which meant the interest and principal payments on the bonds were ultimately backed by the state's taxing authority. These bonds were typically highly-rated and paid a low interest rate; for example, the 2003 pension bond had an annual coupon of 5.0%. If the State earned the expected return of 8.5%, then it would save money: it would receive 8.5% from its investments, yet pay out only 5% to bond holders. Because of this 3.5% difference between the interest rate on the new pension bonds and the projected 8.5% return on the invested bond proceeds, the State was able to realize \$860 million in immediate "savings"<sup>12</sup> if plan investments could meet the 8.5% hurdle rate. If the plan investments could not achieve this hurdle rate, however, eventually the State would have to make up for the shortfall by contributing more to its pension systems.

Of the \$10 billion dollars in proceeds from the pension bonds in 2003, only \$7.3 billion was actually used to reduce the historic underfunding of the Illinois pension systems; the other \$2.7 billion in proceeds was used by the State in 2003 and 2004 to make its annual pension contributions. From 2003 to 2007, each retirement system garnered double-digit investment returns. However, due to the sharp decline in equities during the financial crises in 2008, the average return for the five-year period from 2003-2008 was 1.7% for TRS, much lower than the 8.5% hurdle rate.<sup>13</sup>

### *Other Reforms Proposals*

Thus, although the 2003 issuance of pension bonds improved the fiscal situation of the Illinois pension systems, they were still underfunded. In 2005, Governor Blagojevich established a Pension Commission whose goal was to make recommendations to ensure pension solvency. The Commission made the following proposals:

1. No increase in benefits without a funding source identified to pay for the new benefit;
2. Limit pay increases in the final year of employment before retirement since this is the basis of calculating monthly payments;
3. Eliminate the money purchase pension option for new hires (a limited DC plan that was eligible to a small minority of employees);
4. Limit automatic annual pension increases for new hires to 2%;
5. Limit employee groups eligible for the Alternative Retirement Formula—i.e., "high-stress" positions;
6. Increase the employee contribution rate to state pension systems;
7. Increase state contributions to its pension systems by 1% per year;

8. Issue pension bonds after above initiatives are in place with all proceeds going to fund the pension systems; and
9. Study the effect of switching to a defined contribution plan for all new state employees.

Governor Blagojevich accepted most of the Commission's recommendations, except for #6 requiring employees to contribute more to their pensions and #9 shifting to a defined contribution plan for new employees. These two proposals were strongly opposed by the public unions in Illinois. The General Assembly did pass a number of these recommendations, including capping end-of-career salary increases and limiting new hire eligibility in the alternative program. But the General Assembly rejected the proposal to increase the retirement age to 65 for employees who had worked between 8 and 30 years for the State due to strong opposition from the public sector unions.

In order to garner support for the above recommendations, the General Assembly approved a pension holiday for 2006 and 2007, which allowed the State not to fund its pension systems according to the 1994 law. Specifically, the General Assembly lowered the required pension contribution for 2006 and 2007 by \$2.3 billion, while requiring higher payments in 2008-2010 to make up for the shortfall. In addition, the General Assembly shifted some of the burden of future increases in benefits from the State to the local school districts. For example, the 2006 law required local school districts to pay for the actuarial cost of pension increases for any salary increases over six percent that were used to determine final average salary calculations.<sup>14</sup>

All of these reforms were limited by a constitutional provision to the effect that benefits could not be lowered for current retirees and possibly current state employees. According to Article XIII, Section 5 of the Illinois Constitution:

Membership in any pension or retirement system of the State, any unit of local government or school district, or any agency or instrumentality thereof, shall be an enforceable contractual relationship, the benefits of which shall not be diminished or impaired.

In 2008, Illinois was obligated to make contributions of \$2.6 billion to the state's pension plans. At that time, Governor Blagojevich sought to lease the Illinois Lottery to investors for \$10 billion in cash, and to allow the new issuance of \$15.9 billion in pension obligation bonds. All proceeds were supposed to be used to reduce the unfunded liabilities of the Illinois pension system. However, the General Assembly rejected these proposals largely due to the political scandal that was engulfing the governor. On December 9, 2008, he was arrested by FBI agents for a variety of corruption charges including soliciting bribes to select the U.S. Senator to fill President-elect Obama's vacated seat.

## **Pension Crisis of 2009**

After the impeachment of Governor Blagojevich, Lieutenant Governor Pat Quinn was sworn in as governor in February of 2009. In a month, he was expected to issue his budget for Fiscal Year 2010 despite very weak equity markets and a severe national economic recession.

The recession of 2009 was hitting Illinois particularly hard because of the State's heavy reliance on manufacturing, construction and retail. For Fiscal Year 2009 (July 2008 - June 2009) and Fiscal Year 2010 (July 2009 - June 2010), Illinois' economy was expected to contract by 1.8% and 3.3% of GDP, respectively. The latest jobs report in January 2009 showed a state unemployment rate of 7.9%, which was expected to increase to 9.7% over the coming year. As a result of the downturn, state tax revenues were expected to be \$27 billion in both FY 2009 and FY 2010, down roughly 9% from peak revenues in fiscal 2008. However, the State was scheduled to spend \$31.5 billion and \$34.3 billion in

FY 2009 and FY 2010, respectively, leading to combined deficits of \$11.6 billion. These projected deficits ran afoul of Article VIII of the Illinois Constitution, which stated: "Proposed expenditures shall not exceed funds estimated to be available for the fiscal year as shown in the budget."<sup>15</sup>

