

1997-98 SESSION
COMMITTEE HEARING
RECORDS

Committee Name:

Joint Survey Committee
on Retirement Systems
(JSC-RS)

Sample:

- Record of Comm. Proceedings
- 97hrAC-EdR_RCP_pt01a
- 97hrAC-EdR_RCP_pt01b
- 97hrAC-EdR_RCP_pt02

➤ Appointments ... Appt

➤

➤ Clearinghouse Rules ... CRule

➤

➤ Committee Hearings ... CH

➤

➤ Committee Reports ... CR

➤

➤ Executive Sessions ... ES

➤

➤ Hearing Records ... HR

➤

➤ Miscellaneous ... Misc

➤ 97hr_JSC-RS_Misc_pt04b

➤ Record of Comm. Proceedings ... RCP

➤

Retirement Budget

STATE OF WISCONSIN
DEPARTMENT OF EMPLOYE TRUST FUNDS
201 East Washington Avenue
Madison, WI 53702

CORRESPONDENCE MEMORANDUM

DATE: January 5, 1996

TO: Blair Testin, Director
Retirement Research Committee

FROM: David Stella, Administrator *David Stella*
Division of Retirement Services

SUBJECT: Transaction Amortization Account (TAA)

You asked that I develop an issue paper for the RRC on the Transaction Amortization Account (TAA). This paper provides the perspective of the Department of Employee Trust Funds on the issues surrounding the TAA as it affects reporting of the investment experience of the Fixed Trust Fund of the WRS, benefits provided to participants, and whether the TAA achieves its stated objectives. The ETF Board consulting actuary will provide the RRC with additional information and alternatives concerning the TAA.

Background

The TAA was created in 1973 Wisconsin Act 137 as part of a bill that pooled the assets of the Wisconsin Retirement Fund (WRF), the State Teachers Retirement System (STRS), and the Milwaukee Teachers Retirement System (MTRS). The pooled funds became the Fixed Retirement Investment Trust Fund and the Variable Retirement Investment Trust Funds. Each separate retirement system owned an interest in the fixed fund. Under Act 137 investment gains and losses in the Fixed Retirement Trust were credited (or debited) to the newly created TAA. Prior to Act 137 investment gains and losses were reflected fully in the year the gain or loss was realized.

Under Act 137 the balance of the TAA was paid out at 7% per year (3.5% semiannually). It was expected that capital gains and losses would be spread out over a period of about 14 years rather than falling in total in one year.

The underlying purpose was to smooth investment gains and losses so that the annuity reserves were not adversely affected by short term changes in bond values. Until 1985, stocks were carried at book value. The creation of the TAA was supported by the State of Wisconsin Investment Board (SWIB) because the TAA gave SWIB considerable flexibility in handling bond transactions and saved personnel time (see attached JSCRS minutes 4/19/73).

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Over the years several legislative changes affected the TAA. In 1987 \$230 million of the TAA was recognized to fund a special investment performance dividend for certain annuitants who retired prior to September 1974. This legislation precipitated the Special Investment Performance Dividend lawsuit against the Secretary of the Department of Administration, the State Treasurer and the ETF Board that has continued to the present day.

In 1989 Wisconsin Act 13 \$500 million in investment gain in the TAA was realized to fund some of the benefit improvement costs associated with that legislation. In addition, the annual recognition of investment gains and losses was increased to 20% from 7%. In 1990 the law was amended to provide that the TAA reflect the difference between the book and market value of securities in the Fixed Retirement Investment Trust.

In October, 1995 AB627, a bill which made benefit and other changes to the WRS, proposed recognition of \$2 billion from the TAA. This bill received a public hearing in the Joint Survey Committee on Retirement Systems.

How the TAA Functions

The TAA reflects the difference between the book and market value of assets in the Fixed Retirement Investment Trust Fund and includes both realized and unrealized gains or losses in the value of securities. Its function is to smooth the impact of investment gains and losses on the various reserves of the Fixed Fund. These reserves include the employer reserve, the employee reserve and the annuity reserve. In smoothing the investment experience the TAA stabilizes contributions rates paid by employers and employees. If actual market experience was reflected in these reserves contribution rates could fluctuate considerably year to year making it difficult for employers to budget for large changes in contribution rates.

In addition, the smoothing of gains and losses in the annuity reserve protects annuitants from severe fluctuations in the financial markets. Annuitants are eligible to receive dividends on their monthly annuities based on surpluses in the annuity reserve. These dividends are not guaranteed and can be reduced or eliminated in future years if declines in the financial markets cause asset value declines in the annuity reserve. Smoothing investment returns has the effect of holding back some investment gains, but providing greater dividend stability. Consequently, the annuity reserve of the Fixed Fund has had a positive dividend distribution each year since 1978.

Issues Raised By the TAA

The operation of the TAA is very difficult to understand. It causes confusion for WRS participants, employers and taxpayers because it results in ETF reporting different investment

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performance results for the Fixed Fund than that reported by SWIB. Because investment gains are held back annuitants often believe the investment gain is being taken from them. In years when investment losses occur annuitants are shielded from the full effect of these losses. However, they often don't realize that the reason for this is that they are offset by investment gains that are carried over from previous years.

The complex investment accounting structure associated with the TAA also creates difficulties in implementing proposals that on the surface appear simple to administer. For example, legislation to allow WRS participants to roll-in contributions from other qualified retirement plans passed in 1992. In order to implement this legislation the Department of Employee Trust Funds had to draft administrative rules that would change the accounting structure for crediting investment returns on funds that were rolled-in. The administrative appropriation necessary to implement this legislation was removed from the bill prior to its passage. Consequently, a large part of the legislation has not yet been implemented. The main reason for the delay is caused by the significant accounting problems related to the TAA.

Each year 20% of the December 31 balance of the TAA is recognized and included in the investment income credited to the Fixed Fund. There is no precise method to determine whether this flat percentage distribution formula is always appropriate. Some have asserted that 20% is too low, while others argue it is too high. Despite the arbitrary appearance of a flat percentage distribution formula it may be quite reasonable and functional over the long term despite occasional precision problems on a short-term basis.

Finally, the most serious issue raised by the TAA is the public misperception that this account represents a "surplus" in the assets of the WRS. When the TAA contains a large positive balance the tendency of many fund participants, employers and others is to look for ways to use this "surplus" for benefit improvements or contribution reductions. In fact, the TAA is not a surplus account but merely an accounting mechanism. Inappropriate use of the TAA can cause serious damage to the long term financial stability of the WRS, however, the damage may not be apparent for several years in the future. Investment gains recognized today, that would have been recognized in the assets of the Fixed Fund in the future, simply change the timing of investment income flows. Unfortunately, the temptation to address short term needs at the expense of long term considerations can often be overpowering.

Alternatives to the TAA

The ETF Board actuary will provide information about possible alternatives to the TAA and the advantages and disadvantages of each alternative. However, it is important to keep in mind that

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most defined benefit retirement plans use some sort of investment performance smoothing mechanism because it is an important tool to control the volatility of financial markets.

If changes to the current TAA structure were proposed the legal implications of such changes to the contractual rights of participants would need to be carefully considered. Since many current participants and all annuitants have an benefit interest in the investment return of the Fixed Fund changes to the TAA may affect those benefit interests. Consequently, care should be taken not to create a contractual rights issue in proposing changes to the TAA.

STATE OF WISCONSINMINUTES OF MEETINGJOINT SURVEY COMMITTEE ON RETIREMENT SYSTEMS

Room 318
122 W. Washington Ave.

April 19, 1973

1:00 p.m.

CALL TO ORDER AND ROLL CALL
(AGENDA ITEM 1)

The meeting was called to order by Senator La Fave, Chairman, at 1:30 p.m., in Room 318, 122 W. Washington Ave., Madison, Wis.

Present: (6) Rep. Baldus, Sen. La Fave, Rep. Looby;
Messrs. Olson, Schmidt and Van Cleave.

Absent: (1) Sen. Devitt, unable to attend the meeting, requested that he go on record as favoring adoption of the reports as presented, pertaining to Senate Bills 449 and 50.

Others Present: C. M. Sullivan, Secretary of the Employee Trust Funds Dept.; John Pike, Director of the State Investment Board; Howard Smart, Investment Director of the State Investment Board; Linda Lawlor, Research Analyst; Debbie Vogel and Ivy Haggott, Secretaries.

CONSIDERATION OF MINUTES OF MEETING OF 4/2/73.

Mr. Van Cleave moved, seconded by Rep. Looby, that the minutes of April 2, 1973 be approved as presented. Motion carried by voice vote.

CONSIDERATION OF JOINT SURVEY COMMITTEE REPORTS ON THE
FOLLOWING BILLS:

(AGENDA ITEM 3)

Chapter 137 Laws of 1973

- 1- Senate Bill 449, relating to investment by the investment board of employe trust funds.

Mr. Sullivan expressed his apologies for the brevity of the report. He explained that the bill has two major purposes; the first is the investment procedure and the second is the accounting procedure.

