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A Better Bang for the Buck

The Economic Efficiencies of Defined Benefit Pension Plans

by Beth Almeida and William B. Fornia, FSA

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Why We Did This Study

- Evaluate claims that “DC plans save money”

- How do the costs of delivering retirement benefits through each type of plan compare?
  – Apples-to-apples comparison
  – Calculate the cost to deliver the same level of retirement benefits
    • DB plan
    • DC plan

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What We Found

- The DB approach saves money compared to the DC approach. Three reasons …

1. DB pension plans pool “longevity risks”

2. DB pension plans can maintain a better diversified portfolio because, unlike individuals, they do not age

3. DB pension plans achieve better investment returns because of professional asset management and lower fees

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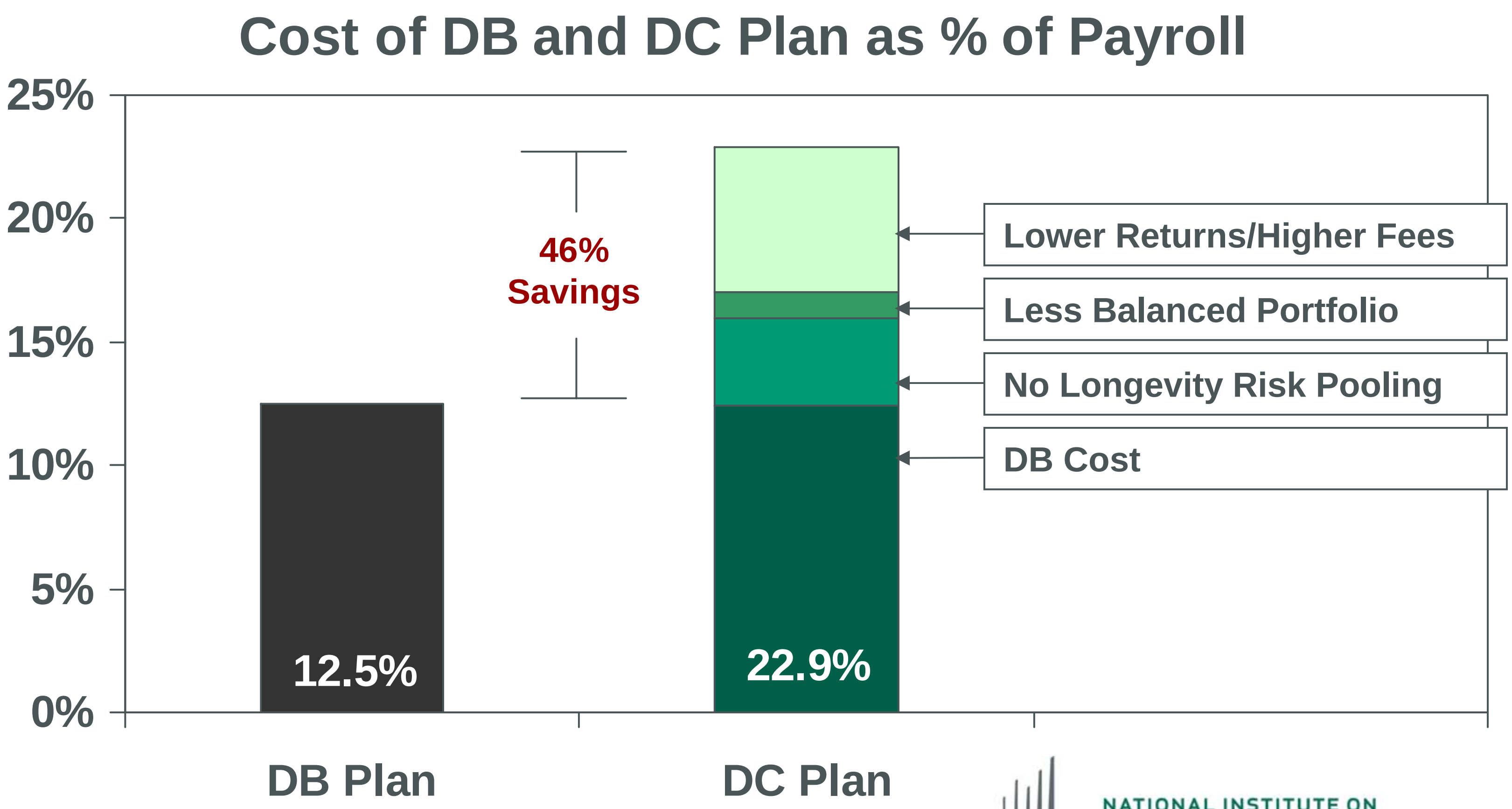
DB Plan Can Deliver Same Benefit at About Half the Cost of DC Plan