The state's pension systems were in a particularly dire situation due to the financial crisis. Under the 1994 funding law, the State had to make a \$3.9 billion contribution for FY 2010. (See **Exhibit 4** for the state contributions required for fiscal years 2010-2045).<sup>16</sup> The total unfunded liability of all the state's pension systems was \$73 billion, an amount that had increased almost \$20 billion as a result of stock market losses in 2008 and 2009.<sup>17</sup> These losses left the Illinois pension systems with an expected funding ratio of 50.2%, the worst in the country.<sup>18</sup>

Some critics believed that the 50.2% ratio understated Illinois' problems. In accordance with GASB, Illinois discounted its future liabilities on the expected return of its assets, which Illinois assumed to be 8.5%. But the long-term rate on highly rated Illinois bonds was actually much lower. Discounting Illinois' pension liability at this actual long-term rate meant the underfunding of the state pension system would be more than \$200 billion.<sup>19</sup>

Other critics of GASB's accounting rules noted that they allowed state pension plans to use the actuarial value of their assets based on an average of the fair market value of a plan's investments over a three to five-year period. Illinois had been one of the few states to report the actual fair market value of its plan assets as of the relevant date. However, in early 2009, the State changed its accounting approach so that the reported actuarial value of its pension assets was based on the average values over the past five years in an attempt to smooth the 22% losses achieved thus far in FY 2009.

More broadly, these critics argued that the higher discount rate allowed by GASB created troubling incentives for public pension plans to invest in risky assets. For example, the Teachers' Retirement System of Illinois, the largest pension plan in the State, had roughly 74% of its assets invested in equities, private equity, hedge funds, real estate and commodities—with only 22% in fixed income.<sup>20</sup> **Exhibit 5** shows the asset allocation for the Teachers' Retirement System of Illinois. Corporate pension funds, on the other hand, had traditionally relied on a large proportion of assets allocated to fixed income products. According to a study based on 2008 data, the TRS has the fourth riskiest investment portfolio among all public pension funds in the country, with 81.5% of its investments considered risky.<sup>21</sup>

TRS had also invested heavily in derivatives; its outstanding notional amount of derivatives reached almost \$2 billion dollars as of 2008. According to Dale Rosenthal, an associate finance professor at the University of Illinois-Chicago, "if you were to have faxed me the balance sheet [of TRS of Illinois] and asked me to guess who it belonged to, I would have guessed, Citadel, Magnetar [hedge funds] or even a proprietary trading desk at a bank."<sup>22</sup> TRS had generally sold derivatives on a variety of products like credit default swaps, interest rate swaps, and options on interest rate swaps called swaptions. In other words, TRS had sold insurance in a large bet that these products would not go down in value or default in exchange for yearly payments. According to an article published by Northwestern University, "a large part of TRS's international-based interest rate swap positions are linked to the Brazilian Interbank Deposit Rate and Euribor in a bet that inflation would stay low in Europe but rise in emerging markets."<sup>23</sup>

## Potential Reform Options

Luckily, for Governor Quinn, a Democrat, both the Senate and the House of Representatives were firmly in his party's control—holding 63% of the seats in the House and 59% in the Senate.<sup>24</sup> However, the Teachers' Union was a major contributor to the Democratic Party and any legislative action to reduce pension benefits would be met with fierce political resistance. The state of Illinois had hired consultant Alexander Dhanraj in order to help draft proposals that would address not only the immediate funding needs of the Illinois pension systems, but also their long-term solvency.

Dhanraj thought of a variety of measures to reform the pension systems. First, the State could issue pension bonds similar to the ones in 2003. Second, the State could change the asset allocation of the pension systems to try to achieve higher returns. Third, the State could increase revenues through taxes or contributions. Finally, the State could alter the liabilities of the pension systems directly by reducing the benefits to some employees.

## Pension Bonds

As in 2003, Illinois could issue pension obligation bonds and invest the proceeds in the assets of the pension systems—immediately increasing the funded ratio. The estimated interest rate of this pension bond ranged from 4-7% depending on the size of the issue.

There were many who argued against issuing any pension obligation bonds. In their view, an underfunded pension is a liability of the State and therefore the issuance of a pension bond just changes the accounting from being off-balance sheet to on-balance sheet.<sup>25</sup> More practically, if the State issued pension bonds, the yearly interest payments on these bonds would have to be paid to investors and could not be altered by state law. In other words, the sale of pension bonds would turn a "soft" obligation into a legally binding commitment.

Proponents of issuing a large amount of pension obligation bonds (e.g., \$20 billion) thought that the State should use the proceeds to take advantage of the dislocation in the capital markets. The benefits of a pension bonds depended on how the assets were put to use. For example, the 2003 pension bond originally looked like a great idea since the pension's investment portfolio performed well from 2003-2007. However, given the decline in the portfolio in 2008, the decision to issue pension bonds seemed counterproductive. As Girard Miller, a senior strategist for retirement investments at a consulting firm, said, "[Pension bonds] should only be issued during recessions or during the early stages of economic recovery, when stock prices are depressed."<sup>26</sup> With current equity markets down substantially, investing now would be consistent with Miller's strategy. On the other hand, there was considerable uncertainty about how the global markets were going to react over the coming months. In addition, it was unclear how large a pension bond could be sold by Illinois in the current markets and what rate it would be forced to pay.