- 1- For investment purposes only, the assets of the Wisconsin Retirement Fund, the State Teachers Retirement System, the Milwaukee Teachers Retirement Fund and the Conservation Wardens Pension Fund would be pooled into one fixed annuity investment trust and one variable annuity investment trust. Each of the above named retirement funds or systems would own an interest in each trust, in proportion to the assets of each fund or system held in each trust.
- 2- A significant change in the manner of accounting, for capital gains and losses for the pooled fixed annuity retirement investment trust is also proposed. Under present law and procedures, each realized capital gain or loss of a fixed annuity retirement fund is reflected fully in the investment experience for the year in which the gain or loss is realized. Under this bill every capital gain or loss realized under the fixed annuity investment trust would be credited (or debited) to a special holding account, the proceeds of which would be paid out to the several retirement funds or systems at a rate of 7% each year. Thus each capital gain or loss would be spread over a period of about 14 years, rather than falling in total in one year.

John Pike, Executive Director of the State Investment Board, appeared before the Committee, stating that this bill would result in some administrative cost savings later. He added that the accounting department is asking for flexibility in handling of bonds also.

Howard Smart, Investment Director of the State Investment Board, also appeared before the Committee. He stressed that the flexibility would increase the frequency of transactions, which would result in increased yield. The change in accounting would benefit the funds in that there would be considerable saving in personnel time in amortizing each individual item. He added that Connecticut and California have already set up a plan similar to this.

Mr. Sullivan pointed out that the State Auditor, Mr. Ringwood, has approved in principle the proposed accounting changes, as well as the Investment Board staff and the Employee Trust Funds Board. The investment pool concept has been endorsed by the State Treasurer, the Investment Board and Employee Trust Funds Board.

Discussion by members followed.

Mr. Sullivan remarked that he contemplates distributions twice a year, as before. The increase will be identical for the various systems, but the determination of return is at the disgression of the boards. Since there is a different fiscal closing date (June 30 for STRS and Dec. 30 for WRF) this could easily result in a variation.

Sen. La Fave suggested the addition of the following sentence to the recommendation on the report: "This Committee believes that passage of this bill would be good public policy."

Mr. Olson moved, seconded by Rep. Looby, that the report be adopted as presented with the above addition. Motion carried by voice vote.

2. Senate Bill 50, relating to retirement age for certain state and local officials and employees.

Detailed discussion ensued by members.

Mr. Sullivan remarked that he finds it difficult to find any justification for a basic compulsory retirement age. There seems to be no agreement between departments or the Bureau of Personnel. He feels that this is not a retirement problem, but a basic policy question and perhaps should be in the personnel-management area.

Motion by Rep. Looby, seconded by Mr. Olson, that the report be adopted as presented. Motion carried unanimously by voice vote.

3. Senate Bill 64, relating to retirement benefit changes in counties having a population of 500,000 or more.

Mr. Olson inquired just what this bill seeks to accomplish. Mr. Sullivan replied that it is a means of circumventing home rule authority.

Rep. Baldus added that he feels that certain bills are presented to the legislature by Milwaukee City and County, especially when a certain request or program has been refused by home rule.

Sen. La Fave commented that it his understanding that Milwaukee is desirous of obtaining a court ruling regarding this bill.

Mr. Schmidt suggested that the phrase "previously delegated to it by the legislature" be added to the recommendation. This met with the agreement of members.

Mr. Schmidt moved that the report be adopted, in the amended form; seconded by Mr. Van Cleave and carried by voice vote.

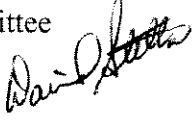
Meeting adjourned at 3:00 p.m. The next meeting will be at the call of the chairman.

STATE OF WISCONSIN
DEPARTMENT OF EMPLOYE TRUST FUNDS
201 East Washington Avenue
Madison, WI 53702

CORRESPONDENCE MEMORANDUM

DATE: January 5, 1996

TO: Blair Testin, Director
Retirement Research Committee

FROM: David Stella, Administrator 
Division of Retirement Services

SUBJECT: WRS Unfunded Accrued Actuarial Liability (UAAL)

You asked that I provide the Committee with a report on the issues related to the creation and payment of the unfunded liability by public employers participating in the WRS. This memo will discuss some of the practical implications of the current method of amortizing unfunded accrued liabilities of the WRS. Norm Jones, consulting actuary to the Employee Trust Funds Board, will provide a more detailed description and possible alternative approaches for the Committee.

Background

For purposes of this discussion I will refer to the UAAL as "prior service liability" which represents all of the current unfunded liability in the WRS. Prior service liability has been a controversial issue for some employers especially since enactment of benefit improvements in 1989 Wisconsin Act 13. Prior service liability is created in two ways: when an employer first joins the WRS and chooses to recognize part or all of the service rendered for that employer prior to the date the employer was included in the WRS and when benefit improvements are granted in legislation and apply to service already rendered by covered employees.

As part of the funding mechanism to pay for benefit improvements 1989 Wis Act 13 increased the WRS existing prior service liability by \$512 million and established a new 40 year amortization period. A previous benefit improvement bill, 1983 Wisconsin Act 141, had increased the prior service liability on January 1, 1986 by \$530 million and had also reset the amortization period to 40 years. On December 31, 1983 the prior service liability of the WRS was \$650 million. The prior service liability balance as of December 31, 1994 was \$2.007 billion. Approximately 70% of the total is the liability of local government employers and 30% is the liability of state agencies.

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Discussion of Issues

The existence of a prior service liability is not the sign of funding difficulties for a retirement system. The important consideration is whether the retirement system has a plan to pay off the liability over a realistic period of time and that employers are meeting their annual obligation to pay down the liability. In the WRS employers on average pay a contribution rate of 1.3% of payroll toward their prior service liability. That rate is frozen for the entire amortization period of 40 years, but the employer may, at its discretion, pay down the balance in larger installments or lump sum payments. Some WRS employers have chosen to pay off their unfunded liability balance completely in one lump sum payment.

As the consulting actuary will describe in his presentation, the amortization schedule for payment of the prior service liability includes a level percent of payroll method so that inter-generational equity is achieved. The amortization schedule assumes an ever increasing employer payroll using a salary growth assumption (currently 5.3%) and an interest rate charge on the unpaid balance based upon the WRS assumed interest rate (currently 8.0%). These assumptions are set by the Employee Trust Funds Board and may change if the Board, on the recommendation of the actuary, determines that a change is necessary to reflect the long term experience of the WRS.

Under the design of the amortization schedule an employer's prior service liability balance will grow (in nominal dollars) for about the first twenty years and then decline in the next twenty years of the schedule as payroll growth causes an ever increasing payment against the principal balance. For most employers the actual experience of salary growth will not be the same as the amortization schedule assumes. However, if on average wage increases grow at the assumed salary inflation rate, the liability will be fully paid within the forty year amortization period.

Issues of Concern to Employers

Since 1989 a series of events have caused concern among some local government employers who were alarmed by their increasing prior service liability balance. In particular, those employers who have experienced substantial downsizing of their employe payroll have expressed concern that their liability balance will continue to grow because their payments will never reach a level sufficient to pay the full interest and principle. This is particularly true for employers who experienced large payroll declines through the sale or closing of a nursing home, hospital or psychiatric facility. In one extreme case, using the current

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amortization method, the employer's liability was projected to grow from \$3 million to more than \$25 million by the end of 40 years.

In order to resolve this problem employers must make larger payments toward their unfunded liability than anticipated. This is particularly unpopular during a period that local governments are under expenditure caps.

A second issue is that many employers object to being charged interest on this debt. However, liabilities are interest bearing obligations of the WRS. The WRS must receive interest on its obligations in an amount it expects to earn over the long term on invested assets. If interest is not charged the result is a financial loss to the WRS which will cause an increase in WRS liabilities and would result in higher current service contribution rates for all employers (i.e. not just those who have an unfunded liability). Employers can avoid interest costs by paying their liability in full or reduce interest costs by paying down the principal balance faster than scheduled.

A third issue raised by employers concerns the fact that once established, the prior service liability remains the employer's obligation regardless of the status of the employees on which the liability is based. Under the current method of assessing prior service liability the allocation of the liability is based on each employer's payroll of participating employees on a specified date. The liability remains regardless of the status of each employee after that date. In some cases, employees move to other public employers, die, retire, separate from service and withdraw their contributions, or leave their contributions on account and become employed in private sector jobs.

Some employers believe that their prior service liability should be recalculated each year solely using the employees employed on the first day of the calendar year. Prior service liability recalculation each year is done in some retirement systems such as the Illinois. However, the logistics of tracking employees as they move in and out of employment with over 1200 employers makes this method extremely complex and expensive. These are experience rating issues that will be addressed in more detail by the actuary.

Alternative Method of Funding UAAL

In addition to the current method used by the WRS and the annual recalculation method by employer, the WRS consulting actuary has suggested that we explore the possibility of aggregating all employer prior service liabilities into one liability for the system and have all employers pay the average contribution rate necessary to pay-off the liability over the

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amortization period. Under this method there would be no individual employer prior service liability. All employers' prior service would be "pooled" and employers would pay the same percentage toward the system's unfunded liability. While this method may create the magical impression that all the individual prior service liabilities would disappear it is not without its drawbacks and possible legal implications. Employers who have already paid off their prior service liabilities would face higher total contribution rates. Employers with high prior service rates would be advantaged by having their rates lowered to the average rate, but those paying less than the average would face an increase in their total contribution rate. New employers might eventually be required to recognize the prior service of their employes when joining the WRS and would pay the same average contribution rate for prior service.

