



Joint Meeting TMRS Fund Structure

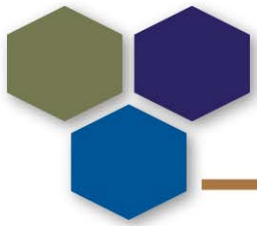
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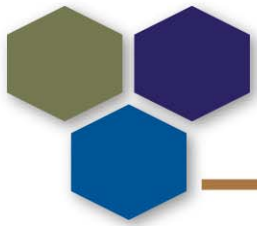
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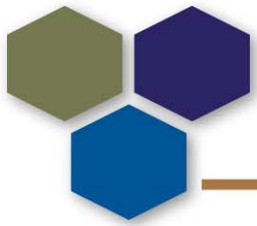
CSARF

- ◆ When created, the CSARF served as a way for cities to transfer the mortality risk away from their own liabilities and share that risk with the other member cities of TMRS
 - ▶ Mortality risk is the risk a member will outlive their life expectancy
- ◆ For a pure cash balance plan, this structure *might* still be advantageous



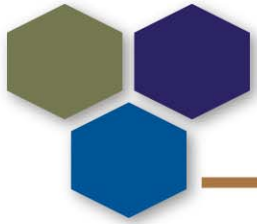
Settlement at time of retirement

- ◆ The CSARF increases the contributions needed to fund a given level of benefits because of the “transfer to CSARF” that occurs at retirement
- ◆ At retirement, a member’s ESF funds and employer matching funds are transferred into the CSARF and annuitized based on the annuity purchase factors
- ◆ The value of the benefits is essentially settled at a 5% interest rate



