



# ***RETIREES' CONTRIBUTORY DEATH BENEFIT PLAN (CDBP) STUDY***

**January 26, 2023**

**Boards of Trustees of the Teachers' and State Employees'  
Retirement System (TSERS) and the Local Governmental  
Employees' Retirement System (LGERS)**



**North Carolina**  
Total Retirement Plans



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# Agenda

- Executive Summary
- Background
- Alternatives Measured
- Alternatives Considered by Staff but Not Measured
- Next Steps
  
- Presenters:
  - Patrick Kinlaw, FSA; RSD Director of Policy, Planning, and Compliance
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## Executive Summary

- In January 2022, the Boards directed RSD staff to “engage with the consulting actuary to study alternatives for addressing the projected shortfall in the Retirees’ Contributory Death Benefit Plan” (CDBP).
- CDBP is a group life insurance plan (\$10,000) designed to be funded entirely by retiree premiums
- Consulting actuary measured projected shortfall of \$178 million (present value) as of 12/31/2021; will not be helped by investment returns during 2022
- Premiums, along with assets held for other public employee death benefits, are invested in the Bond Index Fund with long-term expected return 3% / year
- Consulting actuary estimates that the projected shortfall has arisen **not** because the current premium rates are insufficient for new enrollees, but because the premium rates before 2017 (still being paid by pre-2017 retirees) were insufficient for past enrollees



## Executive Summary (Cont.)

- Alternatives measured by consulting actuary (“L” means requires legislation)
  - 1) Allow all death benefit funds to be invested alongside Retirement Systems (L)**
  - 2) Increase premiums for future retirees by 10%**
  - 3) Extend period before full \$10,000 benefit can be paid, from 24 to 36 months (L)**
  - 4) One-time retiree option to disenroll in exchange for 50% return of contribs. (L)**
- Many alternatives considered by staff but not measured by consulting actuary
- Alternative 1 would have a very significant impact on the actuarial shortfall; for example, would have eliminated the shortfall if implemented before end of 2021
  - Pros: Greater long-term expected return leading to improved actuarial measurement
  - Cons: Increases investment risk; requires legislation; involves non-CDBP death benefit funds; operational impact (manageable)
- Alternatives 2-4: Lesser financial impact; different pro/con profiles; could be considered
- Boards may recommend legislation, direct staff to perform further study, or take no action
  - For example, further study on variations on the details of Alternatives 1-4
- Decision would require both Boards to approve (G.S. 128-28(f1); G.S. 135-6(e1))



# Summary of Actuarial Impact of Modeled Alternatives

|   | <b>Hypothetical 12/31/2021<br/>Shortfall Impact:<br/><u>Only This Alternative</u></b> | <b>Hypothetical 12/31/2021<br/>Shortfall Impact:<br/><u>If Alternative 1 Also<br/>Implemented*</u></b> | <b>Comment</b>   |
|---|---|--|--|
| Alternative 1: Allow all death benefit funds to be invested alongside Retirement Systems        | Improvement of \$281m (surplus \$103m vs. deficit \$178m)                             | N/A  | Assumes rate of return 6.00% rather than 3.00%               |
| Alternative 2: Increase premiums for future retirees by 10%                                     | Improvement of \$66m (deficit \$112m)   | Total improvement of \$316m (surplus of \$138m)  | Assumes no change in enrollment rates                        |
| Alternative 3: Extend period before full \$10,000 benefit can be paid, from 24 to 36 months     | Improvement of \$7m (deficit \$171m)  | Total improvement of \$286m (surplus of \$108m)  | Applies to future retirees only                              |
| Alternative 4: One-time retiree option to disenroll in exchange for 50% return of contributions | Maximum improvement of \$317m (surplus \$139m vs. deficit \$178m)                     | Total maximum improvement of \$412m (surplus of \$234m)  | <b>Maximum impact assuming 100% election (not realistic)</b> |

\* Alternative 1 would result in a change to the assumed rate of return, a key assumption in the actuarial valuation, which would in turn affect the measured impacts of the other alternatives.



## Background

- CDBP is a group life insurance plan designed to be funded entirely by retiree premiums
- Enrollment is during retirement process; requires monthly contributions (premiums) for life
- Premium depends on retirement age; currently \$12.54 / month for retirement at age 50 or earlier; \$26.09 / month at age 65; \$66.14 / month at age 80; etc.
- If retiree dies after making at least 24 months of contributions, \$10,000 paid to one named beneficiary, or divided between multiple named beneficiaries. Benefit was initially \$5,000 in 1988, increased in stages to \$10,000 by 2007, retroactively for living retirees.
- If retiree dies before making 24 months of contributions, contributions plus interest (currently 1.2% per year) refunded to named beneficiary(ies)
- If retiree stops paying premiums for other reasons, no benefit payable