Many of these drawbacks can be accommodated through a phase-in of the prior service rate changes, however, there would be some loss in flexibility now available in the "non-pooled" arrangement. Despite these drawbacks the "pooled" prior service arrangement does offer some advantages that should be studied by the RRC if changes to the current UAAL method are contemplated.

Summary

A number of employers have expressed concern about the current amount of their unfunded prior service liability and the method by which the liability is determined and repaid. It is a matter the RRC should review and determine if a change to the current method of calculating and paying unfunded prior service liabilities is warranted and feasible.

If changes are proposed a careful review of the legal implications should also be completed to assure that these changes would withstand a legal challenge.

Asset Valuation Methods and the TAA

Presented to the
Wisconsin Joint Survey Committee on Retirement Systems

January 12, 1996



Gabriel, Roeder, Smith & Company

WRS Asset Valuation Method

- ▲ An essential step in the valuation process is comparing valuation assets with computed liabilities.
- ▲ Asset valuation methods are distinguished by the timing of the recognition of investment return (I).



Gabriel, Roeder, Smith & Company

WRS Asset Valuation Method

Book Value:

$$\begin{aligned} I &= \text{Ordinary income} \\ &+ \text{Realized capital value changes} \end{aligned}$$

Results are affected by timing of sales.

Market Value:

$$\begin{aligned} I &= \text{Ordinary income} \\ &+ \text{All capital value changes} \end{aligned}$$

Market changes can result in volatile contribution rates in a plan with a high ratio of assets to liabilities.



WRS Asset Valuation Method

The statutory WRS asset valuation method is a blend of book value and market value in which ordinary income plus 20% of all capital value changes are recognized each year.

- ◆ Objective: Give recognition to long-term changes in asset values while minimizing the effect of short-term fluctuations in the capital markets. Realized and unrealized capital gains and losses are treated in the same manner.

Capital value changes are recorded in the Transaction Amortization Account (TAA).

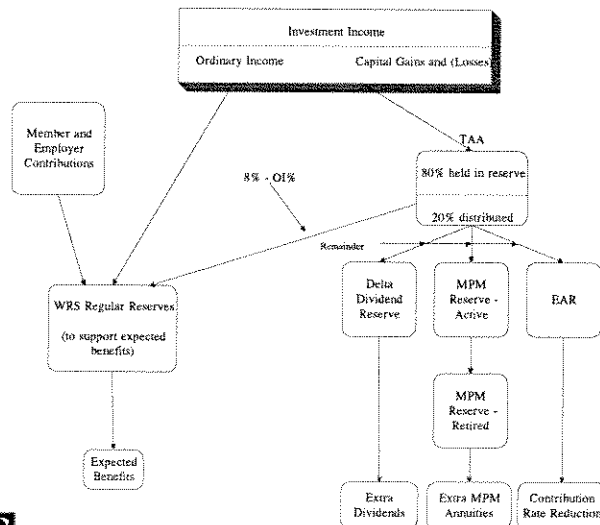


TAA 4 Year History

	\$ Millions			
	1994	1993	1992	1991
Beginning balance (after adjustments)	\$4,312.9	\$2,978.4	\$2,805.6	\$1,059.5
Net gains (losses)	(1,194.4)	2,439.9	927.7	2,474.9
Adjustment for City of Milwaukee	(13.5)	(27.2)	(10.3)	(27.7)
Ending balance before transfer	3,105.0	5,391.1	3,723.0	3,506.7
20% transfer to fixed trust funds	621.0	1,078.2	744.6	701.3
Ending balance	2,484.0	\$4,312.9	\$2,978.4	\$2,805.4
% of WRS assets used in valuations	9.3%	17.0%	13.0%	13.4%



Flow of Investment Return



SWIB Phase II Projection Study*

ASSUMPTION SET VII

- ▲ \$3,500 million beginning TAA balance
- ▲ Annual returns equal to a year by year composite market index (50% common stock, 40% bonds and 10% cash equivalents) for the 50 year period from 1944 through 1993, less 1.0% a year for investment and administrative expenses.

* Report dated September 7, 1994



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Phase II - Assumption Set VII Next 50 Years = Last 50 Years

Year	Valuation Interest	Market Return	Recognized Return	Contribution Rate
1994	8.0%	10.4%	8.76%	12.8%
1995	8.0	20.2	11.47	12.8
1996	8.0	(4.6)	7.77	12.8
1997	8.0	0.9	5.80	12.2
1998	8.0	3.3	5.12	12.2
1999	8.0	10.5	6.18	12.6
2000	8.0	15.4	8.31	13.2
2001	8.0	9.8	8.89	13.4
2002	8.0	9.3	9.03	13.4
2003	8.0	0.1	6.99	13.2
2004	8.0	27.9	11.32	13.0
2005	8.0	14.8	12.77	13.0
2006	8.0	0.0	9.67	12.4
2007	8.0	(2.7)	6.48	11.4
2008	8.0	19.2	8.91	11.0
2009	8.0	4.6	8.31	11.4
2010	8.0	4.1	7.30	11.4
2011	8.0	13.8	8.69	11.4
2012	8.0	(2.0)	6.48	11.6
2013	8.0	11.4	7.28	11.6
2014	8.0	9.3	7.94	12.0
2015	8.0	5.7	7.57	12.2
2016	8.0	(4.7)	4.85	12.2
2017	8.0	8.6	5.30	12.4
2018	8.0	5.5	5.47	13.2



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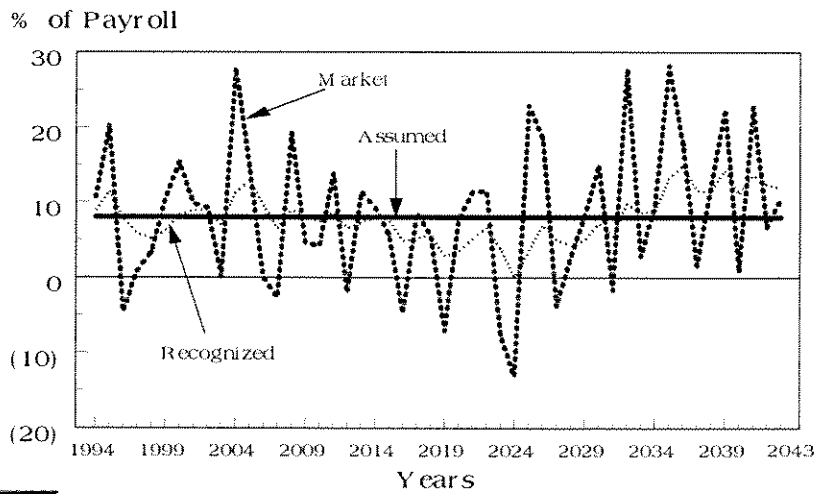
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Phase II - Assumption Set VII Next 50 Years = Last 50 Years

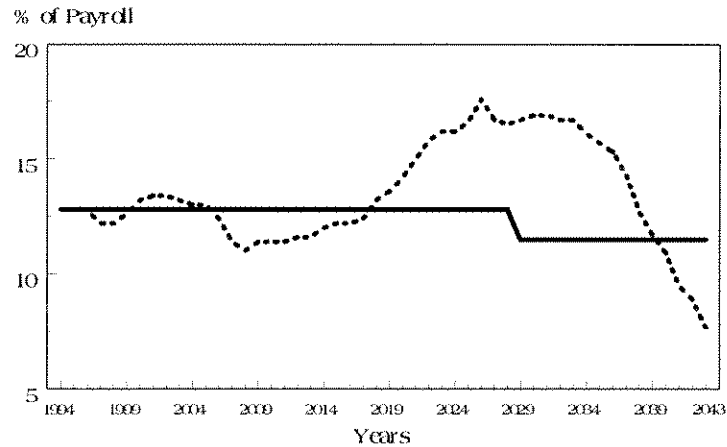
Year	Valuation Interest	Market Return	Recognized Return	Contribution Rate
2019	8.0%	(7.1)%	2.87%	13.6%
2020	8.0	7.8	3.44	14.2
2021	8.0	11.4	5.13	15.0
2022	8.0	11.5	6.68	15.8
2023	8.0	(7.5)	3.77	16.2
2024	8.0	(13.1)	0.08	16.2
2025	8.0	22.9	3.48	16.6
2026	8.0	18.5	7.00	17.6
2027	8.0	(3.8)	4.97	16.7
2028	8.0	2.7	4.21	16.5
2029	8.0	8.2	4.97	16.7
2030	8.0	15.0	7.15	16.9
2031	8.0	(1.7)	5.44	16.9
2032	8.0	27.6	9.80	16.7
2033	8.0	2.8	8.67	16.7
2034	8.0	9.5	8.67	16.1
2035	8.0	28.2	13.23	15.7
2036	8.0	17.7	14.95	15.3
2037	8.0	1.6	11.57	14.3
2038	8.0	12.1	11.41	12.7
2039	8.0	22.4	14.28	11.7
2040	8.0	0.8	11.15	10.9
2041	8.0	22.7	13.69	9.5
2042	8.0	6.7	12.38	8.9
2043	8.0	10.6	11.91	7.7
Average	8.0%	8.4%	8.0%	13.5%



WRS Investment Return Projection Assumed vs. Assumption Set VII Market & Recognized



WRS Contribution Rate Projection Theoretical vs. Assumption Set VII



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Observations from 1994 Projection Study

- If market returns average 8%, the present TAA balance will result in moderate declines in the computed contribution rate. The TAA balance would stabilize around 14% of fixed assets.
- Stable contribution rates will be difficult to maintain over the next several decades because:
 - ◆ The asset pool continues to grow relative to payroll, which magnifies the impact of investment gains or losses.