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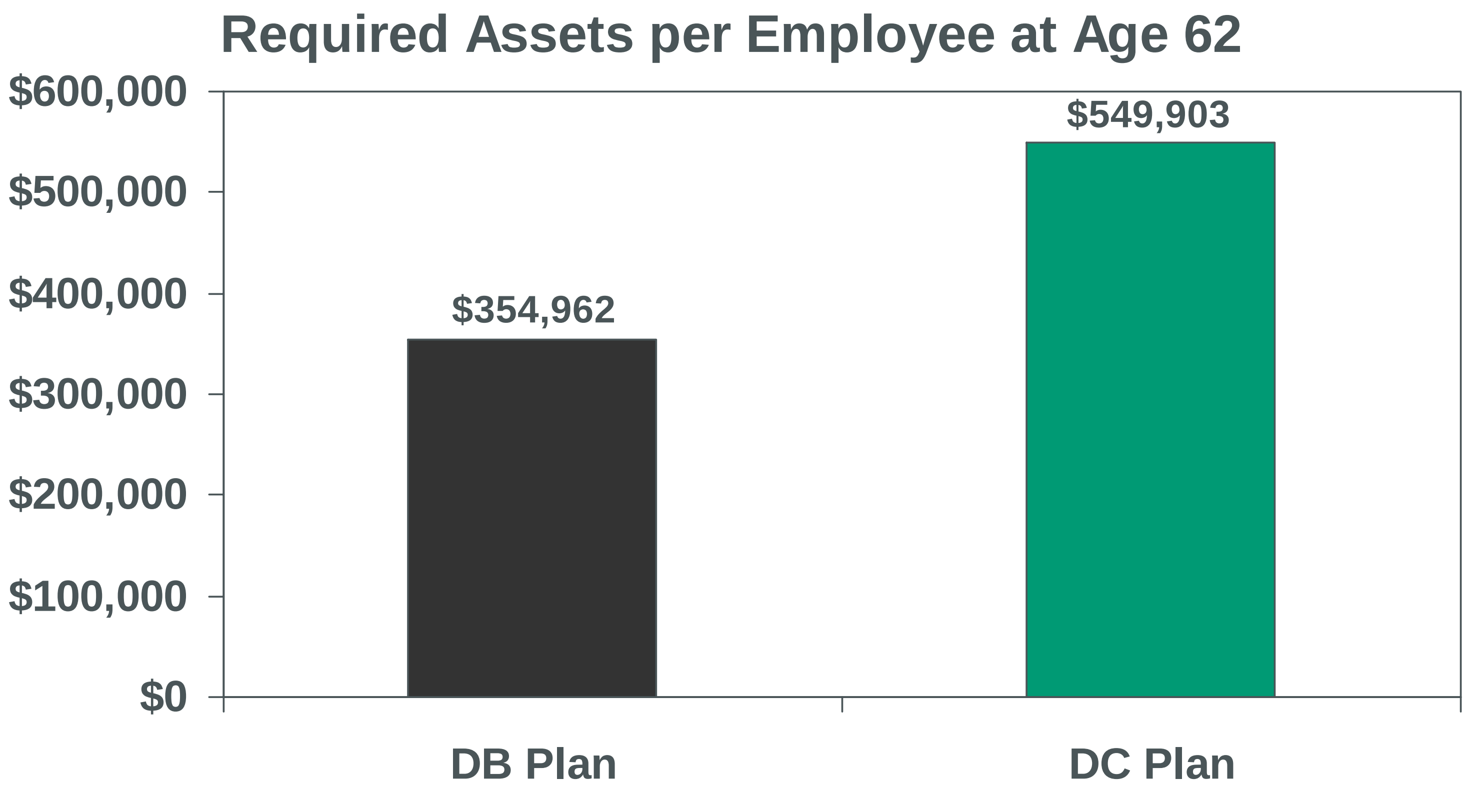
DB Plan Can Do More with Less



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Methodology: What We Did

- We model a population of 1,000 female teachers who work for 30 years - their final salary is $50,000