## Background (Cont.)

- Actuarial measurement at 12/31/2021:
  - Fund held assets of \$286 million; projected future retiree premiums (present value) \$1,013 million, total projected assets \$1,298 million
  - Total projected benefit payments (present value) \$1,476 million
  - Shortfall = \$178 million
- Measurements for last 10 years have consistently projected a shortfall, but it was less than \$100 million until end of 2020 (\$133 million) and then end of 2021 (\$178 million)
- In April 2016, Boards took some action which helped the measurement somewhat:
  - Increased premiums for retirees on or after 3/1/2017, e.g. increasing premium for retirement ages  $\leq 50$  from \$8 to \$12.54, and at age 65 from \$22 to \$26.09. First premium increase since 1980s, except for an open enrollment window in 2008.
  - Reduced interest rate payable on return of contributions for death within first 24 months, from 6.50% to 1.20%.
- Primary (but not only) factor increasing shortfall has been reduction in assumed returns to align with bond market expectations - e.g. from 3.75% to 3.00% / yr. effective end of 2020



## Alternative 1:

### Allow All Death Benefit Funds to Be Invested Alongside Retirement Systems

#### Background for Alternative 1

- CDBP assets are held in the State Employees' Benefit Trust (SEBT), G.S. 135-7(g)
- Other assets in SEBT are those for TSERS active employee death benefits, G.S. 135-5(l); LGERS active employee death benefits, G.S. 128-27(l); and Separate Insurance Benefits Plan for Law Enforcement Officers, G.S. 143-166.60
- As of 12/31/2021, CDBP assets comprised 57% of the SEBT; \$286 million CDBP + \$65 million TSERS + \$92 million LGERS + \$62 million SIBP= \$505 million
- SEBT assets are invested in the Bond Index Fund (high-quality fixed income investments), with a small amount in cash
- G.S. 147-69.2(b)(8) defines "Retirement Systems" as TSERS, CJRS, FRSWPF, LGERS, LRS, NCNGPF, RODSPF, and the Retiree Health Benefit Fund. "Retirement Systems" assets may be invested in equity securities ((b)(8)), opportunistic fixed income ((b)(6c)), real estate ((b)(7)), private equity ((b)(9)), and inflation-protection assets ((b)(9a)), all within statutory limits.





## Alternative 1 (Cont.):

### Allow All Death Benefit Funds to Be Invested Alongside Retirement Systems

- **Alternative:** Add SEBT to list of “Retirement Systems” funds in G.S. 147-69.2(b)(8), allowing investment in Retirement Systems pool. Make any other conforming changes.
- **Financial Impact:** Buck estimates that had this alternative been implemented and reflected in the 12/31/2021 valuation, the CDBP would have had a funding surplus of \$103 million rather than a shortfall of \$178 million. This assumes that the assumed investment return for SEBT assets would have been 6.00% instead of 3.00%.
- **Pros:**
  - Expansion of investment options would increase the expected return once implemented, leading to improved actuarial measurement
- **Cons:**
  - Requires legislation
  - Increased investment risk; mitigated by diversification
  - Involves SEBT funds other than CDBP, where there is already a measured surplus
  - Operational impact (manageable); variations on this alternative could have a more significant operational impact, e.g. treating CDBP differently from rest of SEBT



## Alternative 2: Increase Premiums for Future Retirees by 10%

- **Alternative:** Increase premiums for future retirees by 10%, for example from \$12.54 to \$13.79 at retirement ages 50 and younger, and from \$26.09 to \$28.70 at retirement age 65; do not change premium rates for existing retirees
- **Financial Impact:**
  - Buck estimates that if only this alternative had been reflected in the 12/31/2021 valuation, the CDBP projected shortfall would have been reduced by \$66 million, from \$178 million to \$112 million. Buck assumed no change in enrollment rates under the increased premium.
  - If this change and Alternative 1 had been implemented (using assumed return of 6.00% instead of 3.00%), this change would have improved the measurement by a total of \$316 million (to a surplus of \$138 million).
- **Variation Not Yet Modeled:** Could consider increasing by less than 10%; financial impact would be proportionally reduced. Could also consider studying the impact that this change would have on the assumed CDBP participation election rate.



## Alternative 2 (Cont.): Increase Premiums for Future Retirees by 10%

### ○ Pros:

- Improved actuarial measurement
- Does not require legislation
- Adds a risk premium to cover selection risk for those with moderate health conditions

### ○ Cons:

- Buck estimates that the current premiums are already sufficient for future retirees; the shortfall has arisen because of insufficiency of premiums from past retirees
- Could lead to less participation in the plan, less premiums collected in the future
- Without Alternative 1, Alternative 2 only partially addresses projected shortfall
- With Alternative 1, the incremental impact of Alternative 2 is less significant because it is the greater expected investment returns, not increased premiums, that would carry more significance in addressing the shortfall
- Operational and communications impact would require lead time to implement



## Alternative 3:

### Extend Period Before Full \$10,000 Benefit Can Be Paid, from 24 to 36 Months

- **Alternative:** Currently, if the retiree dies before making 24 months of contributions, the beneficiary(ies) receive a return of contributions plus 1.20% annual interest, rather than the full \$10,000 benefit. This alternative would extend that period to 36 months.
- **Financial Impact:**
  - Buck estimates that if only this alternative had been reflected in the 12/31/2021 valuation, the CDBP projected shortfall would have been reduced by \$7 million, from \$178 million to \$171 million. Buck assumed the change would apply to future retirees. Buck assumed no change in enrollment rates.
  - If this change and Alternative 1 had been implemented (using assumed return of 6.00% instead of 3.00%), this change would have improved the measurement by a total of \$286 million (to a surplus of \$108 million).
- **Variation Not Yet Modeled:** Could limit the group to which the change applies (those retiring below a certain age, etc.). Would have lesser financial impact. Could also consider studying the impact that this change would have on the assumed CDBP participation election rate.



