



# Joint Meeting Intro to Reserving Policy

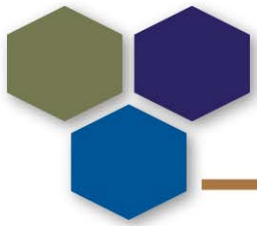
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and  
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**GRS**

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# Summary of Prior Meetings on “Reserving”

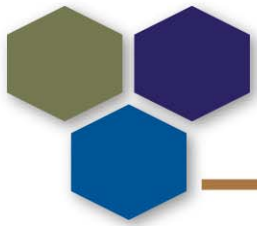
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## ◆ Without a Reserve Fund

- ▶ Guaranteed 5% floor for ESF & CSARF results in potentially high volatility for MAF fund
- ▶ Volatility of the MAF fund will put a “drag” on the returns, lowering the effective annual crediting rate
- ▶ High probability of increasing employer contribution rates

## ◆ With a Reserve Fund

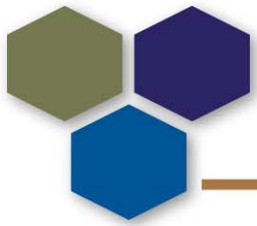
- ▶ The volatility to MAF fund drops significantly
  - But is not eliminated
- ▶ Probability of decreasing employer contribution rates over time
- ▶ Some form of gain-sharing may be appropriate after reserve meets acceptable level



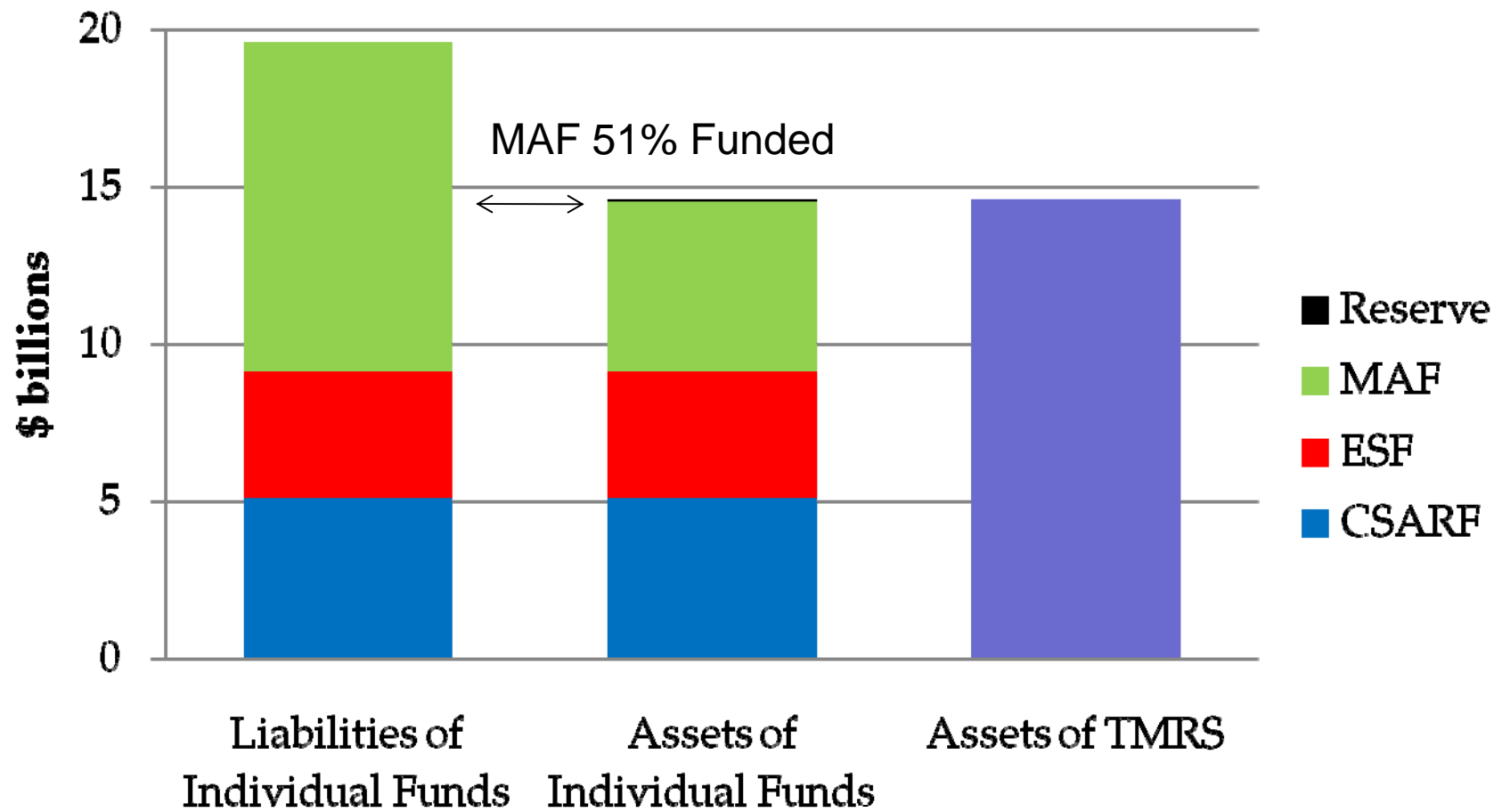
## The CSARF is what creates a requirement for a Reserve