Proponents of issuing a smaller amount of pension obligation bonds (e.g., \$8 billion) stressed that the State of Illinois was already heavily indebted with outstanding general obligations bonds of \$19 billion, equal to 70% of FY 2009 revenues. The total unfunded liabilities of the pension systems were \$73 billion, which represented roughly 270% of FY 2009 revenues.<sup>27</sup> Thus, the immediate issuance of a large amount of bonds would increase borrowing costs of the State dramatically. It was estimated that an issuance of \$8 billion in pension bonds would raise the state's interest rate on 30-year debt from 5% to 7%, 300 bps more than US Treasury bonds and 200 bps more than the state's 2003 issuance.<sup>28</sup> Rating agency S&P had recently placed Illinois AA GO debt on CreditWatch negative, so a lower rating would raise the cost of capital for any future debt issuances by the State. An issuance of

\$20 billion would cause the cost of the debt to rise above the 8.5% expected return on the system's assets.

## Asset Allocation

Dhanraj could try to improve the solvency of the Illinois pension systems by asking them to change their asset allocation mix. **Exhibit 5** shows the asset allocation for TRS; the other state pension plans had similar allocations.<sup>29</sup> But these plans had been particularly hurt by the recession, losing 22% of their value in FY 2009; this loss had added \$20 billion to the balance of the state's unfunded pension liabilities. He debated in his own mind whether these plans should hold onto their positions in an effort to recoup these losses during the next few years.

On a longer-term basis, it was unclear what the optimal asset allocation should be for the Illinois pension systems. Since the pension liability was discounted at 8.5%, if the investment performance of the plan's assets exceeded 8.5%, Illinois could earn its way out of underfunding. The state pension systems had experienced good performance over the long-term, with an annual return of 9.7% over the past 27 years. By contrast, over the past 10 years, the annual return had been only 3.1%.<sup>30</sup> For comparison, U.S. equity returns from 1954 till the end of 2008 were 8.3% per year, while the returns on 10-year Treasury Bonds were 6.7% per year during the same period.<sup>31</sup>

Against this backdrop, many analysts were predicting that U.S. interest rates would remain low for a considerable time with worldwide growth slowing substantially. This low-yield environment meant that it would be increasingly more difficult to achieve the 8.5% return that the pension plans needed to prevent the unfunded liability from expanding. The only way to achieve this return was to put more assets into private equity and hedge funds that sought absolute returns -- i.e., returns above the risk-free rate regardless of market condition. Yet, private equity, real estate, hedge funds and commodities already accounted for 30% of total assets for Illinois pension systems. So far this fiscal year, the private equity positions of the TRS were down 18%, its hedge fund/absolute return positions were down 14%, its real estate portfolio was down 30% and its real return/commodities positions were down 26%.<sup>32</sup> The 10-year return from 1999-2008 for hedge funds varied from 3.02% to 10.71% depending on strategy. During the same 10-year period, the return for private equity funds was 9.30% on average, though there was a large difference between the funds in the top and bottom quartiles.<sup>33</sup> Given these returns, there was a question of whether the 8.5% hurdle rate was achievable even by reallocating to these alternative strategies.

Dhanraj would have liked to invest in safer fixed income products that had weathered the financial crisis better than most asset classes and even eked out a positive return. This was the path being taken by most corporate pension plans in the U.S. However, with a hurdle rate of 8.5%, investing in fixed income was not attractive for the Illinois pension systems.

## Raising Taxes

The most obvious way to generate revenue to fund the pension shortfall was to raise taxes, either through increasing the state's taxes on individual or corporate income. Illinois had a personal income tax of 3% on net income earned in the State; net income was based on the adjusted gross income calculated in an individual's federal tax return.<sup>34</sup> The governor was considering raising this tax to a 5% flat rate, which was estimated to increase revenue by \$3.2 billion a year.<sup>35</sup> Yet, the State was in the largest recession since the Great Depression and most economists were calling for increasing fiscal stimulus rather than decreasing public expenditures. Republicans had indicated that they would not

support an increase in the personal income tax and would use it as a campaign weapon in the 2010 election. Similarly, the electorate was generally opposed to tax increases; some voters felt these increases amounted to the taxpayers funding overly-generous retirements for public sector employees.<sup>36</sup>

There was also a proposal to increase the state corporate tax from its current rate of 4.8% to 7%. The incremental revenues from a higher corporate tax were estimated to raise \$2.9 billion a year.<sup>37</sup> However, many companies in Illinois were particularly hard hit by the recession given their focus on manufacturing and construction. Caterpillar, one of the largest employers in Illinois, had indicated that it might shift jobs out of Illinois if there were an increase in the corporate income tax. The firm was repeatedly being solicited by low-tax states like Texas, Nebraska and South Dakota to move jobs and operations out of Illinois.<sup>38</sup> The increase in the corporate tax would change Illinois from having the 21st highest corporate income tax among states to the 3rd highest.

## Increasing Employee Contributions

Another way that Illinois could increase its revenues was to increase the pension contribution rates of state employees -- i.e., the percentage of their salary that they were required to put into the Illinois pension systems. Raising the contribution limits would directly increase the assets of the systems that could be invested to pay for pension benefits. However, the current employee contribution rate was 9.0%, one of the highest in the country. By contrast, under the U.S. social security plan, employees were required to contribute 6.2% of their wages plus 6.2% from their employers up to \$102,000 of annual wages.<sup>39</sup> State retirement systems were allowed to opt-out of participating in the U.S. social security system and maintain their own pension plans; all of Illinois' pension systems had opted out. Many state employees argued that they were being unfairly targeted and had paid their yearly contributions. They maintained that the underfunded pension systems were not due to the lack of employee contributions, but to the inadequate contributions on the State's part.<sup>40</sup>

Besides these political issues, legal requirements made it difficult to cut benefits to most employees. There were three types of beneficiaries of the Illinois pension system: (1) current retirees, (2) current employees, and (3) future employees.