- We define a “target” retirement benefit - about $2,200/month – at age 62

- We calculate the cost to fund this benefit through a DB plan structure, then through a DC plan structure

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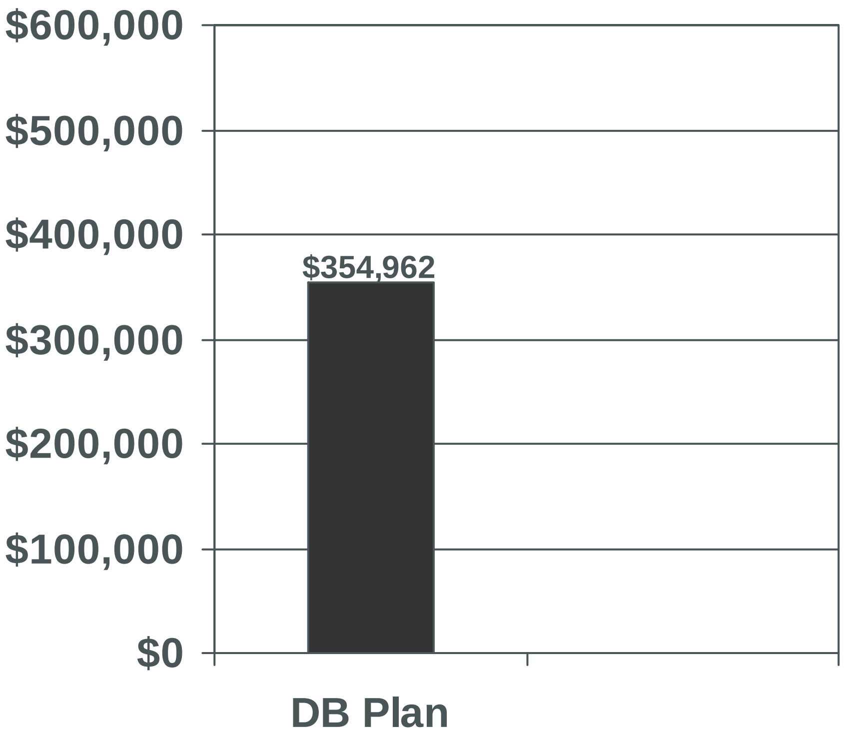
Amount needed at Age 62 to Fund Target Retirement Benefit



- The DB plan must have about $355,000 set aside for each person in the plan at age 62
- In order to fund this amount, contributions must be 12.5% of payroll each year

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1st Strength of DB Plans
Longevity Risk Pooling

- Because they cover large numbers of retirees, DB plans can pay out over the *average* life expectancy, not *maximum* life expectancy
- An individual under a DC plan will want to avoid the risk of running out of money if they live a long life
- Because individuals must plan for a maximum life expectancy, much more money must be accumulated in a DC plan, compared to a DB plan

