



# Actuarial Panel: Impact of Closing a Plan

NCTR 89<sup>th</sup> Annual Convention

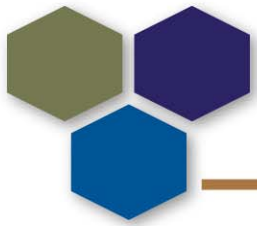
October 10, 2011 - 2:45 PM

Brian B. Murphy, FSA, EA, MAAA, FCA

**GRS**

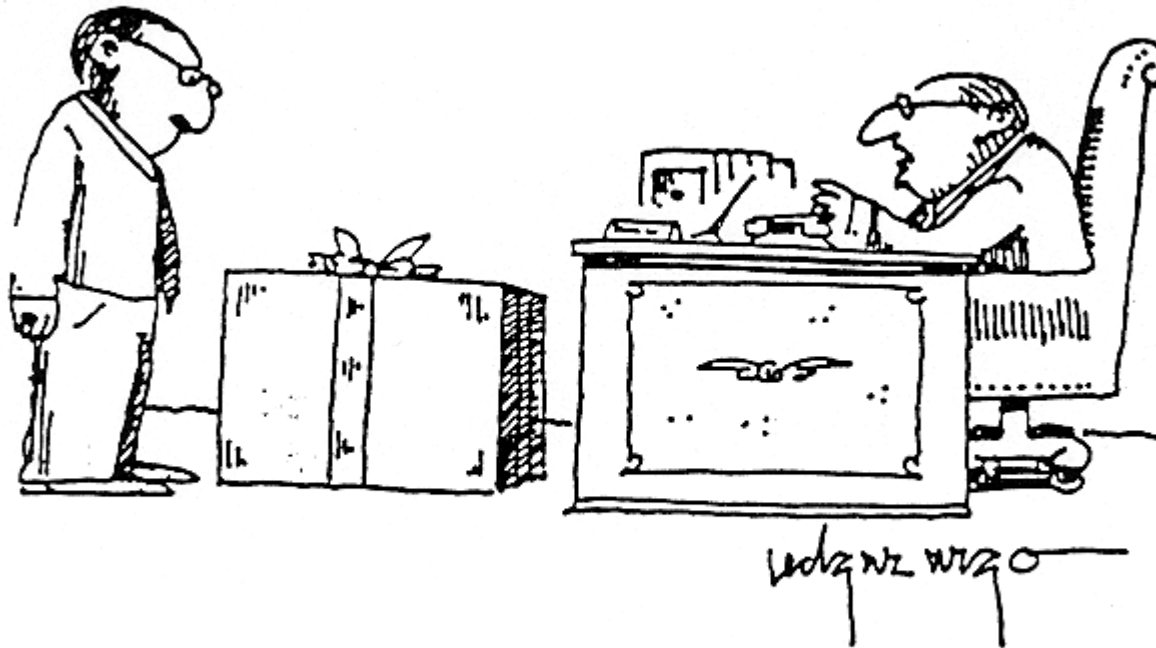
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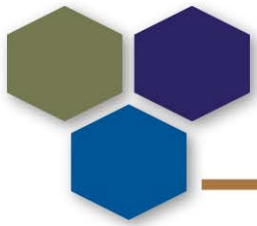


# Plan Closure

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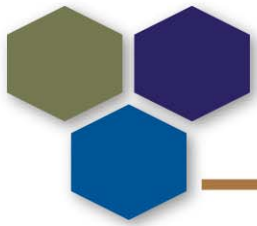
How would you like to trade in your stuffy old DB plan for the new redesigned plan in that box?



# Overview

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- ◆ Types of Retirement Plans
- ◆ History of Public Pensions
- ◆ Defining a “Closed” Plan
- ◆ Key Issues in Moving to a DC Plan
- ◆ Costs and Key Risk Areas
- ◆ Impact of Closure on the DB Plan



# Types of Retirement Plans

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- ◆ Defined Benefit Plan

- ▶  $\% \times \text{Service} \times \text{Final Average Pay} = \text{Monthly } \$$

- ◆ Defined Contribution Plan

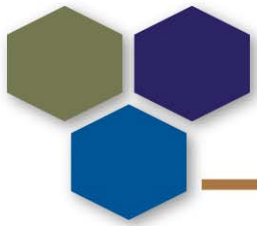
- ▶ 401(a), 401(k), 403(b), 457, etc.