The Illinois Constitution generally treated the relationship between the State and its employees as a contract under which benefits could not be diminished. Thus, for those in group 1, the current retirees, it was legally prohibited to decrease benefits and reduce monthly payments. For future employees, those in group 3, the constitutional prohibition did not apply so Illinois could require more contributions. It was not clear whether current employees, those in group 2, could be required to contribute more to their pension systems. Governor Quinn had suggested that current employees be required to contribute an additional 2% of their annual income towards their retirement. But the Executive Director of TRS, Jon Baumann, viewed this suggestion as "an impairment of benefits and therefore prohibited by the State and federal Constitutions."<sup>41</sup> It was estimated that increasing the annual contribution rate by 2% for all existing and future employees would reduce the unfunded PBO by \$25-30 billion.<sup>42</sup> Roughly 75% of these savings would come from higher contributions by current state employees.<sup>43</sup>

## Decrease Plan Liabilities

In terms of decreasing the liabilities of the Illinois pension systems, the legal framework was more definitive. Dhanraj would not be able to change the pension benefits for either current retirees or current employees since their benefits were classified as a contractual relationship. However, he could certainly alter the pension benefits for new employees. All estimates provided below assume a reduction in pension benefits for future employees only. The current pension benefits for TRS employees are illustrated in **Exhibit 6**.

One way to reduce pension liabilities would be to increase the normal retirement age for new employees to age 67; as a result, employees would work longer and contribute more to their retirement. The theory behind increasing the age limit was that American life expectancies were increasing and people had the ability to work much later in their career. However, many employees in the public sector had jobs with a large physical component, like police officers and firefighters. It was unclear whether the increase in the normal retirement age should apply to these employees as well as teachers and other “knowledge” workers. It was estimated that raising the normal retirement age would produce more than \$30 billion in savings and reduce state contributions by more than \$12 billion relative to what the State would have to pay if it stayed with the current benefit schedule in **Exhibit 6**.

Alternatively, the State could change benefit calculations to give future retirees a lower multiple of their incomes for each year of service; it could also increase the amount of time that was used to calculate the final average salary. Prior to the 2006 law, retirement payments were based solely on an employee’s salary in the final year, which incentivized many officials to increase salaries of public employees in their last year before retirement. The 2006 law rectified this problem by calculating retirement payments based on the average salary of the highest consecutive five years in the last ten years of service. The current proposal would go further to the average salary of the highest consecutive eight of the last ten years.

Another mechanism for decreasing pension benefits to new employees was to decrease the cost-of-living adjustment (COLA). The purpose of the COLA was to increase retirement payments based on the inflation rate so that the retirees would not suffer a loss in purchasing power as they became older. For the current plan, the COLA adjustment was set at 3% per year, which was higher than the prior 20-year average inflation rate of 2.77%. The current proposal was designed to limit COLA increases to 3% or half of the consumer price index annual change, whichever was less. This change would significantly affect the purchasing power of retirees. **Exhibit 7** shows the proposed changes to the pension benefit plan.

In total, it was estimated that all of the above proposals together would save \$220 billion dollars in pension liabilities and \$67 billion in state contributions relative to what the State would have to pay if it did not adopt these proposals.<sup>44</sup> Nevertheless, these savings would only marginally affect the unfunded PBO of the Illinois pension systems. Since the average remaining service life of most state employees was quite long—in TRS, for example, this average was 17 years—the bulk of the savings from reducing pension benefits of new hires would not accrue to the State until most of the current workforce retired.<sup>45</sup> In fact, all the above proposals would together reduce the PBO by only \$382 million a year until the bulk of the current workforce retired.<sup>46</sup>

The last proposal was to initiate a defined contribution (DC) plan for new employees, much like a 401(k) plan in the corporate realm. Under a DC plan, employees would maintain their own retirement accounts by contributing a portion of their salary as well as a matching contribution by the

State. The employees would make the investment choices for their DC accounts and be entitled to any appreciation or depreciation resulting from their choices.

If Illinois instituted a DC plan for new employees, the State would only make a yearly contribution that matched an employee's contribution to his or her own retirement account. The State would have no continuing obligation to contribute if the investments of the DC account did not grow enough to meet the retirement needs of these new state employees. But the cost of administering a DC plan was much higher than the cost of administering a DB plan. DB plans, on average, cost 31 bps to administer while DC plans could range from 96 to 175 bps to administer, though a substantial portion of these high administrative costs would normally be defrayed by payments to the mutual funds and/or the DC provider for large DC plans like those that would cover all new State employees.<sup>47</sup> Plan participants would also pay the higher management fees of mutual funds in DC plans than those of DB plans.<sup>48</sup>

In addition, critics of DC plans were concerned about the financial literacy of many employees who would now have to understand different asset classes in order to choose appropriate investments to fund their retirement needs. In a DB plan, by contrast, employees did not have to make any investment decisions; they were promised a schedule of retirement benefits, which the State was obligated to deliver to them. Because of this difference, public employee unions strongly favored DB plans and opposed their replacement with DC plans.