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Observations from 1994 Projection Study

- ◆ As the money purchase minimum program phases out, a higher proportion of investment gains (losses) affect the contribution rate.
- ◆ The operation of the TAA may not achieve the intended stabilizing effect on contribution rates.
- ◆ Volatility in capital markets may lead to extended periods over which actual returns are substantially different than assumed returns. This is true even in an environment where long-term results exactly match assumptions.



Observations from 1994 Projection Study

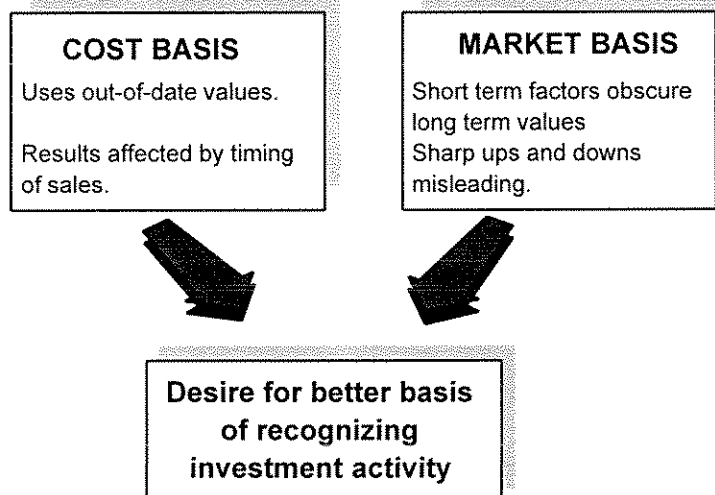
- Consideration should be given to:
 - ◆ Redesigning the TAA to enhance its stabilizing effect.
 - ◆ Exploring ways of reducing overall volatility of portfolio returns.



Asset Valuation Methods for Public Employee Retirement Systems



Motivation



Statutory

- ▲ Governing Statutes Describe Method
- ▲ Change in Method requires a change in statute
- ▲ Changing the statute can be difficult
- ▲ Methods tend to stagnate



Discretionary

- ▲ Plan Trustees determine method
- ▲ Trustees can change method without changing statute
- ▲ More easily kept up to date with current practice standards



Other Characteristics

- ▲ Open vs Closed Amortization
- ▲ Realized & Unrealized Capital Value Changes may be treated same or differently
- ▲ WRS uses open amortization and treats Realized & Unrealized in the same manner
- ▲ WRS amortizes all capital changes -- will result in a positive TAA even if all assumptions are realized exactly forever.



Common Methods

- ▲ Usually not statutory
- ▲ Open & closed amortization both common
- ▲ Usually all Capital Changes treated the same
- ▲ A growing number of plans calculate amortizations in some way giving recognition to the assumed rate.



Illustration Development of Funding Value of Assets

Valuation Date December 31:	1992	1993	1994	1995	1996	1997
A. Funding Value Beginning of Year	\$23,097,286	\$25,969,395	\$29,251,919			
B. Market Value End of Year	26,929,803	29,875,444	30,455,971			
C. Market Value Beginning of Year	25,490,155	26,929,803	29,875,444			
D. Non Investment Net Cash Flow	249,257	274,030	287,584			
E. Investment Income						
E1. Market Total: B - C - D	1,190,391	2,671,611	292,943			
E2. Assumed Rate	7.75%	7.75%	7.75%			
E3. Amount for Immediate Recognition	1,799,698	2,023,247	2,278,168			
E4. Amount for Phased-In Recognition	(609,307)	648,364	(1,985,225)			
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.25 * E4	\$(152,327)	\$162,091	\$(496,306)			
F2. First Prior Year	441,906	(152,327)	162,091	\$(496,306)		
F3. Second Prior Year	533,575	441,907	(152,327)	162,091	\$(496,306)	
F4. Third Prior Year	0	533,576	441,906	(152,327)	162,091	\$(496,307)
F5. Total Recognized Investment Gain	823,154	985,247	(44,336)	(486,542)	(334,215)	(496,307)
G. Funding Value End of Year: A+ D+ E3+ F5	\$25,969,395	\$29,251,919	\$31,773,035			
H. Difference Between Market & Funding Values	\$960,408	\$623,525	\$(1,317,064)	\$(830,522)	\$(496,307)	\$0
I. Recognized Rate of Return	11.29%	11.52%	7.60%			

The Funding Value of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 4 year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 3 consecutive years, funding value will become equal to market value.



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Characteristics

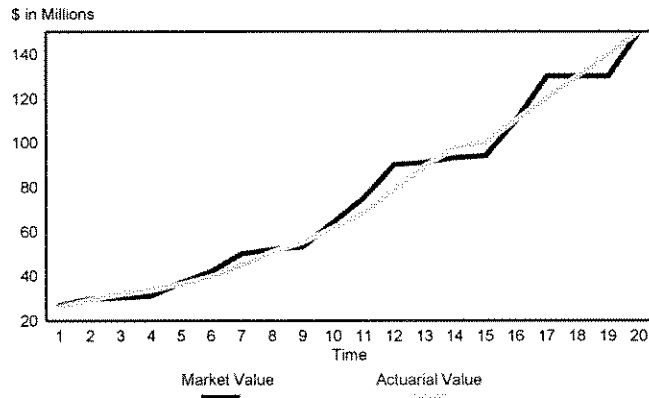
- ▲ Funding Value will equal market value if all assumptions are realized exactly.
- ▲ Otherwise, each year's investment return gain or loss is phased in over a closed period.
- ▲ Peaks and valleys in investment return are smoothed out.
- ▲ Long amortization periods make the method stable
- ▲ Long amortization periods allow more divergence between funding and market values



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Funding Value of Assets Actuarial Value vs. Market Value



Actuarial Value is expected to be:

- ⊗ Below Market when market is doing well
- ⊗ Above Market when market is doing poorly



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Asset Valuation: Areas for Further Study

- ▲ Modify TAA distribution formula.
- ▲ Continue TAA for dividend purposes only.
- ▲ Phase-out TAA

Shift to automatic COLA with gradual pay-out of a portion of present TAA balance.

- ▲ Develop policy regarding TAA target levels.
- ▲ Other?



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RETIREMENT RESEARCH COMMITTEE

FRIDAY, JANUARY 12, 1996

9:30 A.M.

ROOM 417 NORTH (G.A.R. HALL), STATE CAPITOL BLDG.

A G E N D A

1. Call to Order and Roll Call.
2. Consideration of the Minutes of the June 5, 1995, Meeting.
3. Discussion of WRS Unfunded Accrued Actuarial Liability (UAAL) Procedures and Possible Alternatives.
4. Discussion of the WRS Transaction Amortization Account (TAA) and Possible Modifications or Alternatives.
5. Discussion of the WRS Benefit Adjustment Contributions (BAC) Provisions and Possible Alternatives.
6. Other Matters.
7. Adjournment.

STATE OF WISCONSIN
MINUTES OF MEETING
RETIREMENT RESEARCH COMMITTEE
FRIDAY, JANUARY 12, 1996
9:30 A.M.
ROOM 417 NORTH (G.A.R. HALL), STATE CAPITOL BUILDING
MADISON, WISCONSIN

CALL TO ORDER AND ROLL CALL
 (Agenda Item 1)

The meeting of the Retirement Research Committee was called to order by Co-Chair Klusman at 9:50 A.M., in Room 417 North of the State Capitol Building in Madison, Wisconsin.

Roll call was taken as follows:

Present: (12) Sen. Andrea, Mr. Heineck, Rep. Klusman, *Ms. Lattis, Mr. Lieberg, Ms. O'Donnell, Ms. Olson, Sen. Petak, Mr. Schultz, Mr. Stella, Sen. Weeden, Rep. Wirch.

Absent: (7) Mr. Falstad, Ms. Fisher, Rep. Hoven, Mr. Jordi, Mr. Mesenbourg, Mayor Meyer, Mr. Pelzek.

Others Present: Edward J. Muzik, TAUWP; Steve Werner, WPPA; Roy E. Kubista, AFSCME; Ken Opin, WFT/WEAC; Wallace Lemon, WREA; Mel Sensenbrenner, SEA; Sandy Drew, ETF; Sue Chamberlain, U.W. System; Norman Jones and Brian Murphy, Consulting Actuaries; Susyn Dietz, Staff for Sen. Petak; Ginger Mueller, Staff for Rep. Klusman, Blair Testin, Consultant for RRC; Deb Breggeman, Staff for RRC.