- ◆ Hybrid Plan

- ▶ Cash Balance, Pension Equity

- ▶ Smaller DB with DC side account

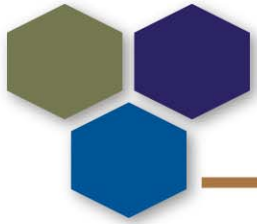
- ▶ Various creative designs



# Brief History of Public Pensions

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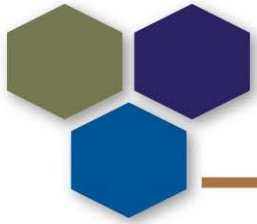
- ◆ Public pensions have been around at least since the time of the Magna Carta (1215)
- ◆ Appeared in the United States in the 19th Century. First for NYC Police in 1857
- ◆ Massachusetts established the first General Employee plan in 1911
- ◆ Became widespread by 1930 or so
- ◆ Original plans were mostly DC plans with an employer match



# History of Public Pensions

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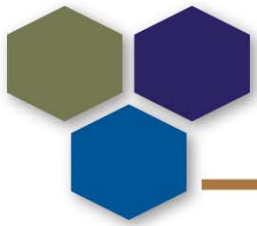
- ◆ Financial consequences of The Great Depression led to the introduction of defined benefit floors into plans that were previously pure DC plans
- ◆ It is not a coincidence that the Federal Insurance Contributions Act, providing a “floor of protection” to US workers was signed into law in 1935
- ◆ By about the mid 20th century, Defined Benefit Plans became the dominant type of Plan in the Public Sector



## What Does “Closing” Mean

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- ◆ All new entrants go into some other plan
- ◆ Maybe current employees can choose to go into the other plan for future service
- ◆ Maybe they are forced to do so
- ◆ There are also voluntary arrangements where people can choose among a DB, a DC, or a Hybrid Plan (not really “closing”)

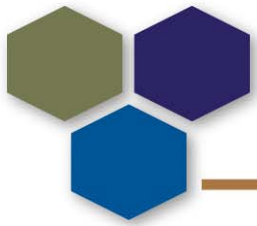


## Is It Really Closed?

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- ◆ If, after the “close”, all assets still back all liabilities, then there is only one plan with different tiers – plan was not really closed
  - ▶ Plan currently provides 2% multiplier with high COLA. All new hires get 1.5% multiplier with smaller COLA
- ◆ Otherwise, there is more than one plan, and the plan was really closed
  - ▶ If all new hires go into a DC plan, the DC assets cannot back the DB liabilities