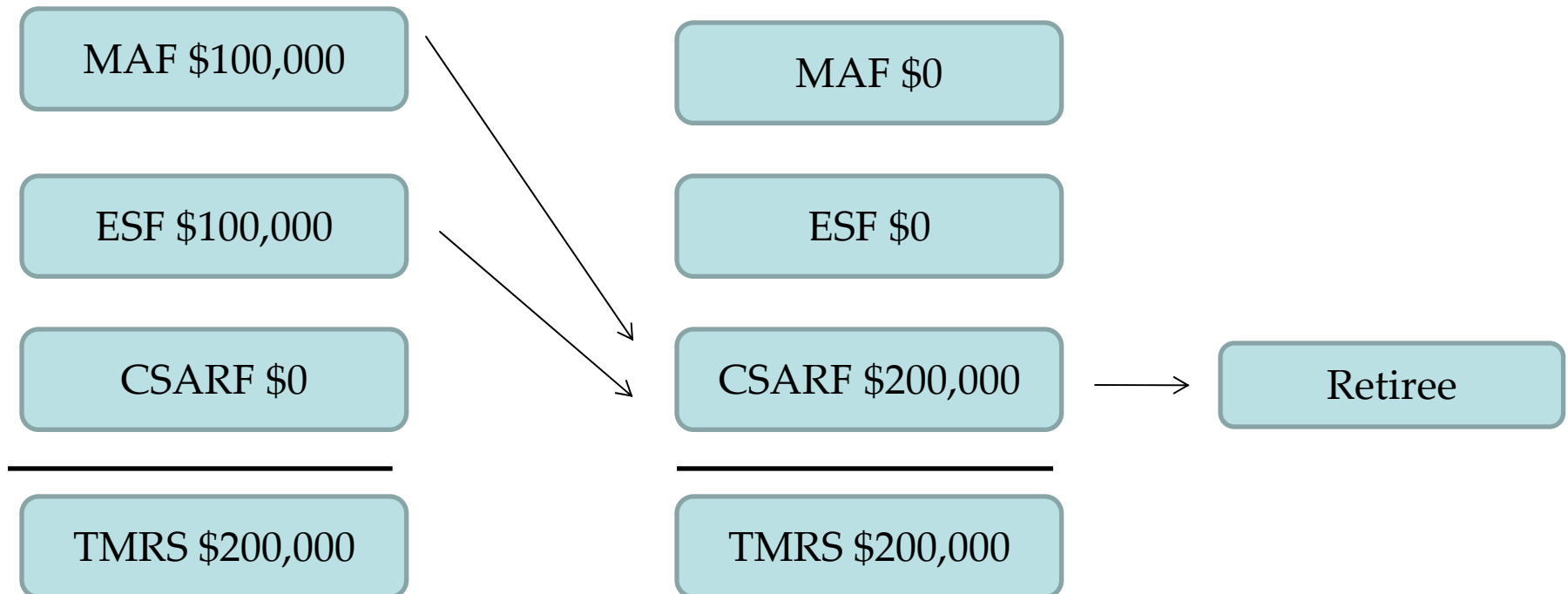
Example

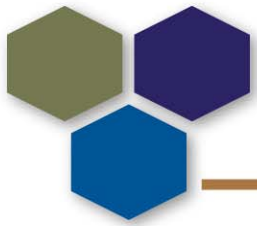
- ◆ Member, age 60, retires from City A
 - ▶ \$100,000 ESF balance
 - ▶ No USC or other source of funds
- ◆ City A
 - ▶ 5%, 1 to 1 match
 - ▶ No repeating benefits
 - ▶ 1 contributing member
 - ▶ No retirees
 - ▶ \$100,000 MAF balance



Example

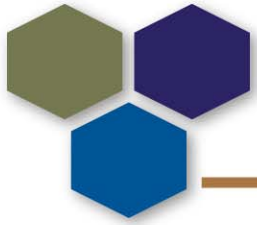
- ◆ At retirement, balance from MAF and ESF balances are transferred to the CSARF and “annuitized”
- ◆ Gross benefit is paid to the retiree from the CSARF





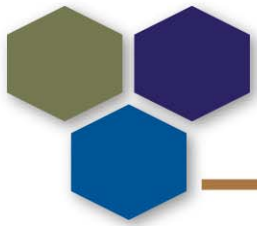
CSARF

- ◆ However, the advantages have changed with the introduction of Unfunded Actuarial Accrued Liabilities (UAAL) due to:
 - ▶ Retroactive benefit enhancements
 - ▶ Unfunded Annuity Increases
 - ▶ Unfunded Updated Service Credits
- ◆ And a benefit structure for many cities that can more resemble a final salary defined benefit plan



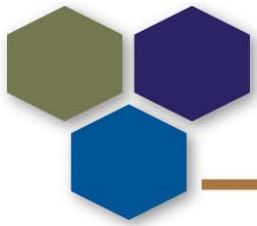
CSARF: Advantages

- ◆ Provides mortality risk management for very small cities
 - ▶ <10 actives
 - ▶ <5 retirees
- ◆ Others?



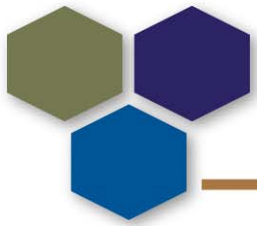
CSARF: Disadvantages

- ◆ Volatility on MAF
 - ▶ Must reserve using earnings that could be used to fund benefits
 - ▶ Longer time horizon before gain-sharing is appropriate
- ◆ Places cash flow pressure on mature plans with level or decreasing active populations
- ◆ Higher contribution requirements based on settlement at retirement
- ◆ Higher administration costs



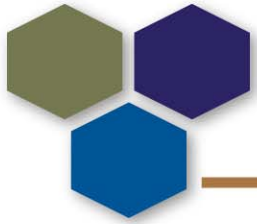
CSARF: Disadvantages

- ◆ Employers are not treated equitably
 - ▶ Newer employers are bearing the risk for retirees of older employers
 - ▶ Newer employers can get additional MAF credits based on earnings from the current retirees
- ◆ Both of these are true even if the employer has no retirees



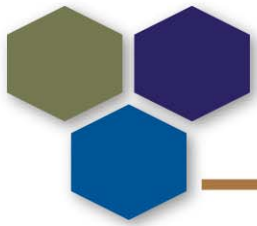
CSARF: Disadvantages

- ◆ The TMRS trust holds the solvency risk for the CSARF, not the employers
 - ▶ The Board must take special care to protect the assets allocated to these benefits because there is no funding source for adverse experience
 - ▶ May be prudent to “Liability Match” the CSARF benefit payments
 - ▶ If asset allocation must be more conservative based on volatility, this lowers the long term earnings of the TMRS trust
 - will increase contributions and potentially lower benefits
 - ▶ Annuity purchase factors **MUST** be actuarially appropriate



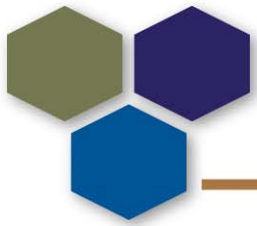
Alternative Solution

- ◆ Stop future transfers to CSARF
- ◆ Redistribute current CSARF liabilities and assets back to employers