More fundamentally, a defined contribution plan for new employees would do little to help the state's current financial situation. Since the unfunded liability was accrued by current employees, the liability would not decrease with the introduction of a DC plan. While the introduction of a DC plan would cap the unfunded liability of the Illinois pension systems, it would deprive the pension systems of contributions from new employees. As with proposed changes to the DB plan, savings would not accrue to the State for 17 years, when the current group of employees had retired.

There was no guarantee that any of these proposed benefit changes would be adopted, given the collective bargaining laws of the State. Under these laws, Illinois had to negotiate in good faith with the public sector unions that established pay for union and non-union members. In contrast to many states, public sector unions in Illinois were allowed to strike. A major obstacle in cutting any benefits for public employees was that unions had supported the Democratic Party. Many in the governor's administration were worried about electoral support. It was possible to amend the 1984 laws to ban strikes and remove collective bargaining power from public unions; however, such amendments would be politically risky for a Democratic governor.

## The Decision

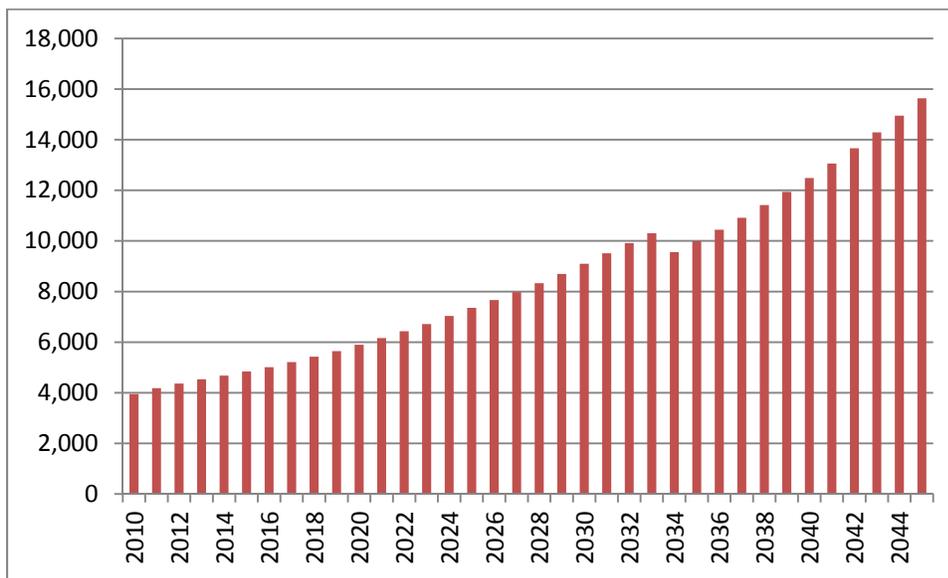
Dhanraj pulled out a pen and began writing down his recommendations to the state of Illinois. He knew his plan had to be practical but palatable to all the major constituencies. He wondered whether he should change the asset allocation of the individual funds to try to achieve higher returns. He also wondered whether he should abandon DB plans for new employees in favor of DC plans. Finally, he needed a specific strategy to deal with the state's unfunded PBO. One alternative would be to issue a large pension bond of \$20 billion; such a large issuance might allow for less drastic changes for state employees and taxpayers. Alternatively, Dhanraj could advocate the issuance of a smaller pension bond of \$8 billion; this would require more burdensome measures for state employees and taxpayers. In either event, he hoped that all constituencies would realize the dire nature of the state's finances and therefore be prepared to make reasonable compromises.

**Exhibit 1** Illinois' Public Pension Funds

Pension Fund	Active Employees	Retirees	Total	Ratio (Active: Retirees)
Teachers	258,531	89,629	347,800	2.9
University	156,952	43,495	200,347	3.6
State Employees	89,598	55,265	144,863	1.6
Judges	990	946	1,963	1.0
General Assembly	267	399	666	0.7
<b>Total</b>	<b>506,338</b>	<b>189,274</b>	<b>695,612</b>	<b>2.7</b>

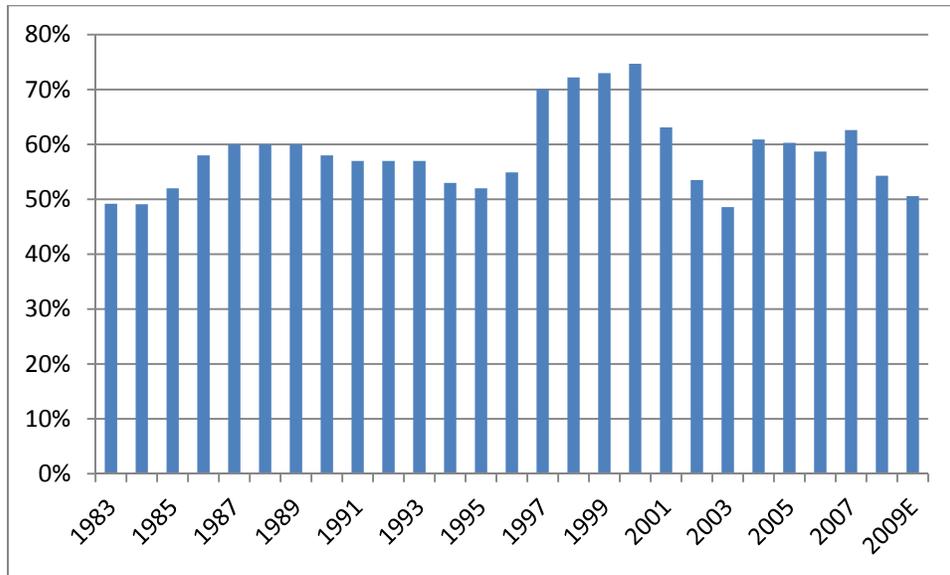
Source: Created by casewriter using data from Center for Tax and Budget Accountability.