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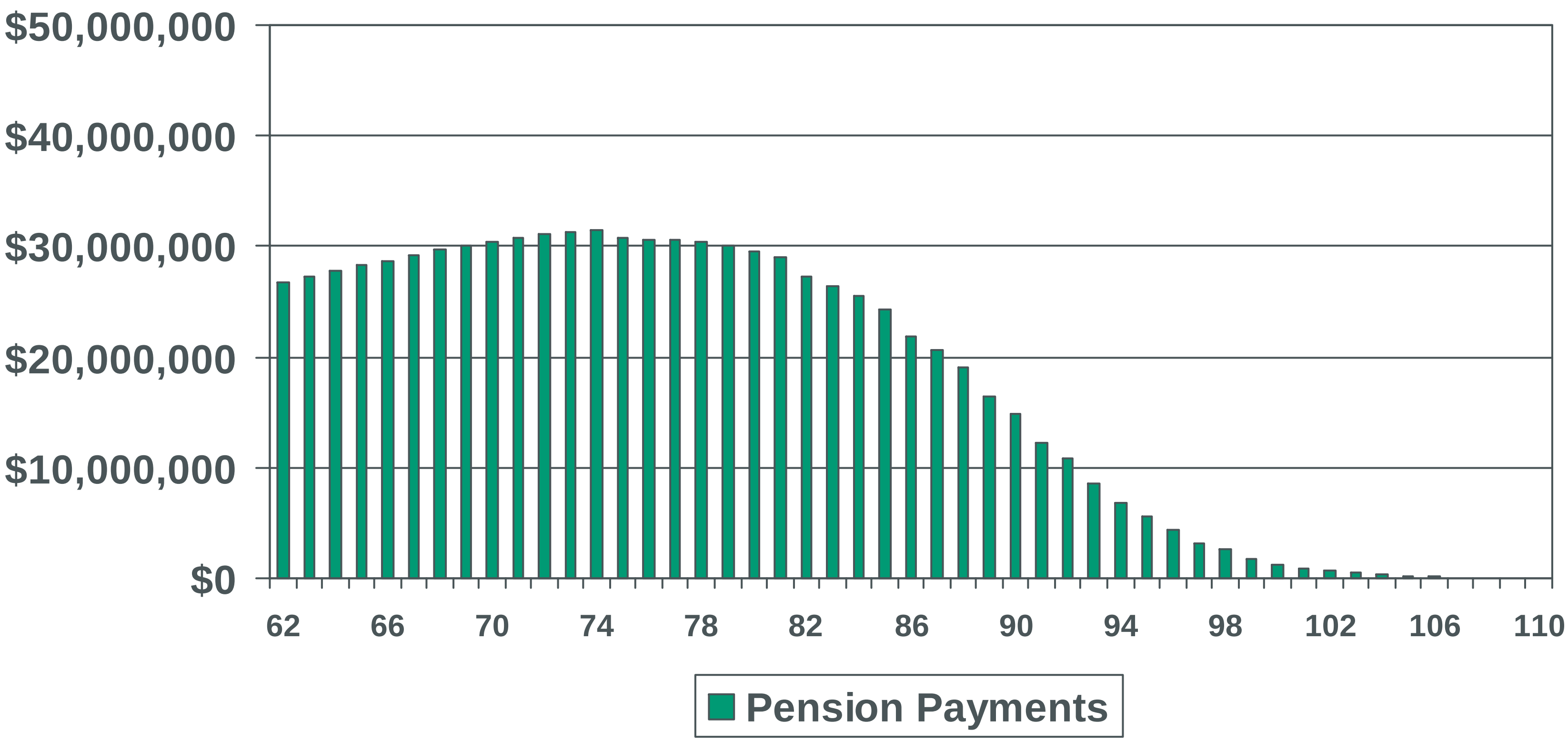
Annual Retirement Payments for 1,000 Teachers



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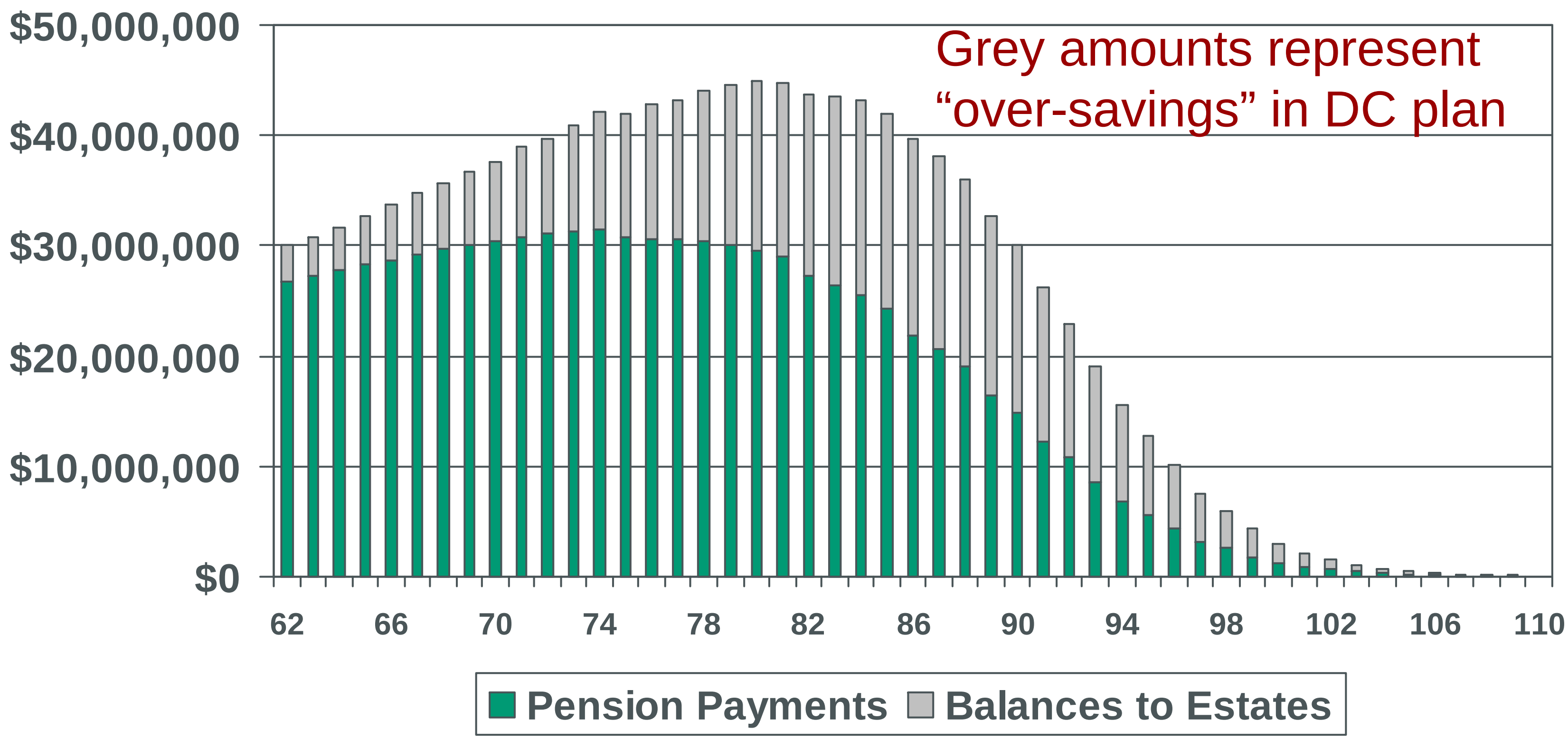
Under the DC Plan 24% of Assets Are Not Used for Retirement