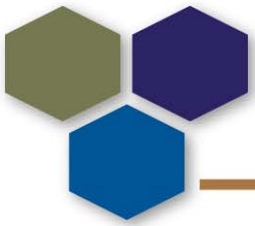
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- ◆ The CSARF creates substantial volatility
- ◆ The only sustainable solution (if one exists) is to have an offsetting reserve to absorb this volatility
- ◆ 2008 illustrated that the reserve would have to be larger than previously thought
- ◆ TCDRS had a 15% reserve as of 1/1/2008 and still had a -43% debit to the employer accounts

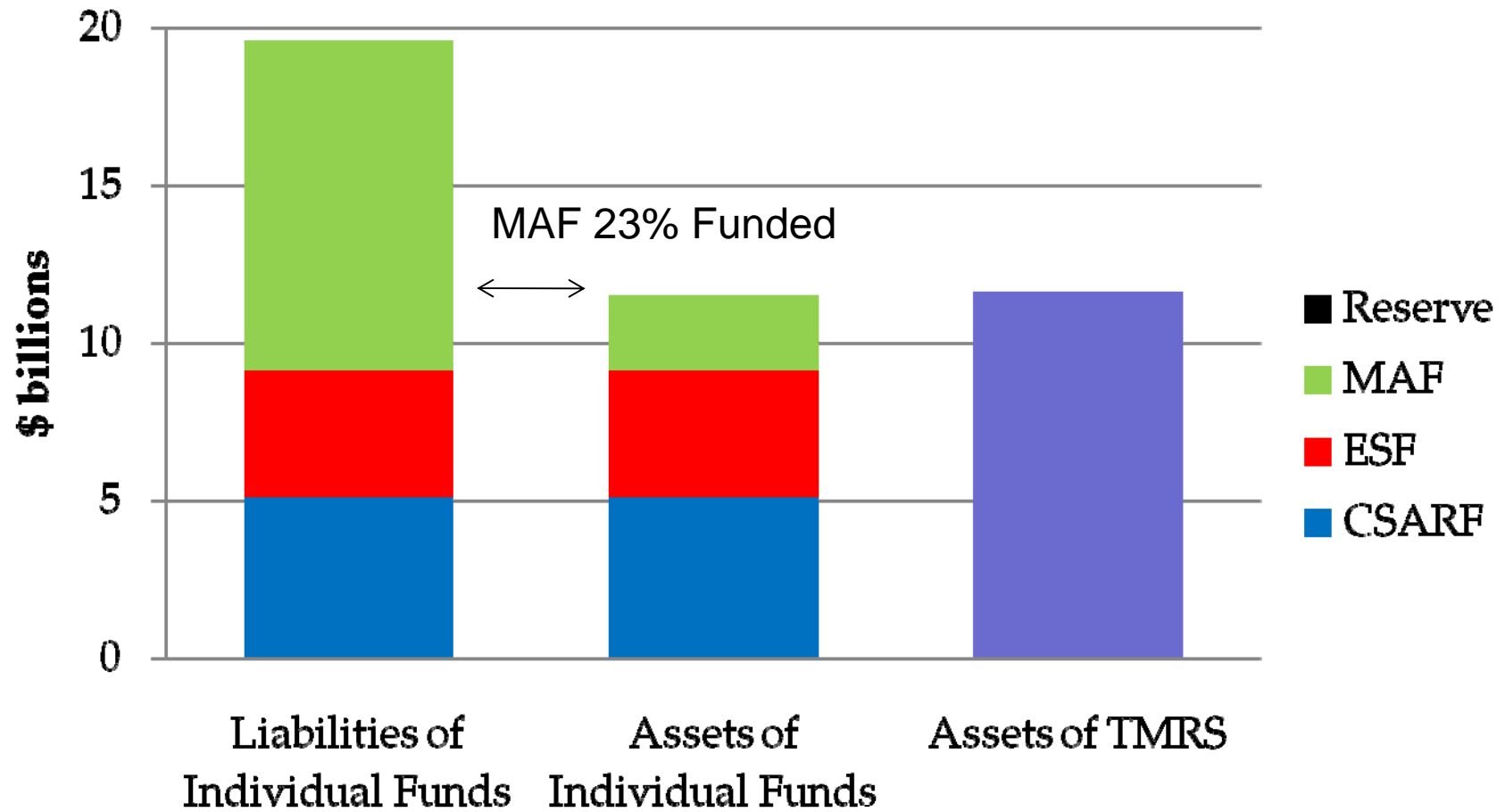


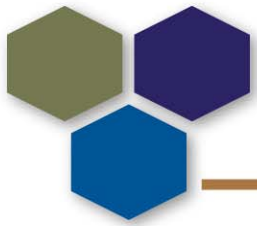
# Makeup of TMRS





# 20% decrease in asset value

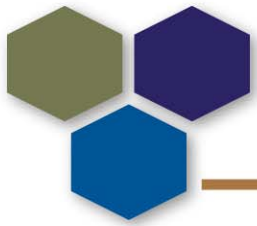




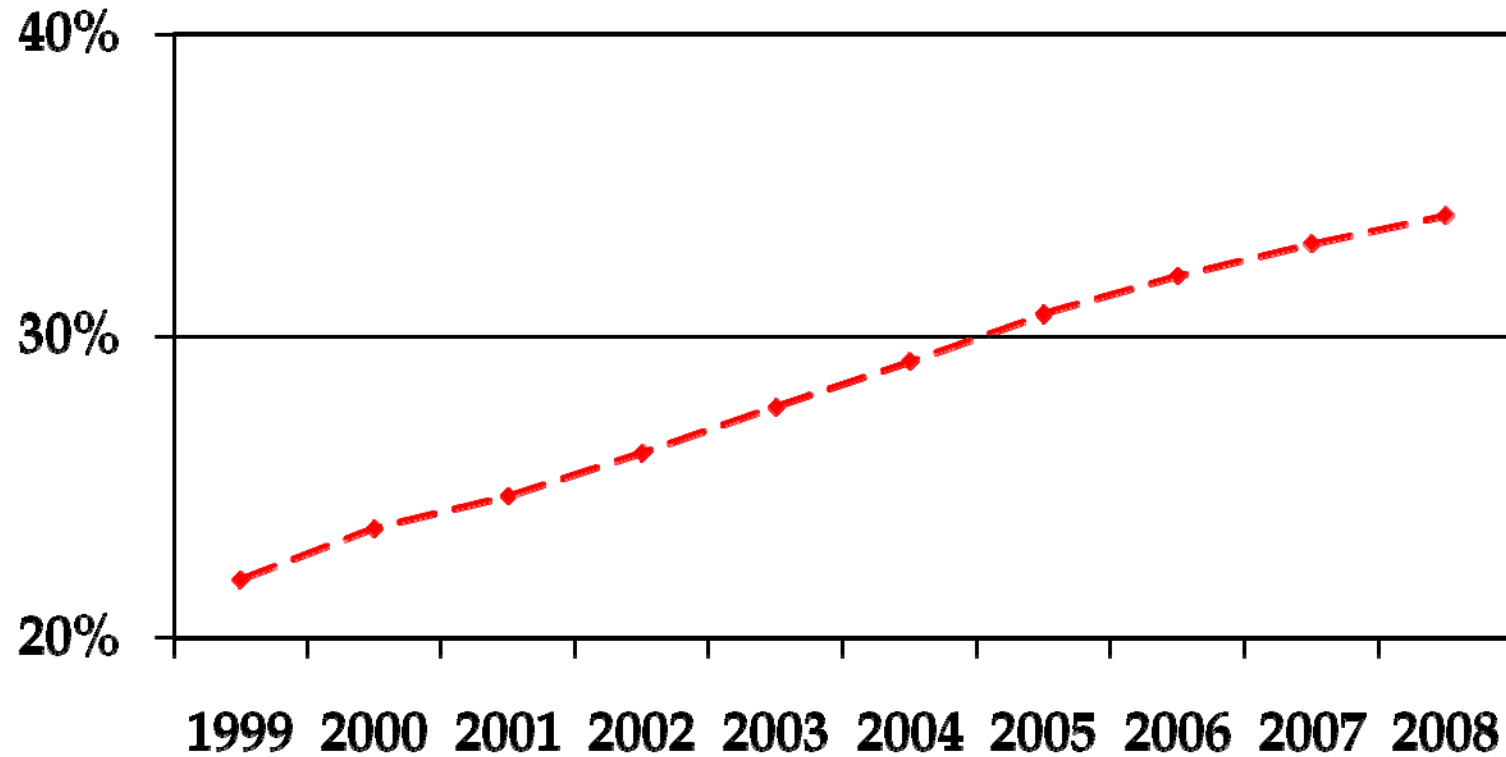
## Illustrative example:

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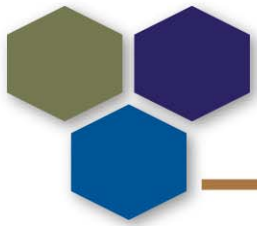
- ◆ A large negative return will have a more profound impact on the funding ratios of TMRS cities than other, more typical pension funds
  - ▶ With a -10% total fund return, the average MAF funding ratio drops to 36%
  - ▶ With a -20% total fund return, the average MAF funding ratio drops to 23%
- ◆ There will likely be a large negative return (perhaps like 2008) during the next 50 years



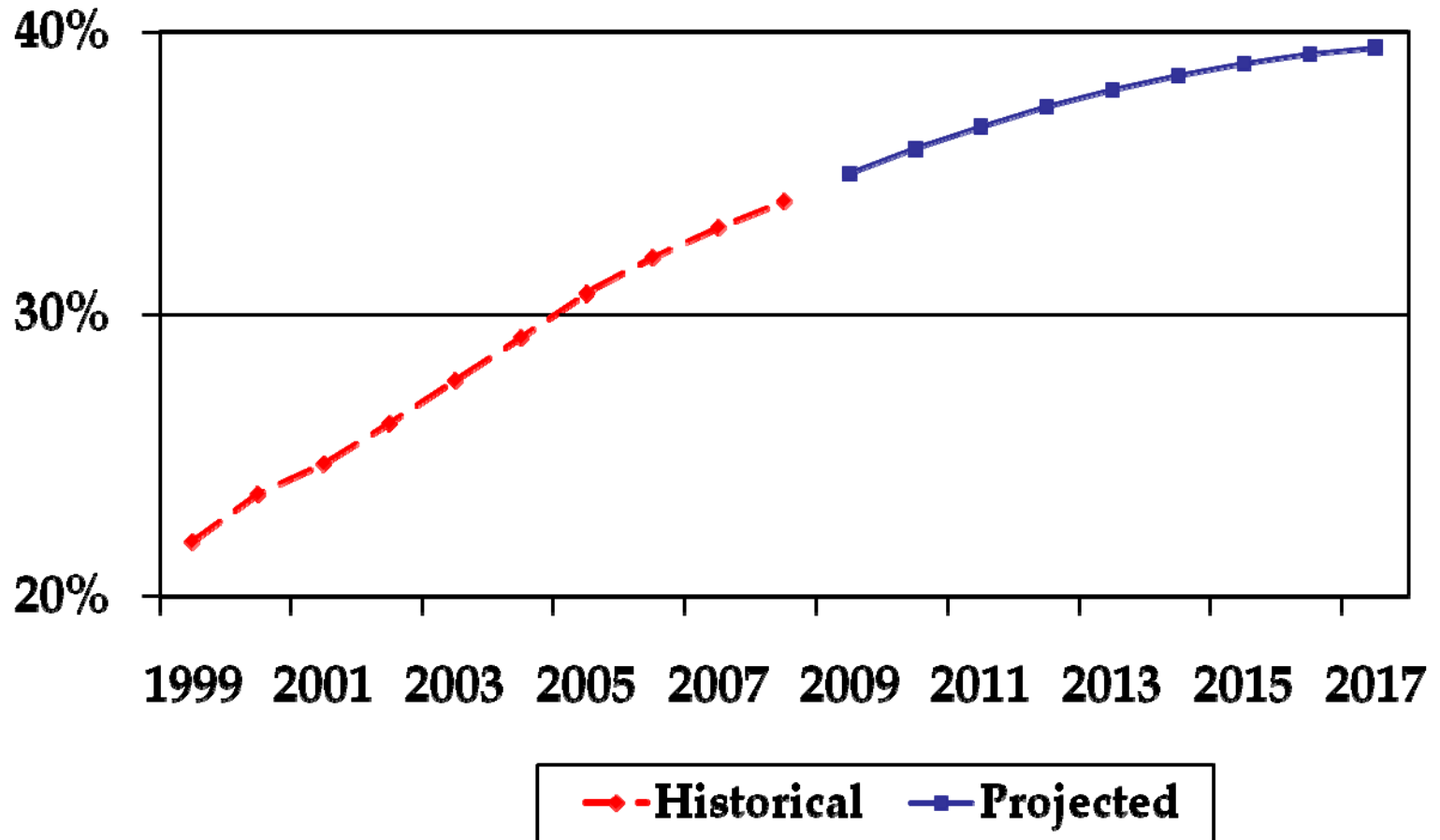
# CSARF- % of Total Fund

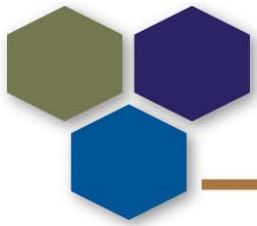


◆ - % of Total Fund



# CSARF- % of Total Fund

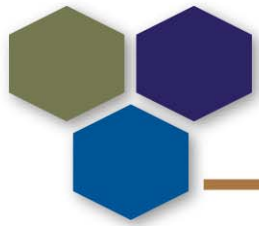




# Sustainable Reserve Levels

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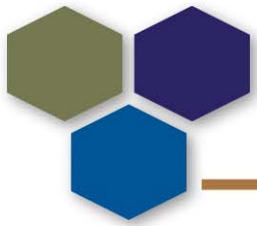
- ◆ The CSARF will continue to grow and become a larger and larger portion of the total
  - ▶ Increases leverage
  - ▶ Increases volatility
- ◆ Using TCDRS actual experience as an example, we estimate a sustainable long term reserve would need to be in excess of **30%** of the total fund for a typical 60%/40% asset allocation



## Time needed to reach Sustainable Reserve Levels

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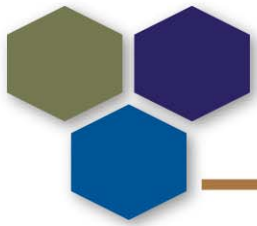
- ◆ There are no material reserves as of today (approximately 1% as of 1/1/2009)
- ◆ Reserves would have to be built out of future earnings
- ◆ If 1% of the Fund were to be saved in the reserve each year, without ever having to pull money out, it would take 30 years to build the reserve
- ◆ Instead of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



# Asset Smoothing

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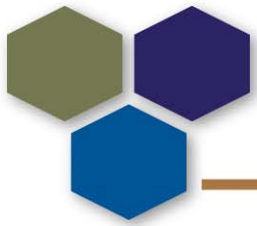
- ◆ The ultimate reserve policy will be combined with a smoothing technique
  - ▶ However, smoothing alone is not a solution
- ◆ GRS will provide a special presentation on asset smoothing at next Board meeting; presentation can be made to the advisory committee as well



# Options/Alternatives

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- ◆ Are there more efficient solutions than reserving?
  - ◆ Asset pool structures
  - ◆ Interest crediting methodologies
  - ◆ Other options could be combined with smaller reserves



## Further Meetings

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- ◆ GRS will provide an educational session on asset smoothing at the next Board meeting ; presentation can be made to the advisory committee as well
  - ▶ Will include options based on current structure and an alternative structure
- ◆ GRS will then provide a recommendation for a reserving policy (including smoothing methods) for use in the December 31, 2009 valuations
  - ▶ Target the December Board Meeting