**Exhibit 2** Pension Funding Plan according to 1994 Law (\$ in millions)



Source: Created by casewriter using data from Civic Federation 2009.

Exhibit 3 Illinois' Historical Funded Ratio



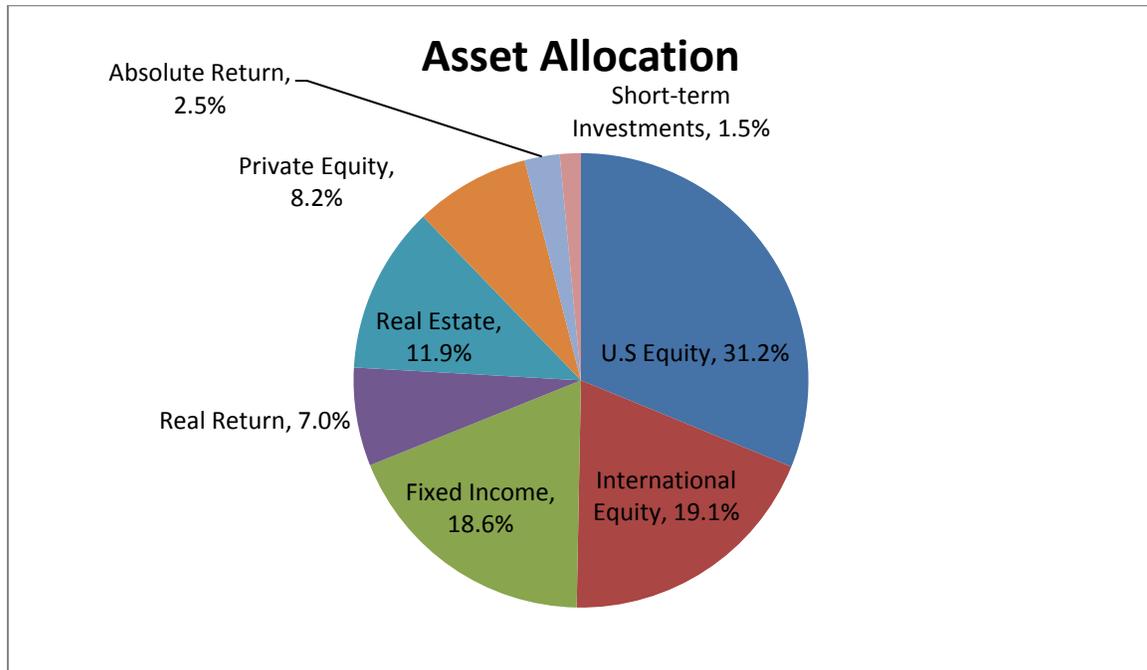
Source: Created by casewriter using data from Civic Federation 2009.

**Exhibit 4** Illinois Pension Funding Schedule

<b>Fiscal Year</b>	<b>State Contribution</b>
2010	\$ 3,944.8
2011	4,183.2
2012	4,364.4
2013	4,535.0
2014	4,680.0
2015	4,840.6
2016	5,009.9
2017	5,212.3
2018	5,423.5
2019	5,643.8
2020	5,898.3
2021	6,161.5
2022	6,433.7
2023	6,715.9
2024	7,034.1
2025	7,356.9
2026	7,663.2
2027	7,976.6
2028	8,330.6
2029	8,695.4
2030	9,097.8
2031	9,511.4
2032	9,911.9
2033	10,301.4
2034	9,558.3
2035	9,989.9
2036	10,442.1
2037	10,916.1
2038	11,414.9
2039	11,937.4
2040	12,485.7
2041	13,058.9
2042	13,659.9
2043	14,289.7
2044	14,947.9
2045	15,636.4

Source: Created by casewriter using data from Civic Federation 2009.

Exhibit 5 TRS' Asset Allocation as of FY 2009



Source: Created by casewriter using data from Teachers' Retirement System of Illinois FY 2009 report.

**Exhibit 6** TRS of Illinois Current Pension Benefit Plan

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<b>Employee Contribution</b>	<ul style="list-style-type: none"> <li>• 9% of pre-tax income</li> </ul>
<b>Retirement Eligibility</b>	<ul style="list-style-type: none"> <li>• If a member has worked 35 years they can retire at 55 with full benefits</li> <li>• If a member has worked more than 20 years but less than 35 years, members can retire at 55 with the benefit reduced by 6% for every year the member is under 60</li> <li>• If a member has worked more than 10 years but less than 20 years, the member can retire at 62 with full benefits</li> <li>• If a member has worked more than 5 years but less than 10 years, the member can retire at 62 with full benefits</li> </ul>
<b>Benefit Calculation</b>	<ul style="list-style-type: none"> <li>• Members will receive an annuity payment equal to 2.2% multiplied by their years of service multiplied by the member's final salary. The final average salary is equal to the member's highest average salary earned during four consecutive years out of the last ten years of service. Benefits are capped at 75% of a member's final average salary</li> </ul>
<b>Cost-of-living adjustments</b>	<ul style="list-style-type: none"> <li>• The annual cost-of-living increase is 3%, compounded annually</li> </ul>
<b>Survivor Benefits</b>	<ul style="list-style-type: none"> <li>• Survivor benefits are no less than 50% of the retired member's benefit</li> </ul>

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Source: Adapted from Teachers' Retirement System of Illinois Benefit Summary.