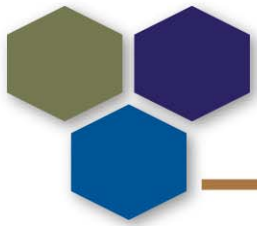
Advantages of Redistributing the CSARF

- ◆ Return to more normal volatility on MAF
 - ▶ Reserve requirements can be decreased substantially, if not eliminated
 - ▶ Shorter time horizon before gain-sharing would be appropriate
- ◆ TMRS cities can fund towards the ultimate benefits, lowering contribution requirements WITHOUT lowering benefits
- ◆ Reduces cash flow pressure on mature plans



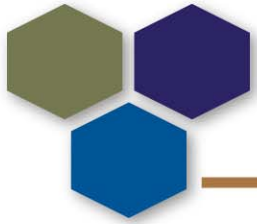
Advantages of Redistributing the CSARF

- ◆ Employers will bear the risk of their own retirees
 - ▶ Proportionately positive impact if asset earnings are higher than expected
 - ▶ Proportionately contribute more if asset earnings are lower than expected
 - ▶ Retirees likely are provided more security in their benefit because the employer is now directly responsible for adverse experience



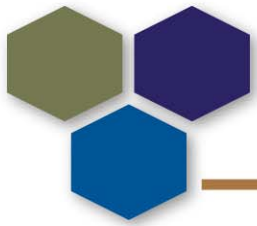
Advantages of Redistributing the CSARF

- ◆ Asset allocation can have a longer time horizon and mimic more standard defined benefit plans
 - ▶ Higher earnings lowers contributions
 - ▶ Increases the likelihood of the current benefit levels being sustainable
- ◆ Annuity purchase factors become a piece of the benefit package and less of an actuarial necessity
- ◆ Probability of a decreasing funded ratio if assumptions are met reduces to zero
- ◆ Probability of MAF balance declining sharply is dramatically reduced



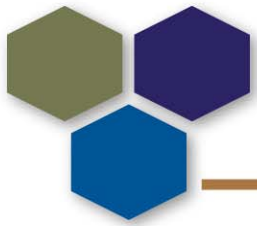
Question:

- ◆ Why does this change decrease future contribution requirements for employers?
 - ▶ Let's look at a basic example ...