(*Ms. Lattis from the Attorney General's office replaced Ms. Hamblen at today's meeting.)

CONSIDERATION OF THE MINUTES OF JUNE 5, 1995
 (Agenda Item 2)

Mr. Stella moved, seconded by Senator Petak, to approve the minutes of the June 5, 1995, meeting of the Retirement Research Committee.

Motion carried by voice vote.

DISCUSSION OF WRS UNFUNDED ACCRUED ACTUARIAL LIABILITY (UAAL)
PROCEDURES AND POSSIBLE ALTERNATIVES
 (Agenda Item 3)

Mr. David Stella, Department of Employee Trust Funds, briefly described a memo he prepared entitled, "WRS Unfunded Accrued Actuarial Liability (UAAL)".

There was discussion.

DISCUSSION OF THE WRS BENEFIT ADJUSTMENT CONTRIBUTIONS (BAC)
PROVISIONS AND POSSIBLE ALTERNATIVES
 (Agenda Item 5)

Mr. Blair Testin, Consultant for the RRC, briefly described a memo he prepared entitled, "Benefit Adjustment Contributions (BAC)".

There was discussion.

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Mr. Norman Jones and Mr. Brian Murphy, Consulting Actuaries, Gabriel, Roeder, Smith, and Company, gave a slide presentation to the Committee on a report entitled, "Funding Benefit Promises".

There was discussion.

**DISCUSSION OF THE WRS TRANSACTION AMORTIZATION ACCOUNT (TAA)
AND POSSIBLE MODIFICATIONS OR ALTERNATIVES**

(Agenda Item 4)

Mr. David Stella, Department of Employee Trust Funds, briefly described a memo he prepared entitled, "Transaction Amortization Account (TAA)".

There was discussion.

Mr. Norman Jones and Mr. Brian Murphy, Consulting Actuaries, Gabriel, Roeder, Smith, and Company, gave a slide presentation on a report entitled, "Asset Valuation Methods and the TAA".

There was discussion.

OTHER MATTERS

(Agenda Item 6)

Mr. Blair Testin, Consultant for the RRC, noted that the Protective Subcommittee would be meeting in the near future to discuss the issue of protective status, including general definitions, benefit levels, and disability programs.

Mr. Testin also noted that the three items on today's agenda have been topics of discussion for several years. He indicated the hope that the RRC will continue to study these areas.

ADJOURNMENT

(Agenda Item 7)

The meeting of the Retirement Research Committee adjourned at 1:00 P.M. The next meeting will be at the call of the Co-Chairs.

Debra Breggeman, Recording Secretary



State of Wisconsin

JOINT SURVEY COMMITTEE ON RETIREMENT SYSTEMS
AND THE RETIREMENT RESEARCH COMMITTEE

BLAIR L. TESTIN
RESEARCH DIRECTOR

ROOM 316, 110 E. MAIN STREET
MADISON WISCONSIN 53703

(608) 267-0507
FAX (608) 267-0675

January 12, 1996

TO: Members of the Retirement Research Committee
FROM: Blair Testin, Consultant for the RRC *B.T.*
RE: **Benefit Adjustment Contributions (BAC)**

Contributory System. As is true for most public employee retirement systems, the WRS and its predecessor pension plans have, by tradition, been contributory plans requiring employee sharing of benefit costs. The statutory employee contributions under the WRS are found under s. 40.05 (1), Stats., and are 5% of payroll for general employees and teachers, 5 1/2% for elected officials and state executives, 6% for protectives with social security (police) and 8% for those protectives without Soc. Sec. (firefighters).

The employers are responsible by statute for the remaining share of the normal cost of pension benefits, and this amount is not established by statute but rather is subject to annual determination by the ETF Board and consulting actuary. In addition, the employers are required by statute to amortize any unfunded accrued actuarial liability (UAAL) over a 40-year period. Lastly, the employer may "pick-up" part or all of the required employee contributions.

Employee statutory contributions are credited to employee individual accounts, and the accounts are subject to withdrawal upon separation or they are used to help fund pension benefits upon retirement. Employer required contributions are credited to an aggregate employer account which is debited only with the costs of pension benefits that exceed the value of an employee's accumulation account.

1983 Wis. Act 141. Major retirement legislation was enacted in the 1983 session providing improvements in formula pensions and other benefits and rights. The benefit changes were funded by a combination of actuarial changes, some benefit reductions, and increases in employee and employer contribution rates for some participants. Contribution rates were increased for general employees, teachers and police in 1986 as a result of this legislation, but contribution rates actually declined for firefighters and elected officials in 1986 because of the internal funding devices.

Benefit Adjustment Contributions
Page 2

An unusual provision of the 1983 Act was a requirement that any additional employee contributions required by passage of this legislation would be credited to the employer aggregate account instead of to the individual employees' account. Accordingly, any such amounts would not be subject to withdrawal upon separation, or be included in death benefits or money purchase calculations. Because of this requirement, any added employee contributions provide a greater offset against the costs of the 1983 benefit improvements than would be true if they were credited to the employee accumulation accounts.

This unusual contribution and crediting provision is defined as the benefit adjustment contribution (BAC), and is found in WRS Stats. under s. 40.05 (2m) as follows:

(2m) BENEFIT ADJUSTMENT CONTRIBUTION. Except as provided in sub. (2n), in addition to the amounts under subs. (1) and (2), a benefit adjustment contribution equal to 1% of earnings shall be paid by or for participating employees whose formula rate is determined under s. 40.23 (2m) (e) 1 and 3. This contribution shall be deducted from each payment of earnings to participating employees unless the employer provides through its compensation provisions or agreements that all or part of the contribution will be paid by the employer. For benefit purposes, this contribution shall be treated as if it were an employer required contribution regardless of whether the employer or the employee pays the contribution.

1989 Wis. Act 13. Another major retirement bill was enacted during the 1989 session providing for a temporary retirement incentive window and also permanent changes in the normal retirement provisions of the WRS. This legislation also contained an unusual funding provision requiring that any contribution rate increases resulting from this legislation would be entirely an employee obligation reflected as additions to the BAC. In addition, this 1989 Act required that any future contribution rate adjustments (either up or down) that were not related to the early retirement bill will be shared equally between the employee and employer participants. This provision is now coded under WRS law as s. 40.05 (2n) as follows:

(2n) CONTRIBUTION RATE ADJUSTMENT. (a) If the board, on the advice of the actuary, determines that an increase or decrease in contribution rates is necessary for any annual period after 1989, the board, on the advice of the actuary, shall adjust contribution rates in the following manner:

1. One-half of the increase or decrease in contribution rates shall be provided for by an increase or decrease in employer contributions under sub. (2) (a) and (am), except as provided in subd. 3.

2. One-half of the increase or decrease in contribution rates shall be provided for by an increase or decrease in benefit adjustment contributions under sub. (2m), except as provided in subd. 3 or par. (b).

Benefit Adjustment Contributions
Page 3

3. Any increase in contribution rates required after 1989 that results from benefit improvements under 1989 Wisconsin Act 13, which would otherwise increase employer contribution rates over the 1989 rate shall be provided for by an increase in benefit adjustment contributions under sub. (2m). Notwithstanding sub. (2m), an employer may not pay for all or part of any increase in benefit adjustment contributions that is required under this subdivision.

(b) If under par. (a) 2 a decrease in benefit adjustment contributions under sub. (2m) would reduce the amount under sub. (2m) to less than zero, the employee contribution rates under sub. (1) shall be decreased.

Contribution Rate Experience. The following ETF chart notes employee and employer contribution rates for 1995 and 1996. The chart on the next page reflect the rates for the previous 10 years.

Contributions for					Protective Occupation			
	General Participants		Executives & Elected Officials		With Soc. Sec.		Without Soc. Sec.	
	1996	1995	1996	1995	1996	1995	1996	1995
Employer Normal Cost	5.1%	4.8%	10.1%	11.1%	9.2%	9.6%	14.2%	14.6%
Benefit Adjustment Contribution	1.5	1.2	0.0	0.1	0.1	0.5	0.0	0.0
Participant Normal Cost	<u>5.0</u>	<u>5.0</u>	<u>4.6</u>	<u>5.5</u>	<u>6.0</u>	<u>6.0</u>	<u>6.8</u>	<u>7.2</u>
Total Normal Cost	11.6%	11.0%	14.7%	16.7%	15.3%	16.1%	21.0%	21.8%
Unfunded Actuarial [★] Accrued Liability (UAAL)	1.3	1.3	1.0	0.9	1.0	1.0	1.5	1.4
WRS Average Total	12.9%	12.3%	15.7%	17.6%	16.3%	17.1%	22.5%	23.2%

*Rates shown for UAAL are weighted average of rates that vary by employer units. In addition to the WRS rate shown above are contributions to support the Section 40.65 Duty Disability Program and the Accumulated Sick Leave Conversion Credit Program.