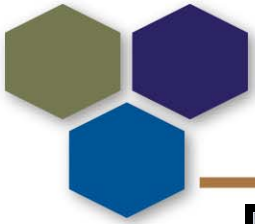




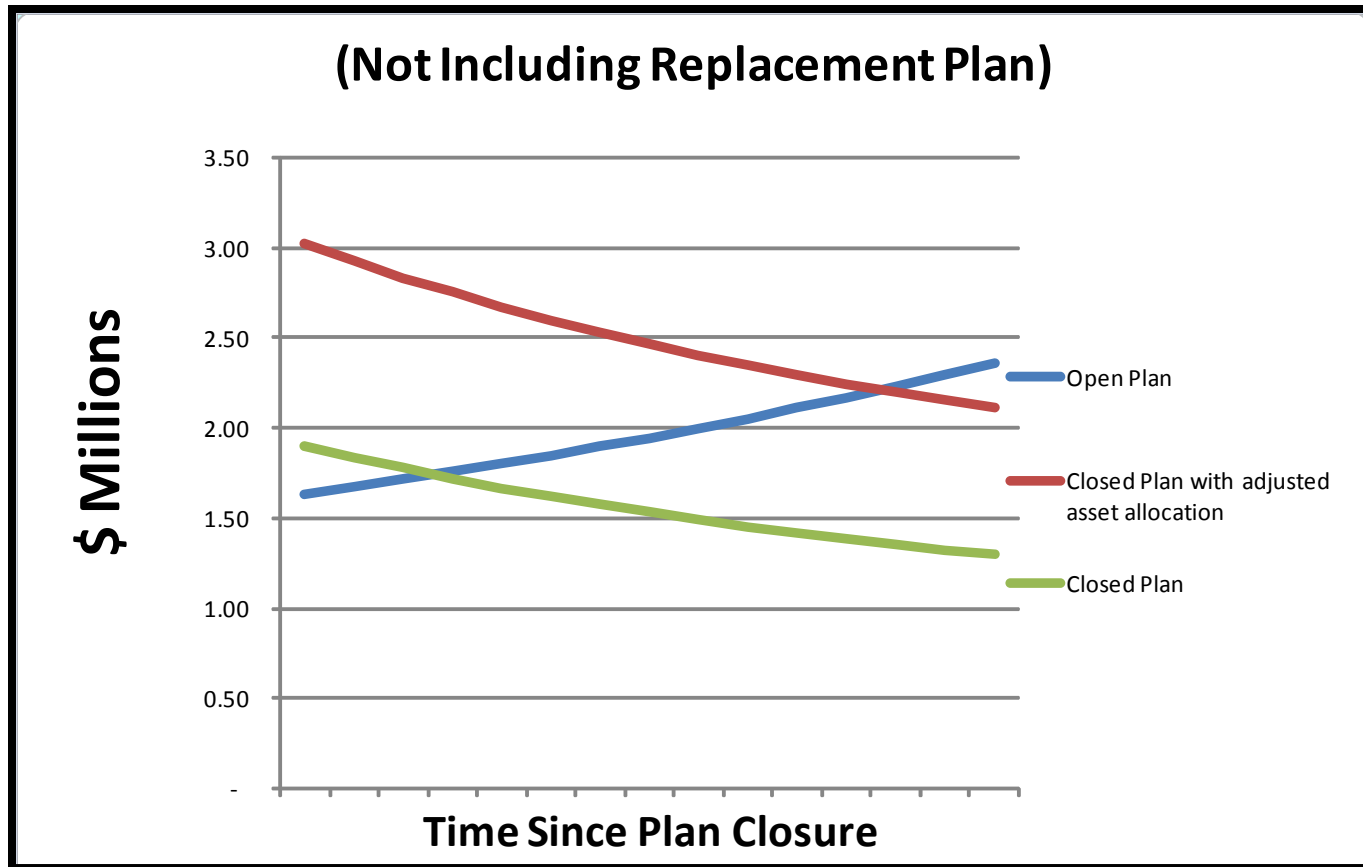
## Closed Plan Issues

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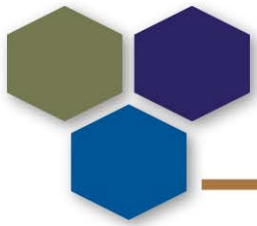
- ◆ Best practices and current accounting standards call for accelerated funding in a closed plan. *Likely to increase plan sponsor costs near term.*
- ◆ Longer term asset allocation changes may lead to reduced investment return and therefore to *higher total costs for the plan sponsor.*



# Pattern of Employer Contributions



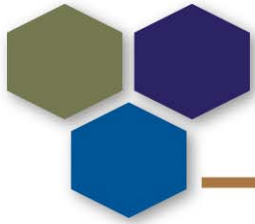
In the open plan, contributions are usually level as % of pay, but rise in \$ amount as the covered payroll goes up. The true crossover points would be much farther in the future than illustrated if replacement plan contributions were illustrated.