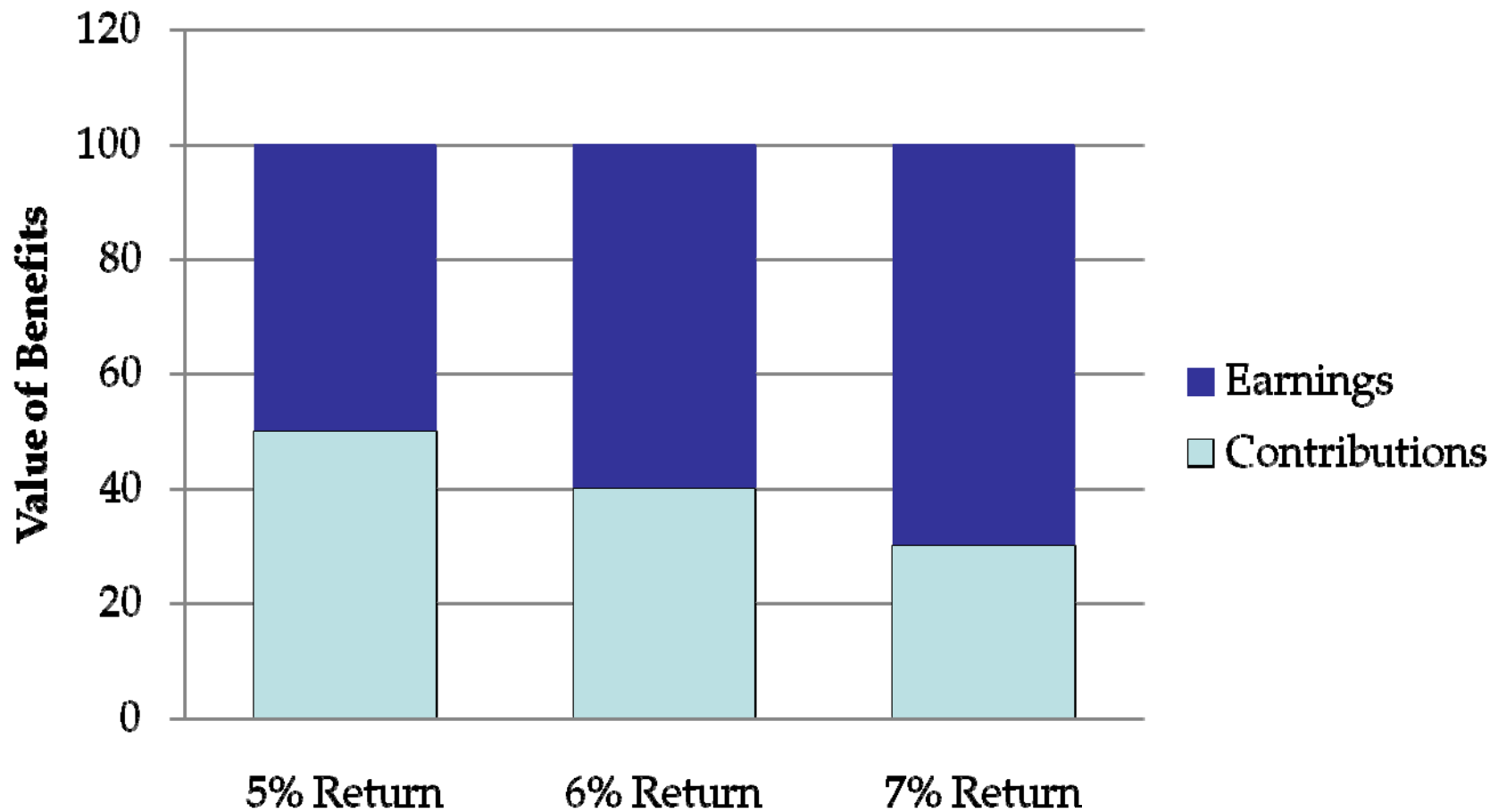


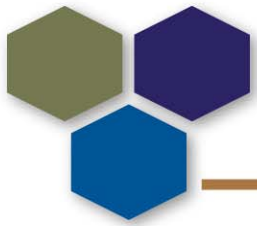
Compound Interest Example

- ◆ \$100 payment to be made in 10 years
- ◆ Investment to be made today in order to earn interest for 10 years
- ◆ Today's investment is based on the amount of interest (**I**) to be earned per year
 - ▶ If **I** is 5%, must invest \$61.39
 - ▶ If **I** is 6%, must invest \$55.84
 - ▶ If **I** is 7%, must invest \$50.83



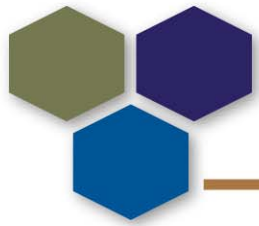
How does this impact pension funding?





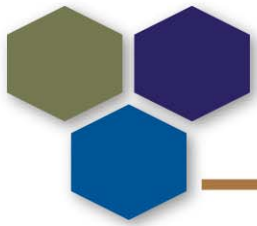
Impact on TMRS funding #1

- ◆ While most funds continue to earn interest at their expected investment return (7%) throughout the lifetime of the member, TMRS cities can only earn at this interest rate until the retirement date
- ◆ Value on retirement date of \$100 payable 10 years later:
 - ▶ Typical Structure (7%): \$50.83
 - ▶ TMRS Structure (5%): \$61.39



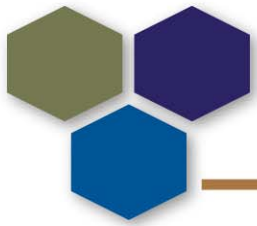
Time needed to reach Sustainable Reserve Levels

- ◆ There are no material reserves as of today (approximately 1% as of 1/1/2009)
- ◆ Reserves would have to be built out of future earnings
- ◆ If 1% of the Fund were to be saved in the reserve each year, without ever having to take money out, it would take 30 years to build the reserve to a 30% target
 - ▶ Instead of the investment return assumption being 7% per year, the assumption would effectively be 6% per year for the next 30 years



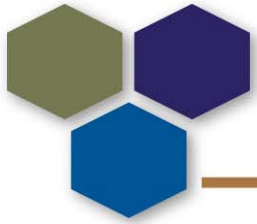
Impact on TMRS funding #2

- ◆ Based on the compound interest examples, if 1.0% of the 7.0% annual return is being used to build reserves, contributions must be higher to provide the same level of benefits
- ◆ Value of \$100 payable at retirement in 10 years:
 - ▶ Typical Structure (7%): \$50.83
 - ▶ TMRS Structure (6%): \$55.84