Wisconsin Retirement System
Contribution Rates

Year	General (Incl. Teachers)				Executive & Elected			
	Current Cost	Prior Cost	Total Employer	BAC Total	Current Cost	Prior Cost	Total Employer	BAC Total
1984	5.8%	0.7%	6.5%	5.0%	0.0%	11.5%	11.0%	0.9%
1985	5.8%	0.7%	6.5%	5.0%	0.0%	11.5%	11.0%	0.9%
1986	5.4%	1.1%	6.5%	5.0%	1.0%	12.5%	10.8%	0.8%
1987	5.0%	1.1%	6.1%	5.0%	1.0%	12.1%	10.6%	0.7%
1988	4.9%	1.1%	6.0%	5.0%	1.0%	12.0%	11.2%	0.7%
1989	4.9%	1.1%	6.0%	5.0%	1.0%	12.0%	11.2%	0.7%
1990	4.6%	1.4%	6.0%	5.0%	1.0%	12.0%	11.0%	0.9%
1991	4.7%	1.4%	6.1%	5.0%	1.1%	12.2%	11.1%	0.9%
1992	4.8%	1.4%	6.2%	5.0%	1.2%	12.4%	11.1%	0.9%
1993	4.8%	1.4%	6.2%	5.0%	1.2%	12.4%	11.1%	0.9%
1994	4.8%	1.3%	6.1%	5.0%	1.2%	12.3%	11.1%	0.9%
1995	4.8%	1.3%	6.1%	5.0%	1.2%	12.3%	11.1%	0.9%
1996	5.1%	1.3%	6.4%	5.0%	1.5%	12.9%	10.1%	1.0%

Year	Protective with Social Security				Protective without Social Security			
	Current Cost	Prior Cost	Duty Dis	Total Employer	Current Cost	Prior Cost	Duty Dis	Total Employer
1984	10.8%	1.3%	0.2%	12.3%	18.2%	1.6%	0.2%	20.0%
1985	10.8%	1.3%	0.2%	12.3%	18.2%	1.6%	0.2%	20.0%
1986	11.0%	1.3%	0.4%	12.7%	17.6%	1.5%	0.4%	19.5%
1987	11.2%	1.2%	0.5%	12.9%	17.0%	1.5%	0.5%	19.0%
1988	10.8%	1.2%	1.1%	13.1%	16.5%	1.5%	1.1%	19.1%
1989	10.1%	1.2%	1.4%	12.7%	15.4%	1.5%	1.4%	18.3%
1990	10.0%	1.2%	2.1%	13.3%	15.4%	1.5%	2.1%	19.0%
1991	9.8%	1.1%	2.3%	13.2%	14.9%	1.5%	2.3%	18.7%
1992	9.8%	1.1%	2.5%	13.4%	14.9%	1.5%	2.5%	18.9%
1993	9.7%	1.0%	2.8%	13.5%	14.9%	1.5%	2.8%	19.2%
1994	9.7%	1.0%	3.0%	13.7%	14.9%	1.4%	3.0%	19.3%
1995	9.6%	1.0%	3.2%	13.8%	14.6%	1.4%	3.2%	19.2%
1996	9.2%	1.0%	3.2%	13.4%	14.2%	1.5%	3.2%	18.9%

Year	Protective with Social Security				Protective without Social Security			
	BAC	Total Employer	Duty Dis	Prior Cost	BAC	Total Employer	Duty Dis	Prior Cost
1984	6.0%	12.3%	0.2%	1.3%	0.0%	20.0%	0.2%	1.6%
1985	6.0%	12.3%	0.2%	1.3%	0.0%	20.0%	0.2%	1.6%
1986	6.0%	12.7%	0.4%	1.3%	1.0%	19.5%	0.4%	1.5%
1987	6.0%	12.9%	0.5%	1.2%	1.0%	19.0%	0.5%	1.5%
1988	6.0%	13.1%	1.1%	1.2%	1.0%	19.1%	1.1%	1.5%
1989	6.0%	12.7%	1.4%	1.2%	1.0%	18.3%	1.4%	1.5%
1990	6.0%	13.3%	2.1%	1.2%	0.9%	19.0%	2.1%	1.5%
1991	6.0%	13.2%	2.3%	1.1%	0.7%	18.7%	2.3%	1.5%
1992	6.0%	13.4%	2.5%	1.1%	0.7%	18.9%	2.5%	1.5%
1993	6.0%	13.5%	2.8%	1.0%	0.6%	19.2%	2.8%	1.5%
1994	6.0%	13.7%	3.0%	1.0%	0.6%	19.3%	3.0%	1.4%
1995	6.0%	13.8%	3.2%	1.0%	0.5%	19.2%	3.2%	1.4%
1996	6.0%	13.4%	3.2%	1.0%	0.1%	18.9%	3.2%	1.5%

Points of Interest. These charts illustrate the following:

1. The BAC for general employees has increased from the original 1% to 1.5% of payroll in 1996. However, the BAC for police has decreased from 1% to 0.1% over time, and is zero for firefighters and elected officials.
2. The first chart reflects that total employee contribution rates for general employees (required plus BAC) now equals 6.5% of payroll, and this level exceeds the total employee contribution rates for elected officials, state executives, and protectives with social security even though these other classifications have much higher benefit levels. In fact, the total contribution rates for general employees are approaching the employee contribution requirements (6.8%) for firefighters who have more than 50% higher benefits than general employees.
3. The statutory employee contribution rates provided by s. 40.05 (1) are no longer in effect for elected officials and firefighters (5.5% and 8%) because these rates have been reduced to 4.6% and 6.8% by the rate change sharing provided by s. 40.05 (2n).
4. The first chart indicates that general employee total contributions (normal plus BAC) represent 56% of the normal cost of benefits, while the other employee classifications are obligated to pay only 31% - elected officials, 39% - police and 32% - fire of the normal cost of benefits.
5. The second chart indicates that there is significant cost shifting for both police and firefighters from pension costs to insurance costs of the s. 40.65 duty disability plan. Hence, protectives benefit by the shared reductions in pension costs, while employers pay the full increasing costs of the disability program.
6. The whole issue of "who pays what" is further clouded by the employer "pick-up" authority. ETF records indicate that about 98% of all employee normal costs and BAC contributions are, in fact, being paid by employers.

Possible Conclusion. The employee and employer contribution provisions are now unnecessarily complex and confusing. It may be time to review this complexity and perhaps return to the original concept of sharing the normal cost of benefits by some specific percentage for the various classifications of WRS participants.

Benefit Adjustment Contributions
Page 6

This could be achieved by repealing the statutory percentage rates found under s. 40.05 (1), and also the BAC and adjustment rate provisions found under s. 40.05 (2m) and (2n), and replacing these provisions with a new statutory requirement that the normal costs for the various classifications would be shared by a specific ratio. As an example, the share of costs for general employees and teachers could be set at 50% of the total normal cost. Employers presumably would continue to be responsible for any amortization payments, and employers would continue to have the authority to "pick-up" any required employee contributions.

Funding Benefit Promises

Presented to the
Wisconsin Joint Survey Committee
on Retirement Systems

January 12, 1996

Gabriel, Roeder, Smith & Company

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Basic Retirement Funding Equation

$$C + I = B + E$$

B depends on

- ▲ Plan Provisions
- ▲ Experience

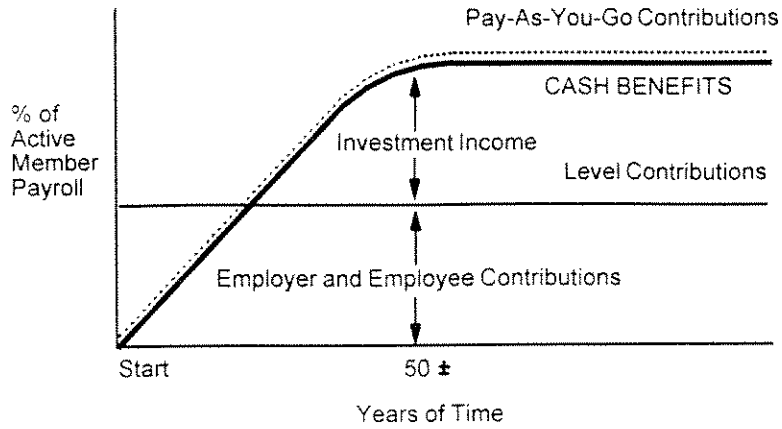
C depends on

- ▲ Short Term: Actuarial Assumptions
Actuarial Cost Method
- ▲ Long Term: I, B, E

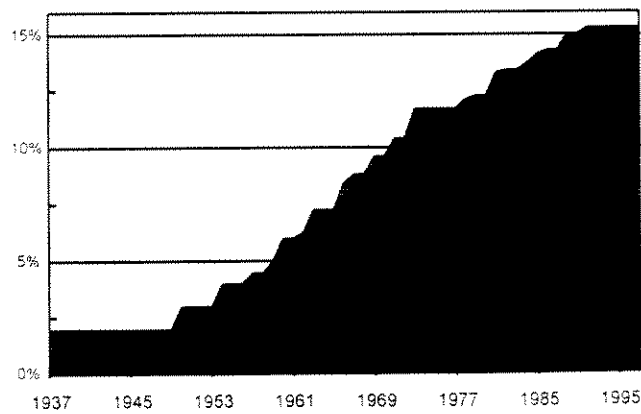
-2-



Cash Flow Characteristics of a Pension Plan



Social Security Contribution Rates (Employee and Employer Combined)



Two fundamentally different methods of financing retirement benefits

OASDI: “Owe as you go”
Current generation pays benefits of prior generation.