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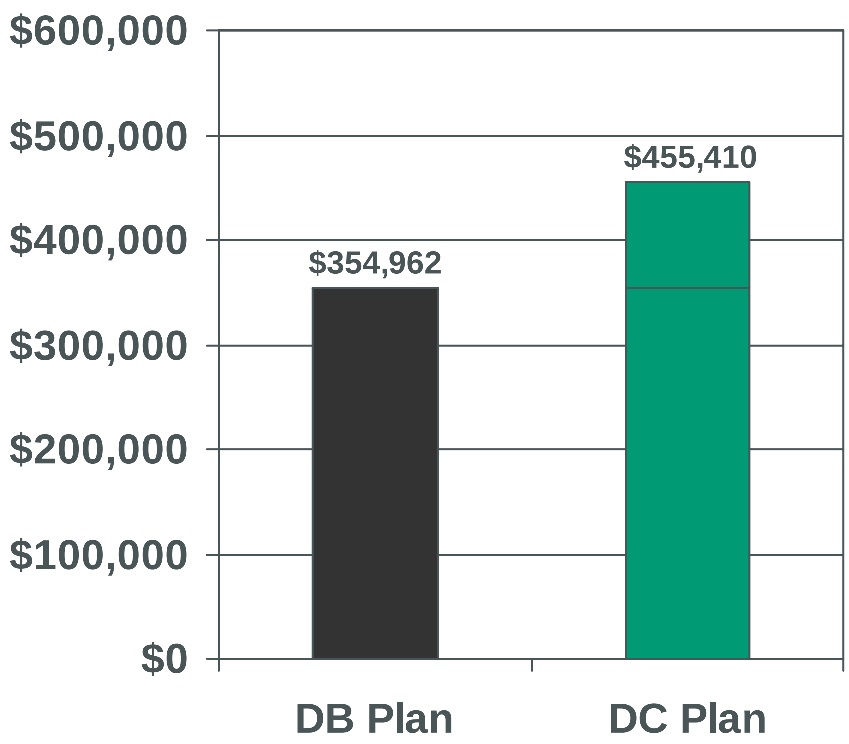
Lack of Longevity Risk Pooling in DC Plans Drives Up Cost



- Individuals must self-insure longevity risks ("over-save") thus, the DC plan needs to set aside at least $455,000 for each retiree at age 62

- In order to fund this amount, contributions must be **16.0%** of payroll

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2nd Strength of DB Pension Plans
More Effective Portfolio Diversification

- DB plans can maintain a well diversified portfolio over time – unlike individuals, DB plans do not age
- To protect against market shocks, individuals in DC plans are advised to shift toward more conservative investments as they age, sacrificing some expected return
- Lower returns mean more money must be contributed to deliver the same level of benefits