# Understanding the Pattern

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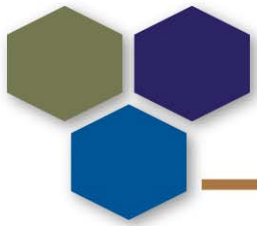
- ◆ The green line results from accelerated funding but presumes assets can always be invested in a diversified portfolio. It goes down as the payroll goes down.
- ◆ The red line recognizes the effect of changing cash flow needs on asset allocation – a real and often ignored effect. It goes down as the payroll goes down.
- ◆ The blue line is the contribution pattern from the open plan. It is level as % of pay, but increases in \$ as the payroll increases. This is the only line that includes funding for new hire benefits.
- ◆ Actual plan sponsor savings, if any, may be many years away depending on the replacement plan (which is not shown)



## Replacing DB with DC

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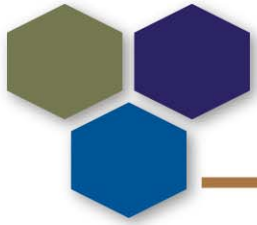
- ◆ Might appear to reduce cost, benefit reduction less obvious
- ◆ Investment, longevity, and inflation risk transferred to employees
- ◆ DC usually produces a much lesser benefit per \$ of contribution than a DB plan
- ◆ As a result, retirees may have less to contribute to the local economy after the closure of the DB plan than before
- ◆ Retirees may even wind up on public assistance in some cases



## Replacing DB with DC

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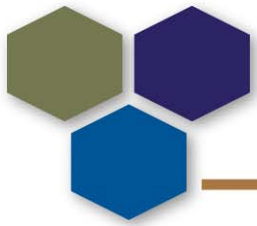
- ◆ If DC benefits ultimately prove to be inadequate, Government may eventually have to make up the difference and any savings that may have been realized could evaporate quickly
- ◆ Death and disability require separate treatment
- ◆ COLA can't really be provided
- ◆ What about employees who are not covered by Social Security?
- ◆ Issues with attraction and retention of employees



## Replacing DB with DC

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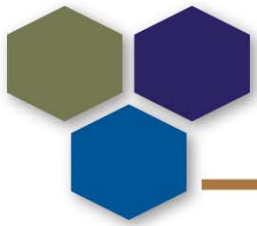
- ◆ Higher DC plan administrative costs
- ◆ Mandated minimum DC benefit if not in social security
- ◆ Inflexibility of DC plan
- ◆ Changing liquidity requirements of a DC Plan as employee ages



## Issues with Tiers

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- ◆ May reduce cost, but *obviously* provides lesser benefits (or higher employee contributions)
- ◆ Expense of administering multiple benefit provisions
- ◆ Difficulty of determining who is in which tier
- ◆ New tier may float up to old tier anyway as new tier people become unhappy
- ◆ More new tiers may be created, exacerbating all of the above

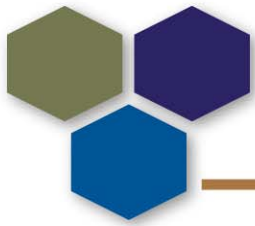


# Advantages of Tiers over Closure

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- ◆ Death benefits, disability benefits, and COLAs can easily be accommodated in a new DB tier
- ◆ In many cases, assets in a tiered plan can be commonly invested
- ◆ Cash flow from second tier may be able to help with liquidity needs of first tier, resulting in a better asset allocation than is produced by a closure
- ◆ Actuary can present a unified funding pattern and potentially avoid or reduce the increases in contributions that an actual closure can produce

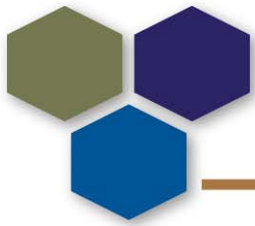




# Takeaways

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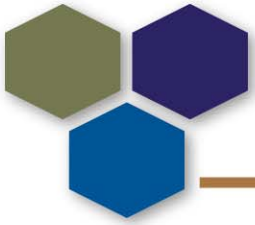
- ◆ DB Plans provide much more in Benefits per Dollar of contributions than DC Plans
- ◆ Reduced benefits in replacement plan could lead to public retirees on public assistance
- ◆ Asset allocation changes in DB Plan after closure likely to lead to reduced investment earnings, and therefore to higher costs for plan sponsor than anyone thought initially
- ◆ *Plan closure or major redesign should be undertaken only after careful consideration of long term effects by all concerned parties*



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# Acknowledgement

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