WRS: “Save as you go”
Current generation saves money for its own retirement; prior generation did the same.

Funding Objectives

- ▲ Intergenerational equity with respect to plan costs.
- ▲ Stable pattern of contribution rates.
- ▲ Stable or increasing ratio of Assets to Liabilities.

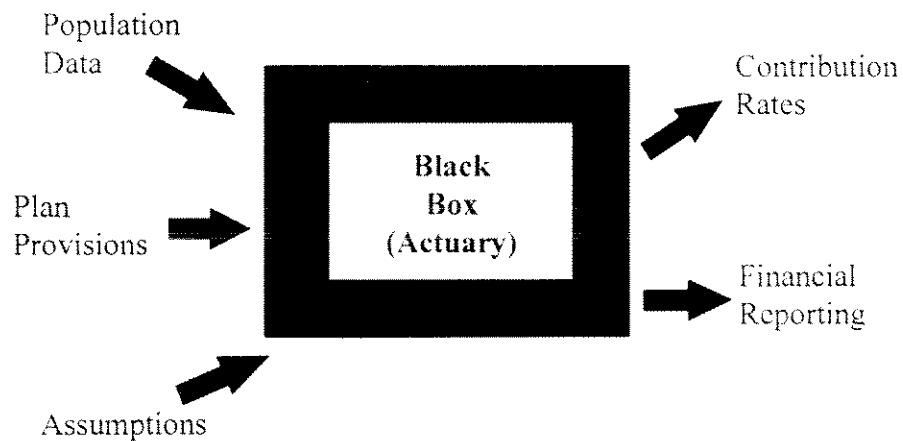
What's Needed to Meet Objectives

- ▲ Good data about covered population
- ▲ Reasonable forecasts of resources and obligations
(i.e., good assumptions)
- ▲ Experience reasonably in line with assumptions
- ▲ Level % of payroll funding method
- ▲ Stable asset valuation method
- ▲ Funding discipline

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GRS

Public Perception of the Actuarial Valuation



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GRS

Actuarial Valuation

- ▲ In WRS, Benefits are statutory.
- ▲ Contribution rates needed to support the benefits are based upon actuarial valuation.
- ▲ Actuarial valuation determines contribution rates.
- ▲ Separate results for each rate group.

WRS Rate Groups

- ▲ General (Including Teachers)
- ▲ Executive & Elected
- ▲ Protective With Social Security
- ▲ Protective without Social Security

Benefits and Contribution Rates vary by rate group

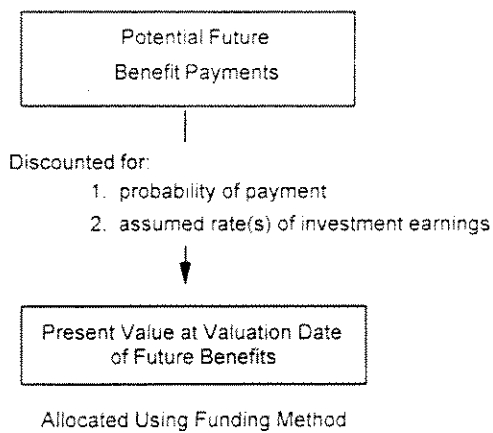
WRS Funding Policy

- ▲ Entry Age Normal Cost Actuarial Cost Method With Frozen Initial Liability.
- ▲ Investment Gains/(Losses) Spread Over ⁵/~~4~~ Years.
- ▲ UAAL Amortization Period
 - Base - 34 years
 - Experience gains (losses): 10-30 Years
- ▲ Experience Study - Every 3 Years.

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GRS

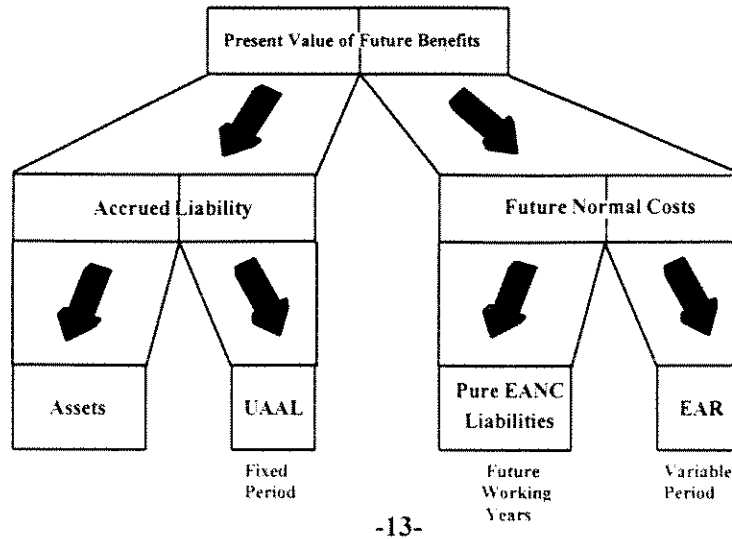
The Valuation Process



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The Actuarial Valuation Process



WRS Normal Cost

- ▲ Normal Cost is split between "Future Portion" & EAR.
- ▲ "Future Portion" is the long term Cost of the Plan.
- ▲ "Experience Amortization Reserve" (EAR) portion is a temporary cost/savings due to accumulated prior differences between actual and expected experience.

Comments on EAR

- ▲ EAR is amortized over varying periods in order to help stabilize rates. Amortization period can vary widely, but is usually in the range of 10-30 years.
- ▲ By design , EAR is small & has limited ability to stabilize rates.

WRS Contribution Rates

- ▲ ER Normal Cost (uniform throughout rate group).
- ▲ Participant Normal Cost (uniform throughout rate group).
- ▲ Ben. Adj. Contrib. (uniform throughout rate group).
- ▲ Unfunded Liability (Varies by Employer depending on % of Prior Service elected and other factors).
- ▲ Er , Par, and BAC determined annually by valuation.

Summary of 12/31/94 Valuation Results

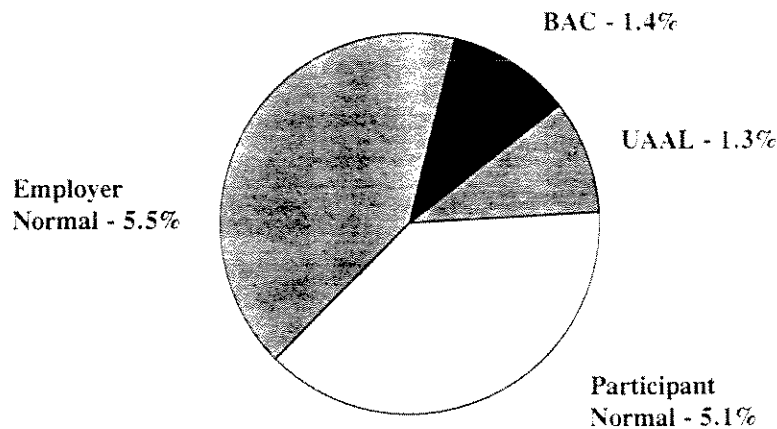
Contributions for	General		Exec. & Elected		Protective Occupation				1996 Average
	1996	1995	1996	1995	With Soc. Sec.		Without Soc. Sec.		
					1996	1995	1996	1995	
Employer Normal Cost	5.1%	4.8%	10.1%	11.1%	9.2%	9.6%	14.2%	14.6%	5.5%
Benefit Adjustment Contr.	1.5	1.2	0.0	0.1	0.1	0.5	0.0	0.0	1.4
Participant Normal Cost	<u>5.0</u>	<u>5.0</u>	<u>4.6</u>	<u>5.5</u>	<u>6.0</u>	<u>6.0</u>	<u>6.8</u>	<u>7.2</u>	<u>5.1</u>
Total Normal Cost	11.6%	11.0%	14.7%	16.7%	15.3%	16.1%	21.0%	21.8%	12.0%
UAAL (weighted averages)	1.3	1.3	1.0	0.9	1.0	1.0	1.5	1.4	1.3
WRS Average Total	12.9%	12.3%	15.7%	17.6%	16.3%	17.1%	22.5%	23.2%	13.3%

- Contribution rate changes are generally split evenly between the employer normal cost and the BAC.
- If there is no BAC and the rate change is a decrease, the participant normal cost is decreased.
- If there is no BAC and the rate change is an increase and the participant normal cost is below the statutory rate, the participant normal cost is increased.

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1996 WRS Average Contribution Rates



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Causes of Unfunded Actuarial Accrued Liabilities

1. Granting initial past service benefits, or
2. Granting benefit increases for service already rendered.

Year by Year gains and losses affect Normal Cost,
or benefit adjustment, not UAAL.

