Study Bill 2 – Analysis (DC Bill for ND TFFR)

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Bill 2 Provisions

- Affects membership of ND Teachers' Fund for Retirement (TFFR)
  - Teachers and administrators in public schools
- Closes membership in current defined benefit (DB) plan to future hires
  - Effective for hires after July 31, 2011
- Creates new defined contribution (DC) plan for all future hires

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Bill 2 Provisions – DB Plan

- No change to benefit provisions in closed DB plan
  - Members in plan would continue to earn service and benefits in DB plan
  - Members and employers would continue to contribute a combined 16.50% of salary
    - 8.75% employers
    - 7.75% members
    - 8.75% employer rate would sunset back to 7.75% once DB plan is 90% funded

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Bill 2 Provisions – DC Plan

- Individual accounts
- Contributions of 16.50% of salary
  - 8.75% employers
  - 7.75% members
  - Same as DB, except no prospect for sunset of employer contribution back to 7.75%
- Individual control over investments

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Bill 2 Provisions – DC Plan

- Employer contributions vest in 4 years
  - 50% after 2 years, 75% after 3 years, 100% after 4 years
  - Member contributions always 100% vested
- DC benefits paid:
  - as lump sum or rollover (e.g., to IRA), or
  - made in periodic payments
- Death and disability trigger payment of account balance

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Actuarial Analysis

- Without changes, TFFR is projected to run out of money in FY 2039
- But Bill 2 makes this worse
  - Assets projected to run out in FY 2030
  - Nine years sooner

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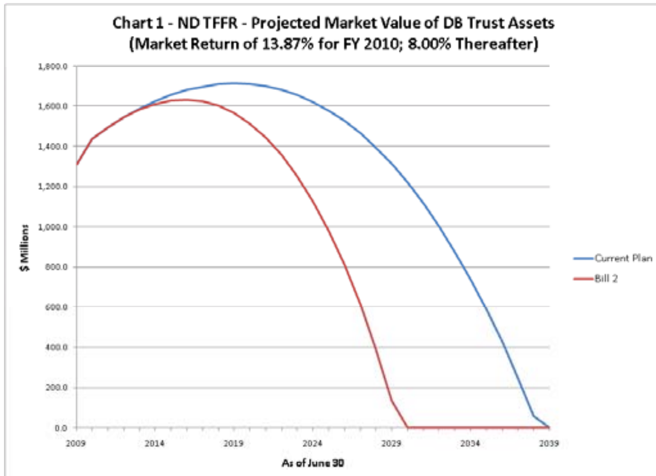
Actuarial Analysis



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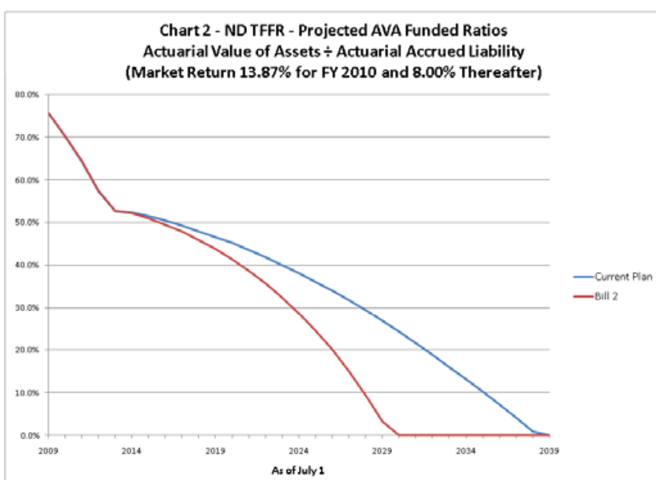
Actuarial Analysis



8 GRS

Actuarial Analysis

- Two things account for this
- First, closed DB plan receives less contributions under Bill 2
  - 16.50% contributions for future hires is going into DC plan rather than DB plan
  - DB plan does not have the liabilities for these future members, but this has little impact on benefit payments over next 30 years
  - So negative cash flow increases under Bill 2

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Actuarial Analysis

- But it's not just a question of timing
- The average new hire costs 10.57% of salary per year (the normal cost)
- But TFFR receives 16.50% from employer and member combined
- So 5.93% of each future hire's salary now goes to help fund the UAAL
- This is lost to the DB plan under Bill 2

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Actuarial Analysis

- Because of this, total liability for all future benefits—<u>including liability for future hires whether under DB or DC</u>—increases under Bill 2
  - ►Current law: $3.8 billion; Bill 2: $4.2 billion
- But total contributions are the same: 16.50% of pay under current law or Bill 2
- Therefore Bill 2 increases liability with no funding source by $456 million