## Alternative 3 (Cont.):

### Extend Period Before Full \$10,000 Benefit Can Be Paid, from 24 to 36 Months

- **Pros:**
  - Slightly improved actuarial measurement
- **Cons:**
  - Reduction in benefit when retiree dies in third year of retirement; for example, if retired at age 65, contributed \$26.09 for 30 months, beneficiary(ies) would receive less than \$1,000 instead of \$10,000
  - 24-month period seems sufficient to address the main plan design concern, which is selection risk by retirees with severe health conditions
  - Impact on actuarial measurement is minimal
  - Operational and communications impact would require lead time to implement
  - Requires legislation



## Alternative 4:

### One-Time Retiree Option to Disenroll in Exchange for 50% Return of Contributions

- **Alternative:** Provide all current retirees the option of disenrolling from the CDBP, in exchange for a 50% return of accumulated premium contributions with no interest
- **Financial Impact:**
  - Buck estimates that if only this alternative had been reflected in the 12/31/2021 valuation, the CDBP projected shortfall would have been reduced by a maximum amount of \$317 million, from a deficit of \$178 million to a maximum surplus of \$139 million. **This is a maximum amount assuming 100% participation, in effect that all current retirees would accept the option. In reality, some fraction would accept it, reducing the financial impact.**
  - If this change and Alternative 1 had been implemented (using assumed return of 6.00% instead of 3.00%), this change would have improved the measurement by a maximum total of \$412 million (to a maximum surplus of \$234 million).
- **Variations Not Yet Modeled:** Could consider payout different from 50%; include interest in the payout; set minimum or maximum amounts on the accumulated contributions for eligibility; or develop and apply an assumed cash-out election rate



## Alternative 4 (Cont.):

### One-Time Retiree Option to Disenroll in Exchange for 50% Return of Contributions

- **Pros:**

- Improved actuarial measurement
- Allows retirees who feel “locked in” to plan to receive some benefit while living
- Focuses on past retirees instead of future retirees, for whom consulting actuary believes current premium rates are sufficient

- **Cons:**

- Without Alternative 1, Alternative 4 likely only partially addresses projected shortfall
- With Alternative 1, the incremental impact of Alternative 4 is less significant because the greater expected investment returns make the \$10,000 benefit more “affordable” for the plan relative to the 50% return of contributions
- Exposes plan to selection risk that is not really within the framework of the actuarial measurement. For example, some of the people who accept the buyout might have stopped paying premiums anyway in the future (and received no benefit).
- Operational and communications impact would require lead time to implement
- Requires legislation



## Alternatives Considered by Staff But Not Measured

In the course of the review, several alternatives were considered by staff, but not pursued to the point of an actuarial measurement. These include the “variations” on Alternatives 1-4 identified on the prior pages. They also include the following, which staff did not pursue for reasons that could include adverse member/retiree impacts, legal concerns, perceived minimal or adverse financial impact, or operational feasibility. Many of these were considered by the Boards in the April 2016 review but not pursued at that time.

- Reduce the \$10,000 benefit for future retirees
- Reduce the \$10,000 benefit for current retirees to the amount of the benefit that was in force when they first enrolled
- Increase the premium paid by current retirees (Alternative 2 but including current retirees)
- Open enrollment at higher premium rate for current retirees who did not enroll
- Increase the \$10,000 benefit for future retirees, and increase the premium rate by some amount with the goal of driving more enrollment among future retirees



## Alternatives Considered by Staff But Not Measured (Cont.)

Continued list from prior page:

- Close CDBP entirely to future enrollees
- Close CDBP to future enrollees but replace it with an optional payment election in the Retirement Systems allowing for reduced pension in exchange for \$10,000 death benefit
- Formally separate the CDBP into pieces for each of the relevant Retirement Systems, and merge the pieces into the Retirement Systems' trusts
- Sell CDBP obligations and right to future premiums to an insurance company
- Eliminate the payment of a return of contributions for death within 24 months
- Reduce the 1.20% interest rate on the return of contributions
- Request appropriation from General Assembly to close the projected shortfall



## Next Steps

- After considering the pros and cons of the alternatives measured, the Boards may choose today or at a future meeting to do any or all of the following:
  - Recommend legislative action on Alternatives 1, 3, or 4
  - Enact a premium increase (within Boards' authority) under Alternative 2
  - Direct staff to conduct further study of one of the “variations” identified in this presentation or any other alternative suggested by the Boards
  - Take no action in response to this study
- Any decision would require both Boards to approve (G.S. 128-28(f1); G.S. 135-6(e1))