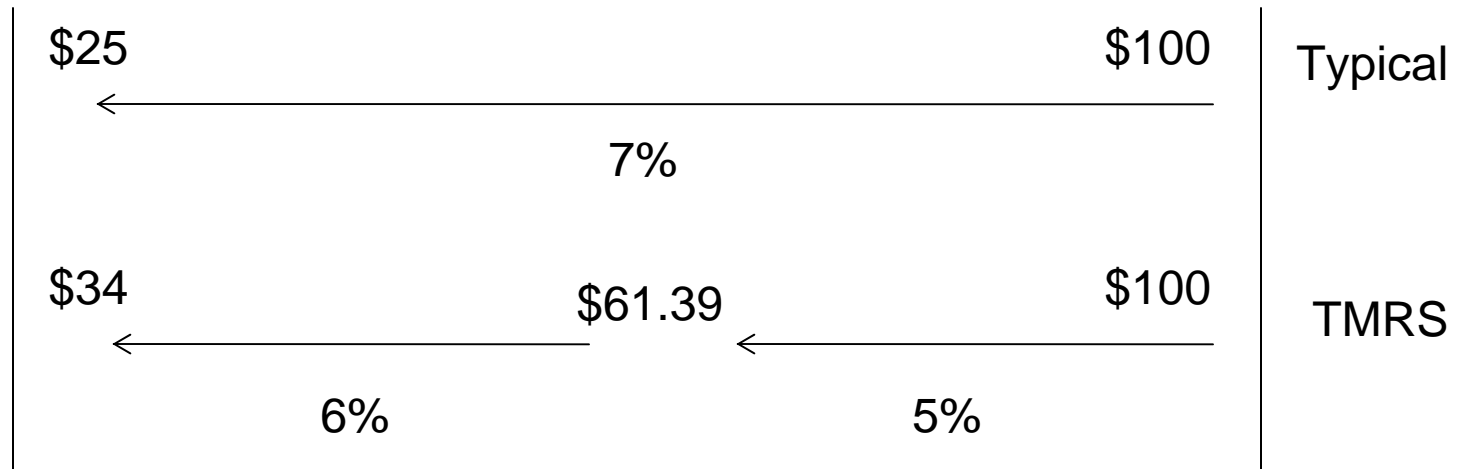


Current TMRS Fund Structure

- ◆ The total financing structure is impacted by both:
 - ▶ the lower accumulation of earnings prior to retirement and
 - ▶ the higher settlement cost at retirement
- ◆ Example: Member hired today will work 10 years and then receive a \$100 payment 10 years after retirement



Current Structure

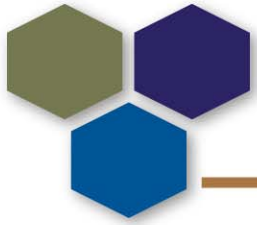


Contribution Value at Hire Date

Retirement Date

Payment Date

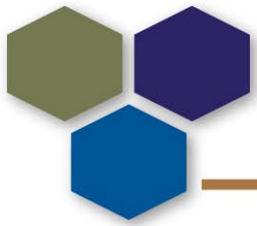
A TMRS pension is basically hundreds of payments made after the retirement date based on hundreds of contributions made before the retirement date



Target crediting rates - TMRS

Fund	Balance as of 1/1/2009	Crediting Rate	Interest Credit
CSARF	\$5,141	5.0%	\$257
ESF	3,968	5.0%	198
MAF	5,431	7.5%	407
Reserve	<u>89</u>		<u>0</u>
Total	\$14,629	5.90%	\$863

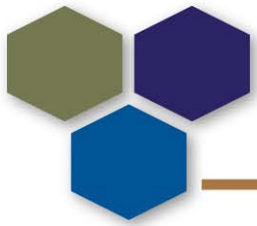
To build a reserve requires the additional 1.10% return (7.00 less 5.90)