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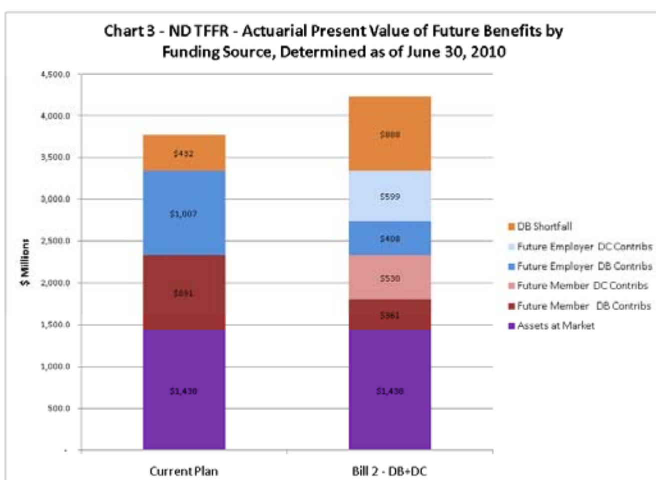
Actuarial Analysis



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Actuarial Analysis

- What happens when trust is exhausted?
- Annual benefit payments would be larger than contributions received
- A liability of employers or State
- Additional contributions (DB Shortfall Contributions) would be required
- Plan would become pay-as-you-go
- True for current plan and Bill 2

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Actuarial Analysis

- Next chart compares contribution rates (member + employer) under this scenario
- Contribution rate for current plan = [Regular DB (16.50%) + DB Shortfall Contribution] ÷ Payroll
- Contribution rate for Bill 2 = [Regular DB (16.50%) + DB Shortfall Contribution + DC (16.50%)] ÷ Combined DB + DC Payroll

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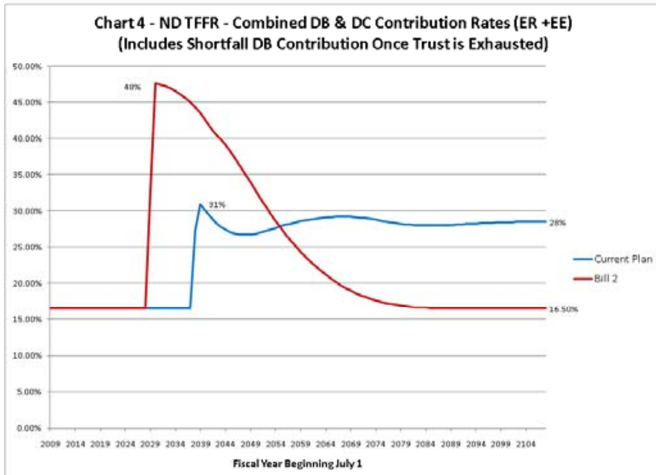
Actuarial Analysis



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Actuarial Analysis

- We think it is unlikely that legislature would allow this
- We looked at what would happen if DB contributions were prefunded
  - Current Plan – Pay normal cost and fund UAAL by FY 2041 (30 years from 07/01/2011)
  - Bill 2 – Level contribution to DB plan as % of payroll

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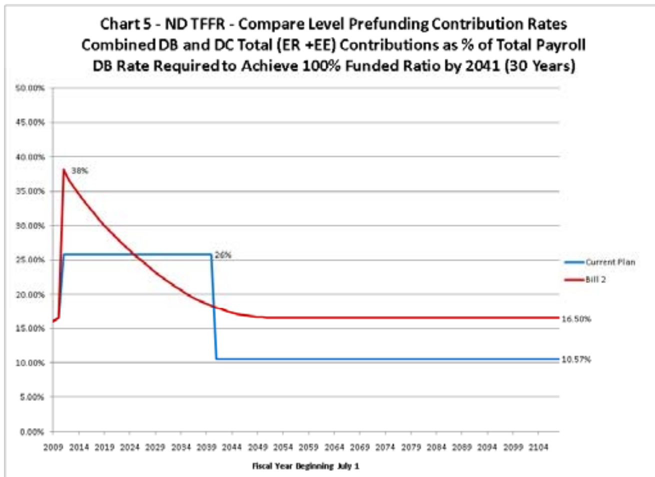
Actuarial Analysis



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Actuarial Analysis

- This analysis is based on current TFFR assumptions for the DB plan
  - Including expected 8.00% investment returns
- But 8.00% will be harder to achieve in a closed DB plan than in an open one
- Greater external cash flow as % of assets may require more conservative allocation
  - More cash held for benefit payments
  - More fixed income, less illiquid investments

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Actuarial Analysis

- Cash needs for benefits may require forced sales in depressed markets
- Therefore, the picture may turn out worse for the closed plan than shown under our projections