**Exhibit 7** Proposed Changes to TRS' Benefit Plan

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<b>Employee Contributions</b>	<ul style="list-style-type: none"> <li>• 9% of pre-tax income</li> </ul>
<b>Retirement Eligibility</b>	<ul style="list-style-type: none"> <li>• New employees need to retire at 67 years of age and have worked for 10 years to receive full benefits. Members may retire at 62, but will receive 6% reduced benefits for every year the number is under 67</li> </ul>
<b>Benefit Calculation</b>	<ul style="list-style-type: none"> <li>• Annuity payments are still equal to 2.2% multiplied by the years of service multiplied by the final average salary, but the final average salary will be based off of the highest average salary during eight consecutive years out of the last ten years of service. Also, payments will be capped at 75% of final average salary with a limit of \$106,800</li> </ul>
<b>Cost-of-living adjustments</b>	<ul style="list-style-type: none"> <li>• The annual cost-of-living increase is the lesser of 3% and ½ the yearly change in the consumer price index</li> </ul>
<b>Survivor Benefits</b>	<ul style="list-style-type: none"> <li>• Survivor benefits will be 2/3 of the retired member's benefits</li> </ul>

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Source: Adapted from Teachers' Retirement System of Illinois Benefit Summary.

## Endnotes

- <sup>1</sup> Civic Federation, *The State of Illinois Retirement Systems: Funding History and Reform Proposals*. 2008. p. 2.
- <sup>2</sup> Teachers' Retirement System of Illinois, "Member Services" 2010. <http://trs.illinois.gov/subsections/members/memberservices.htm>.
- <sup>3</sup> NWI.com. "History of Illinois State Pension System Woes." May 25, 2008. [http://www.nwitimes.com/news/local/article\\_5a2754dd-a45d-5556-8cf0-c58115871381.html](http://www.nwitimes.com/news/local/article_5a2754dd-a45d-5556-8cf0-c58115871381.html).
- <sup>4</sup> Teachers' Retirement System of Illinois. "State Funding History of Illinois Pension System." 2010. <http://trs.illinois.gov/subsections/press/history.htm>.
- <sup>5</sup> Civic Federation, *The State of Illinois Retirement Systems: Funding History and Reform Proposals*, 2008. p. 6.
- <sup>6</sup> *Ibid*, p. 6.
- <sup>7</sup> United States Census Bureau. *Illinois Population Growth*. Mar. 12 2011, [http://www.censusscope.org/us/s17/chart\\_popl.html](http://www.censusscope.org/us/s17/chart_popl.html).
- <sup>8</sup> Civic Federation, *The State of Illinois Retirement Systems: Funding History and Reform Proposals*, 2008. p. 6.
- <sup>9</sup> Progress Illinois, "Anti-Strike Language A Key Pivot Point in Education Bill." Mar. 8, 2011, <http://progressillinois.com/posts/content/2011/04/08/anti-strike-language-key-pivot-point-education-bill-video>.
- <sup>10</sup> Illinois Policy Institute, "Bargaining for Better Schools: An Introduction to Collective Bargaining in Illinois Public Education." 2010. p. 43.
- <sup>11</sup> Board of Governors of the Federal Reserve System. "Selected Daily Interest Rate" 2011.
- <sup>12</sup> Civic Federation, *The State of Illinois Retirement Systems: Funding History and Reform Proposals*, 2008. p. 14.
- <sup>13</sup> Judy Topinka. "Pension Obligation Bonds: A Four-Year Review." Fiscal Focus Magazine. <http://www.comptroller.state.il.us/FiscalFocus/article.cfm?ID=286>.
- <sup>14</sup> Teachers' Retirement System of Illinois. *State Funding History of Illinois Pension System. Press Room*. 2010. Web. 12 Mar. 2011. <<http://trs.illinois.gov/subsections/press/history.htm>>.
- <sup>15</sup> Illinois. *Constitution of the State of Illinois*. Article 8: Finance.
- <sup>16</sup> Chrissy Mancini and Ralph Martire. *The Illinois Pension Funding Problem*. Center for Tax and Budget Accountability, 2006.
- <sup>17</sup> Pat Quinn, "Fiscal Year 2010 Budget" The Office of the Governor, 2009.
- <sup>18</sup> Susan Urahn. *The Trillion Dollar Gap: Underfunded State Retirement Systems and the Roads to Reform*. Pew Center on the States, 2010.
- <sup>19</sup> Robert Novy-Marx and Joshua Rauh. *The Liabilities and Risks of State-Sponsored Pension Plans*. National Bureau of Economic Research.
- <sup>20</sup> Teachers' Retirement System of Illinois, *Financial Report of Teachers' Retirement System of Illinois: FY 2010*. Dec. 20, 2010. <http://trs.illinois.gov/subsections/pubs/cafr/fy10/financial.pdf>.
- <sup>21</sup> Alexandra Harris. "Illinois Pension Fund Uses OTC Derivatives to Recoup Returns, Jeopardizes Pensions." *Medill Reports*. June 10, 2010. <http://news.medill.northwestern.edu/chicago/news.aspx?id=166746>.
- <sup>22</sup> *Ibid*.