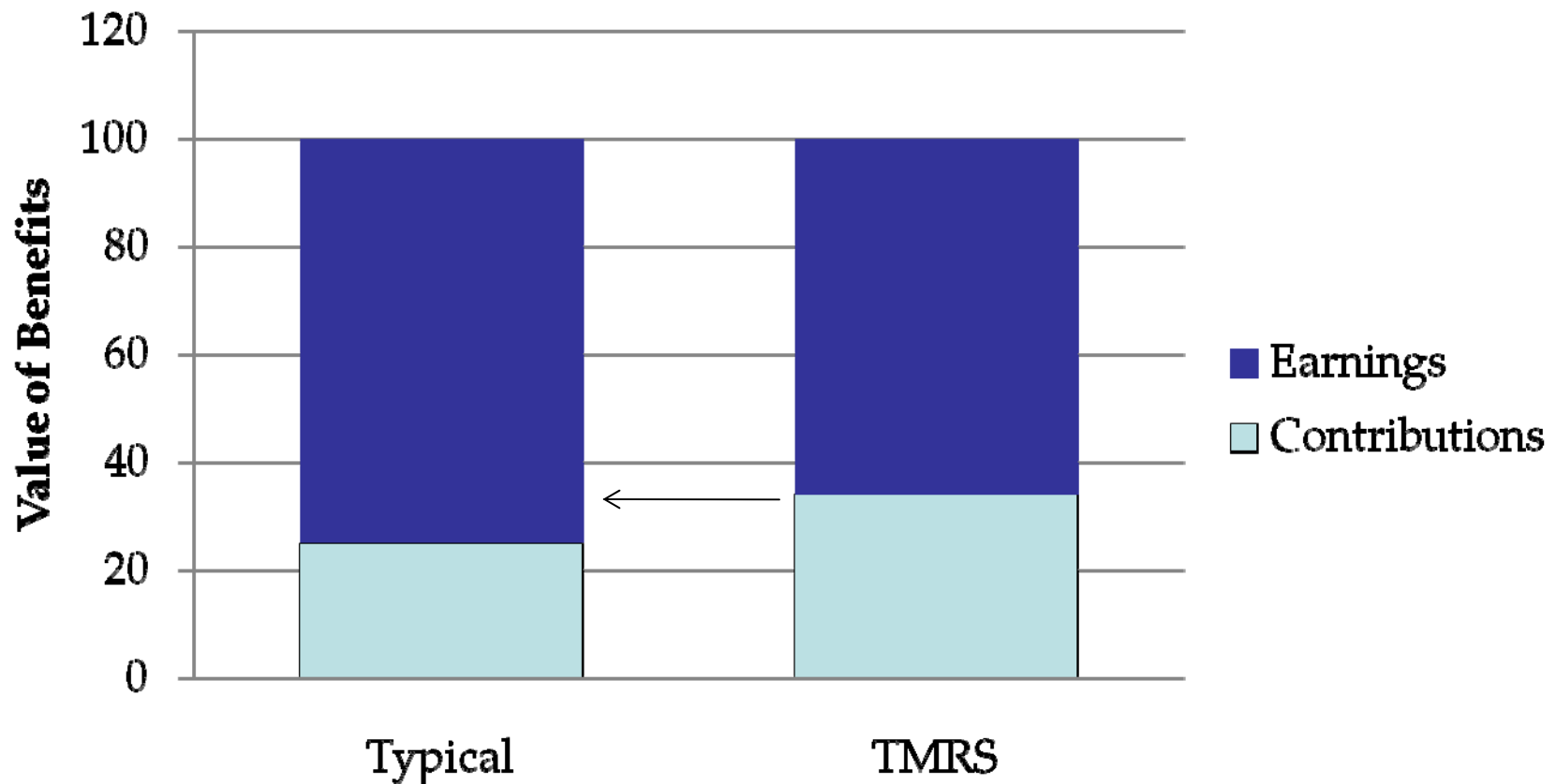
Target crediting rates – All other Funds

Fund	Balance as of 1/1/2009	Crediting Rate	Interest Credit
CSARF	\$5,141	5.0%	\$257
ESF	3,968	5.0%	198
MAF	5,431	10.4%	569
Reserve	<u>89</u>		<u>0</u>
Total	\$14,629	7.00%	\$1,024

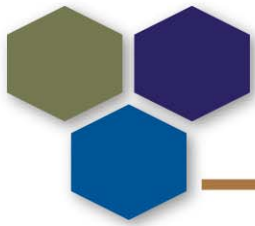
All other pension funds use the entire expected investment earnings



How does this impact TMRS funding?



The contribution requirement to provide the same ultimate benefit under the TMRS structure is 10%-20% higher than a more typical pension plan



Summary:

Impact on TMRS from Redistributing the CSARF

- ◆ No change to benefit procedures
- ◆ Increase in benefit security
 - ▶ Employer directly bears solvency risk
 - ▶ Higher probability of sustaining current benefit levels
- ◆ Lower contributions for Cities
 - ▶ Relieves burden on the current generation of taxpayers
- ◆ Lower requirement for reserves
 - ▶ Higher earnings potential
 - ▶ Shorter timeframe for gain sharing
- ◆ More flexibility in asset allocation
- ◆ More flexibility in smoothing techniques