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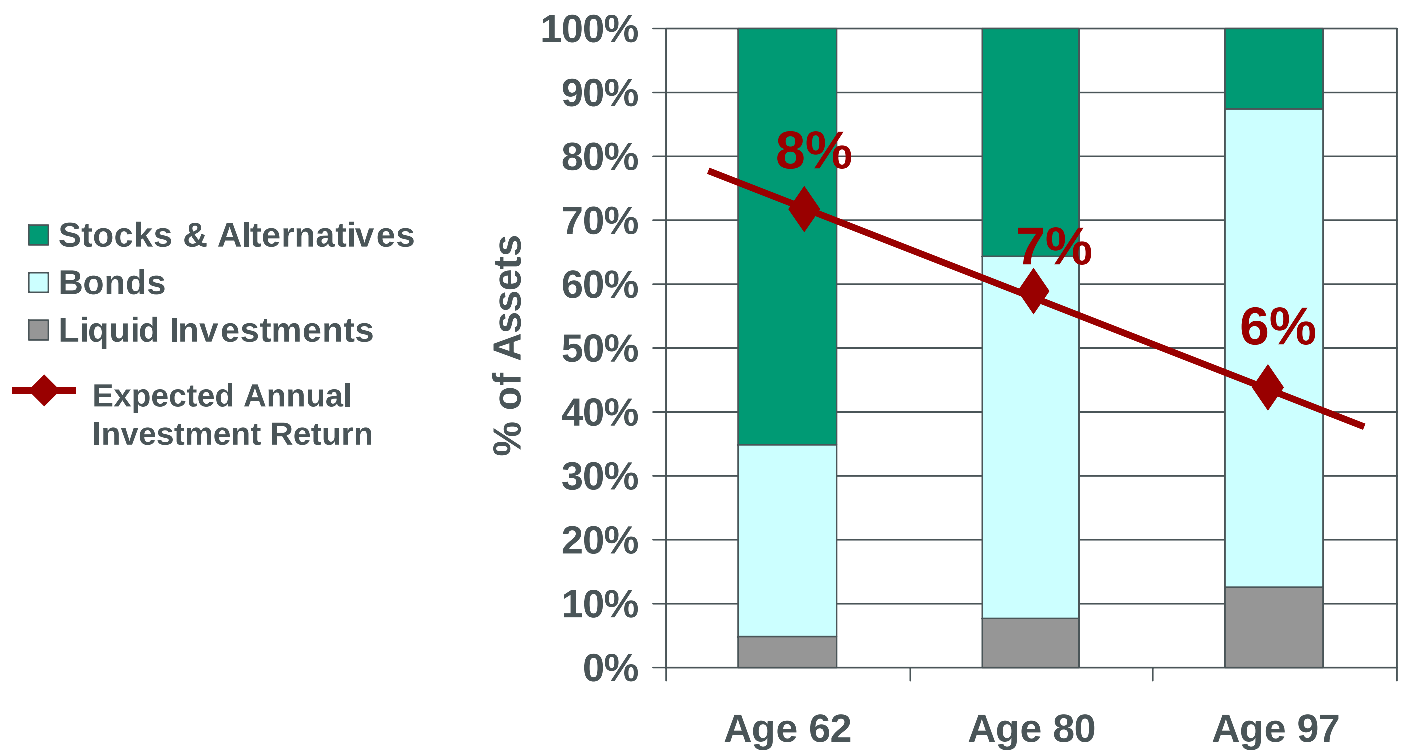
As Individuals Shift DC Portfolio Allocation, Expected Return Reduced