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<sup>23</sup> Alexandra Harris. "Illinois Pension Fund Uses OTC Derivatives to Recoup Returns, Jeopardizes Pensions." *Medill Reports*. June 10, 2010. <http://news.medill.northwestern.edu/chicago/news.aspx?id=166746>.

<sup>24</sup> Legislative Research Unit: Illinois General Assembly. "96th Illinois General Assembly" 2009.

<sup>25</sup> James Burnham, *Risky Business: Evaluating the Use of Pension Obligation Bonds*. Government Finance Review, 2008.

<sup>26</sup> Girard Miller. "Top 12 Pension and Benefit Plan Issues for 2009: Part I." *Governing: Connecting America's Leaders*. Jan. 22 2009. <http://www.governing.com/columns/public-money/Top-12-Pension-and-.html#item5>.

<sup>27</sup> John Kenward. *Illinois' GO Rating Placed on CreditWatch Negative*. Standard & Poors, 2008.

<sup>28</sup> Allison Bennett "Illinois Borrowing \$900 Million as Credit-Default Cost Doubles." *Bloomberg BusinessWeek* June 28, 2010. <http://http://www.businessweek.com/news/2010-06-28/illinois-borrowing-900-million-as-credit-default-cost-doubles.html>.

<sup>29</sup> Teachers' Retirement System of Illinois, *Annual Financial Report Summary for the Fiscal Year Ended June 30, 2009*.

<sup>30</sup> Alexandra Harris. "Illinois Pension Fund Uses OTC Derivatives to Recoup Returns, Jeopardizes Pensions." *Medill Reports*. June 10, 2010. <http://news.medill.northwestern.edu/chicago/news.aspx?id=166746>.

<sup>31</sup> Board of Governors of the Federal Reserve System. "Selected Daily Interest Rate" 2011.

<sup>32</sup> Teachers' Retirement System of Illinois, *Annual Financial Report Summary for the Fiscal Year Ended June 30, 2009*.

<sup>33</sup> Veronique Le Sourd. *Hedge Fund Performance in 2008*. EDHEC Risk and Asset Management Research Centre, 2009 and European Private Equity & Venture Capital Association. *Performance Data*. Thomson Reuters, 12 Mar. 12, 2009 [http://www.evca.eu/uploadedfiles/News1/News\\_Items/PR-preliminary%20performance-FINAL.pdf](http://www.evca.eu/uploadedfiles/News1/News_Items/PR-preliminary%20performance-FINAL.pdf).

<sup>34</sup> Illinois Revenue, *Individual Income Tax*. Jan. 5, 2011. <http://tax.illinois.gov/Businesses/TaxInformation/Income/individual.htm>.

<sup>35</sup> Civic Federation, *The State of Illinois Retirement Systems: Funding History and Reform Proposals*, 2008. pg. 18.

<sup>36</sup> "Suburban Lawmakers Offer Little Support for a Tax Increase." *Daily Herald* Nov. 22 2010.

<sup>37</sup> "Illinois Tax Hike: State Lawmakers Close to Passing Massive Tax Break." *Huffpost* Jan. 11 2011. [http://www.huffingtonpost.com/2011/01/11/illinois-tax-hike-state-l\\_n\\_807278.html](http://www.huffingtonpost.com/2011/01/11/illinois-tax-hike-state-l_n_807278.html).

<sup>38</sup> "Caterpillar Hints at Leaving Illinois over High Taxes." *RTT News: Global Financial Newswires*, Mar. 27, 2011. <http://www.rttnews.com/Content/BreakingNews.aspx?Node=B1&Id=1584201>.

<sup>39</sup> Social Security Administration, *2008 Social Security Changes*, Oct. 2007. <http://www.ssa.gov/pressoffice/factsheets/colafacts2008.htm>.

<sup>40</sup> Governor's Pension Commission, "Pension Reform Report and Recommendations," 2005.

<sup>41</sup> Teachers' Retirement System of Illinois, *Topics and Reports*. 2009. <http://trs.illinois.gov/subsections/pubs/topics/spring09.pdf>.

<sup>42</sup> Governor's Pension Commission, "Pension Reform Report and Recommendations," 2005.

<sup>43</sup> Case writer's estimate based on average remaining service life of employees.

<sup>44</sup> The Office of the Governor, *Governor Quinn Signs Historic Illinois Public Pension Reform Bill*, Illinois Government News Network. Apr. 14 2010. <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8368>.

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<sup>45</sup> *Annual Financial Report Summary for the Fiscal Year Ended June 30, 2009*. Rep. Springfield, IL: Teachers' Retirement System of Illinois, 2009.

<sup>46</sup> Illinois Government News Network. *Governor Quinn Battles State's Fiscal Crisis with "Fighting for Illinois" Budget Plan*. The Office of the Governor, Mar. 12, 2010. <http://www.illinois.gov/PressReleases/ShowPressRelease.cfm?SubjectID=3&RecNum=8291>.

<sup>47</sup> Center for Tax and Budget Accountability, *Illinois Retirement Security Initiative*. Feb. 2009. <http://www.icana.org/region/40/assets/debunkingpensionmyths.pdf>.

<sup>48</sup> Management fees of equity mutual funds, with the notable exception of stock index funds, were roughly twice the size of the management fees for large equity portfolios of DB plans.