Actuarial Analysis

- Bill 2 has negative impact on DB reporting
- GASB 25 allows plans to determine Annual Required Contribution (ARC) using increasing amortization payments (level % of payroll).
- ARC is calculated and compared to statutory contribution in CAFR (Comprehensive Annual Financial Report)

Actuarial Analysis

- If DB plan is closed, ARC must use level $ amortization
- Projected ARCs for FY 2012:
  - Current plan: 15.20%
  - Bill 2: 19.87%
- Statutory (8.75%) as % of ARC:
  - Current plan: 57.6%
  - Bill 2: 44.0%

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Technical Comments – Benefit Patterns

- DB plans tend to provide larger benefits for career employees while providing smaller benefits for employees who terminate early in career
  - Value of DB accruals is back-loaded, with large increases in value as the member approaches retirement age
  - Some members will fare better under Bill 2, some worse, depending on career length, retirement age, and investment performance

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Technical Comments - Leakage

- Because DC plans allow lump-sum distributions, some people spend their distribution on current consumption
  - The distribution has "leaked" from the person's retirement savings
  - Less than 50% of people who receive a lump-sum distribution save any portion in a tax-favored retirement fund (e.g., IRA)
    - Despite 10% penalty tax

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Technical Comments – Investment Returns

- Individually-managed DC accounts typically perform worse than professionally managed DB plans
  - Average shortfall in DC plans averages around 1%/year
    - Lower investment fees in DB plans
    - Manager expertise, education and temperament
    - Available investments (e.g., private equity)
  - Several studies show this, academic and consulting firms

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Technical Comments - Risk

- DC plans carry no direct financial risk for employers
  - ▶Contribution rates cannot increase or decrease except through legislation
  - ▶No hidden or contingent liability
  - ▶No concern about investment performance
  - ▶No concern about impact of increases in life expectancy

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Technical Comments - Risk

- But these risks do not disappear; they are shifted to members
  - ▶Benefits contingent on returns in market
  - ▶Results for different members with same service and salary will vary widely
    - Depends on member's skill/luck in investing
    - Depends on pattern of returns during member's service and choice of retirement date

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Technical Comments - Risk

- Longevity risk: The risk of running out of money before death
  - In DB plan, member does not bear longevity risk
    - Benefits paid as annuity
  - In DC Plan, member bears longevity risk
    - Might outlive the money
      - Uncertain life expectancy makes management difficult
      - Some will spend too much early in retirement

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Technical Comments - Risk

- DC Plans continued
  - Uncertain life expectancies may lead to ultraconservatism
  - Risk of incapacity or death, leaving unprepared spouse to manage investment
  - The elderly with large pools of investment assets are a favorite target of unscrupulous individuals
  - If DC members make poor decisions, they could end up needing state-paid assistance later in retirement (food stamps, Medicaid, etc.)

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Technical Comments – Recruitment and Retention

- Retention: DB plans work better
  - A form of golden handcuffs
    - Large build-up in value late in career
    - Rule of 85/90
- Recruitment: ?
  - In private sector, DC considered better recruitment tool
  - But teachers seem to have marked preference for DB

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Technical Comments – Ancillary Benefits

- DB plan provides better death and disability benefits for most members, especially younger vested ones
  - DC plan only provides distribution of account balance
- DC Plan has no mechanism for providing COLAs or other post-retirement payments
  - May be moot considering funding condition of DB plan

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Technical Comments – Drafting Issues

- Under Bill 2, an employee first hired before August 1, 2011 will always be a DB participant
  - Even if member terminates, takes a refund, then returns to work after August 1, 2011
  - Not consistent with treatment of Tier 1 members in this case
  - Consider tying DB membership to retention of service for periods before 08/01/2011.

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Technical Comments – Drafting Issues

- What happens when a retiree from DB plan returns to work after July 31, 2011?
  - We think correct result would prohibit her joining DC plan
  - Current DB rules would apply to her
  - Bill might need clarification on this point

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Administration and Timing

- Too little time between possible enactment in late spring 2011 and effective date
  - RIO and TFFR would need more time
    - to select consultants, vendors
    - to prepare member and employer communication materials
    - to establish polices, procedures, and programming
  - Recommend delaying effective date until July 1, 2012
    - Typical when such a major change is made.

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Administration and Timing

- Members will bear most costs of DC plan
  - Forfeitures of nonvested employer funds
  - Charge on assets
- However, there may be a need for an appropriation to cover costs to set up new plan
  - And staffing may have to increase
  - Heavy ongoing need for member education

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Basis of Calculations

- July 1, 2009 valuation, updated to reflect:
  - New actuarial assumptions adopted after last valuation
  - FY 2010 investment performance
- 8.00% annual return for FY 2011 and later
- No non-investment gains or losses
- No change in number of active members
- No benefit or contribution changes

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Conclusion

- Questions?

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