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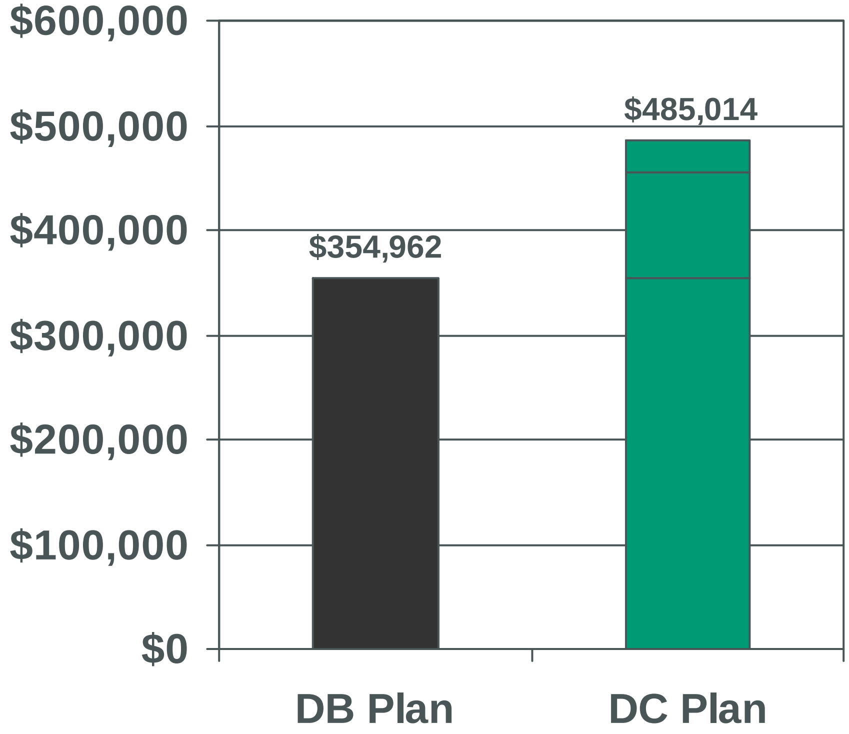
Age-Driven Shift to a Less Diversified Portfolio in DC Plans Drives Up Cost



- The DC plan now must have at least $485,000 set aside for each retiree at age 62

- In order to fund this amount, contributions must be **17.0%** of payroll

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3rd Strength of DB Pension Plans Pooled, Professionally-Managed Assets

- Assets in DB plans are professionally managed. Despite their best efforts, individuals tend to under-perform when it comes to investing in DC plans
- Pooled investments in DB plans can lower expenses
  - Large group pricing negotiation
  - Avoid expenses of individual recordkeeping, investment education, investment transactions
- Studies generally have shown that DB plan returns outperform DC plans by at least 1% annually

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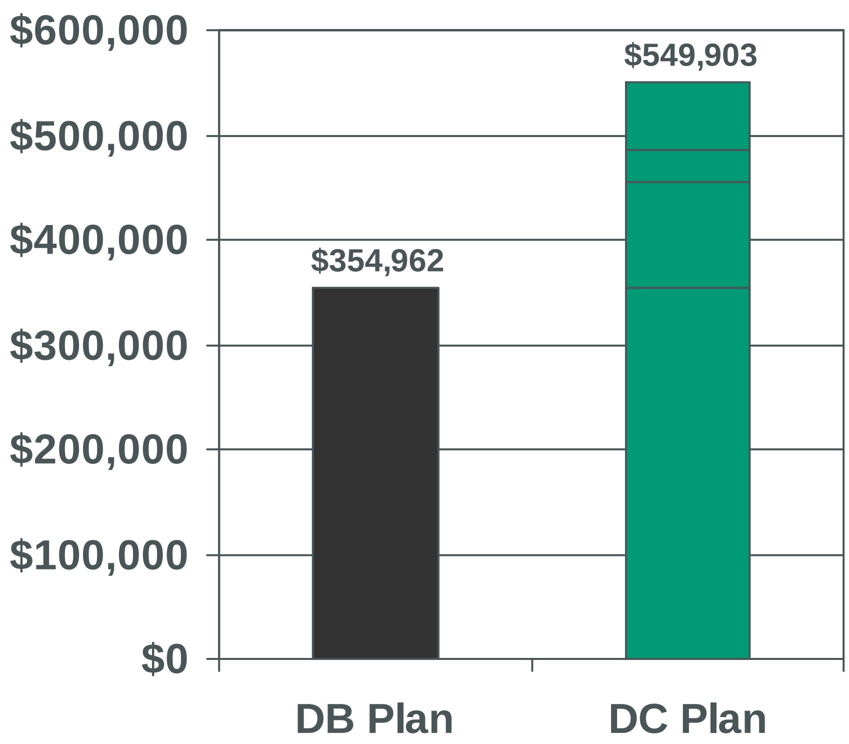
Lower Returns/Higher Fees in DC Plans Drive Up Cost



- The DC plan now must have almost $550,000 set aside for each retiree at age 62
- In order to fund this amount, contributions must be **22.9%** of payroll