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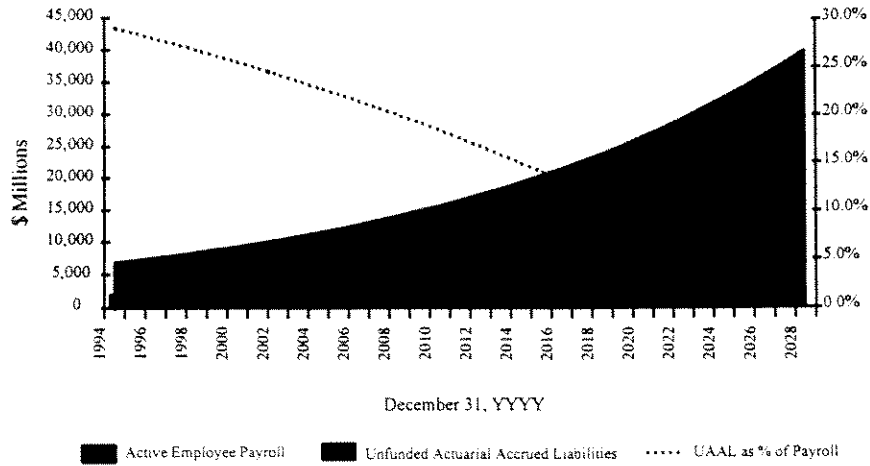
Level % of Payroll Amortization of UAAL Payroll Grows 5.3%/Year

12/31	\$ Millions	UAAL (\$ millions)	Annual Contributions		UAAL/ Payroll
			\$ Millions	% of Payroll	
1994	\$ 6,947	\$2,007	\$ 90	1.3%	28.0%
1995	7,315	2,074	95	1.3	28.4
1996	7,703	2,141	100	1.3	27.8
1997	8,111	2,208	105	1.3	27.2
1998	8,541	2,275	111	1.3	26.6
1999	8,994	2,341	117	1.3	26.0
2000	9,470	2,407	123	1.3	25.4
2001	9,972	2,472	130	1.3	24.8
2002	10,501	2,535	137	1.3	24.1
2003	11,057	2,596	144	1.3	23.5
2004	11,643	2,654	151	1.3	22.8
2005	12,261	2,709	159	1.3	22.1
2006	12,910	2,760	168	1.3	21.4
2007	13,595	2,806	177	1.3	20.6
2008	14,315	2,847	186	1.3	19.9
2009	15,074	2,881	196	1.3	19.1
2010	15,873	2,908	206	1.3	18.3
2011	16,714	2,926	217	1.3	17.5
2012	17,600	2,934	229	1.3	16.7
2013	18,533	2,931	241	1.3	15.8
2014	19,515	2,915	254	1.3	14.9
2015	20,549	2,885	267	1.3	14.0
2016	21,638	2,848	281	1.3	13.1
2017	22,785	2,792	296	1.3	12.2
2018	23,991	2,686	312	1.3	11.2
2019	25,264	2,527	328	1.3	10.2
2020	26,603	2,441	346	1.3	9.2
2021	28,013	2,277	364	1.3	8.1
2022	29,498	2,081	384	1.3	7.1
2023	31,061	1,849	404	1.3	6.0
2024	32,708	1,577	425	1.3	4.8
2025	34,441	1,261	448	1.3	3.7
2026	36,266	896	472	1.3	2.5
2027	38,189	478	496	1.3	1.3
2028	40,213	0	0	0.0	0.0

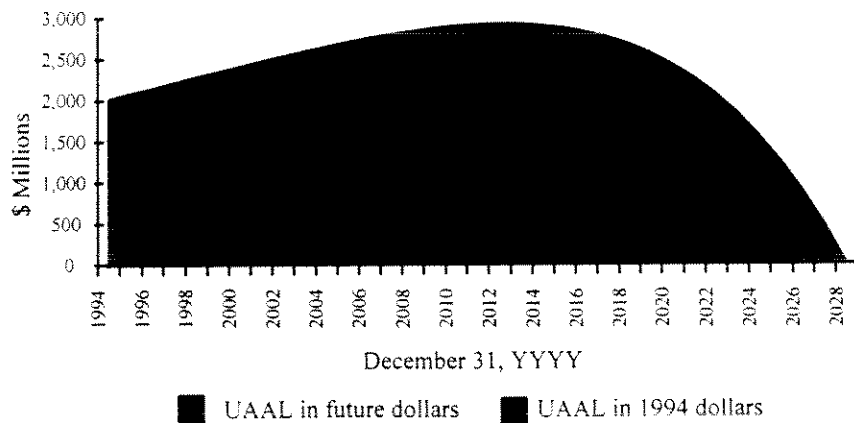
-20-



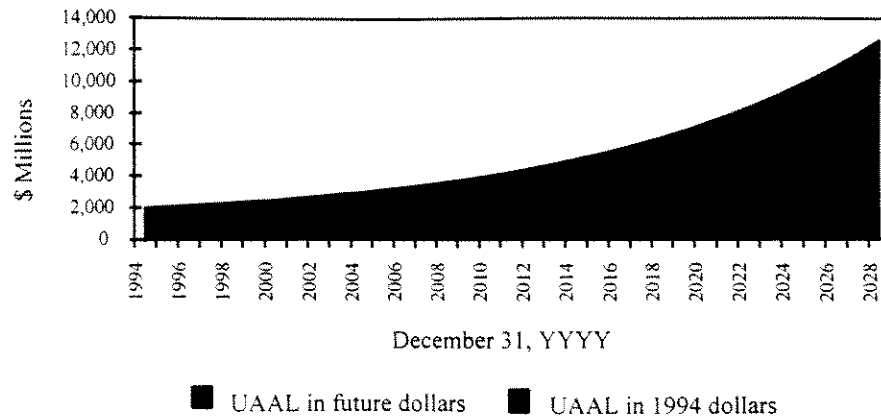
UAAL vs Active Payroll



Financing of UAAL with Assumed Payroll Growth



Financing UAAL with No Payroll Growth



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Practices Elsewhere

- ▲ Most Public plans have Er and Ee Contributions.
- ▲ Usually Ee contribution is fixed by statute.
- ▲ Benefit Adjustment contribution is rare.
- ▲ Most plans have some unfunded liabilities.

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UAAL in Other Multiple Er PERS

- ▲ One UAAL contribution rate for entire rate group.
- ▲ Or separate UAAL for each employer.
- ▲ Usually when there is a separate UAAL for each employer, experience is not pooled. UAAL for each employer includes the effects of prior gains and losses related to that employer.

Experience Rating in Multiple Er PERS

- ▲ All risks pooled.
- ▲ Initially Experience Rated and Pooled thereafter.
- ▲ Partially Experience Rated annually
(Certain but not all risks are pooled)
 - Through Normal Cost rates; or
 - Through UAAL rates
- ▲ Fully Experience Rated -- No risks pooled.

Experience Rating in WRS

- ▲ Initially Experience Rated with full pooling thereafter.
- ▲ Normal Cost & Gain/Loss effect same for all Ers.
- ▲ When an employer joins WRS, an estimate of accrued liability is made based upon demographics of group, assumptions then in effect, and the prior service percent elected by the employer.
- ▲ In subsequent years, deviations between actual and assumed experience become part of EAR and are spread over all employers (fully pooled).

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Experience Rating Generally

- ▲ Most Governmental plans are either fully experience rated or fully pooled.
- ▲ WRS Partial experience rating is rare. F-I-L method is rare.
- ▲ Fully pooled plans have a single contribution rate for each rate group.
- ▲ Fully experience rated plans have separate contrib rates for each employer that include prior gains and losses, and often employers can pick from a benefit menu.

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Dealing with UAAL - WRS

- ▲ A Separate UAAL account is kept for each Er.
- ▲ Account is increased by interest and benefit changes.
- ▲ Account is decreased by payments made.
- ▲ Level percent of pay amortization-34 Yrs.

UAAL Financing: Some Problems Facing WRS

- ▲ UAAL balance may grow out of control for some employers. There is no statutory means of preventing it or dealing with it.
- ▲ Statutory UAAL increases create UAAL obligations for employers with no past service.
- ▲ As time passes, an employer's UAAL obligation bears less and less relationship to its own demographics.
- ▲ As anomalies arise, employers will press for change.

Areas for Further Study

Should the Amount of Pooling be :

- ▲ Increased
- ▲ Decreased
- ▲ Kept the same

If it is changed, how do we get there from here?

Areas for Further Study

- ▲ Increasing the pooling would somehow involve spreading the accrued liability over all employers uniformly. Questions of equity would be raised, particularly by employers who came of with no prior service or who paid off their UAAL with a Lump Sum Payment

Areas for Further Study

- ▲ Decreasing the pooling would cause more rate volatility, particularly for small employers. They might complain that it is unfair to change the plan after they join it.

Areas for Further Study

- ▲ Leaving it the same in the Age of Choice may be difficult. In other states, various employers have recognized that their rates are higher than they would be in a standalone plan and have pressured legislatures into permitting withdrawals from the plan. Effectively, they demand less pooling.

UAAL Funding: Alternatives for Further Study

- ▲ Fix obligation as a % of payroll without regard to \$ amount
- ▲ Require minimum \$ UAAL contributions
- ▲ Total pooling with temporary credit for units with lower than average UAAL rates.
- ▲ Partially experience rate individual employers.
(Pool mortality and casualty experience).
- ▲ Fully experience rate individual employers.
- ▲ Other?

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