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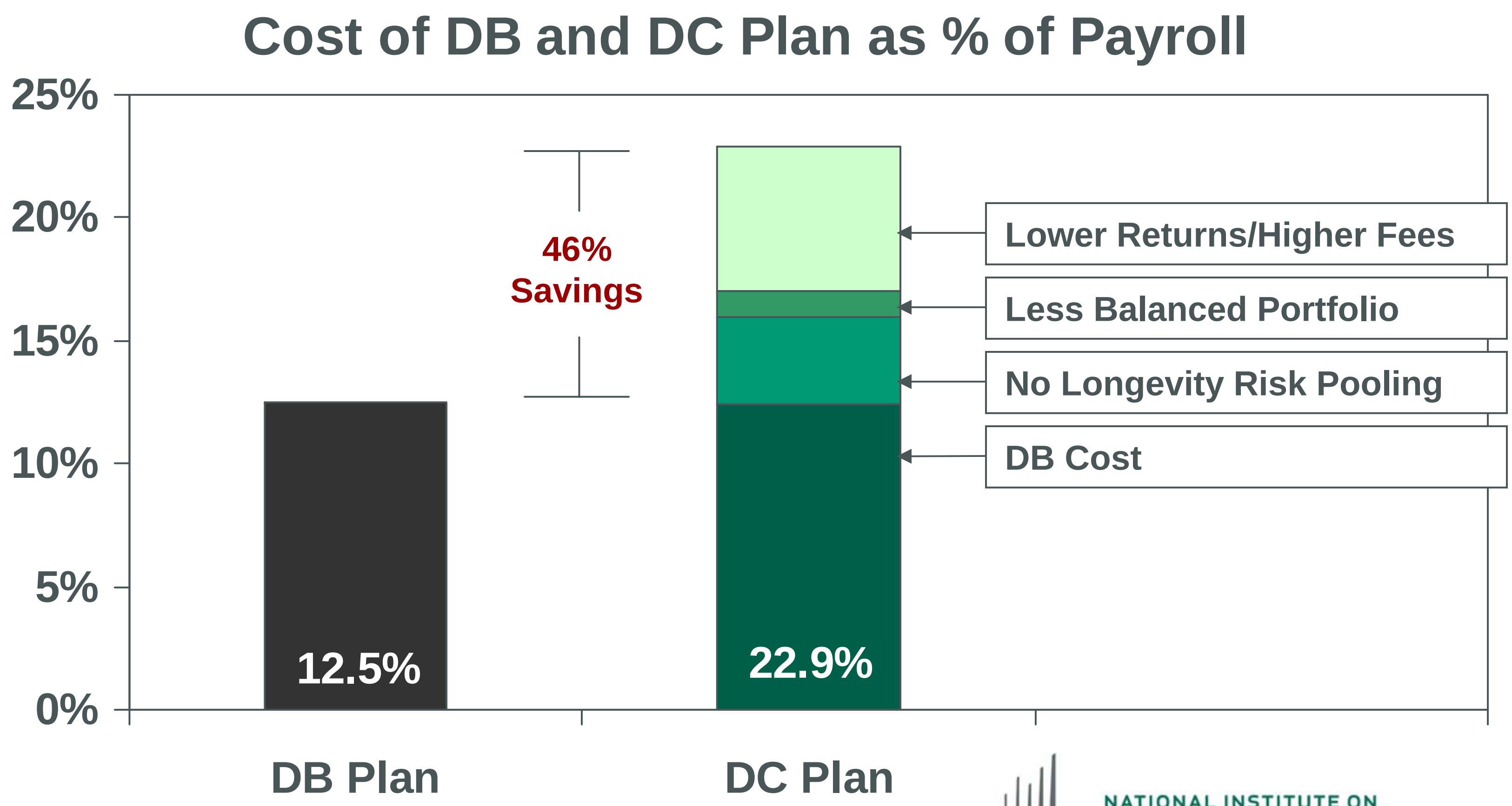
Cost of DB Plan is Almost Half the Cost of DC Plan



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Tallying the DB Plan Cost Savings

1. Longevity risk pooling saves …………………..…….	15%
2. Maintenance of portfolio diversification saves …	5%
3. Superior investment returns save …………………	26%
All-in costs savings in DB plans ………………….	**46%**

In other words - a DB plan can provide the same benefit at almost half the cost of a DC plan

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Conclusions

- DB plans have built-in economic efficiencies – provide a “better bang for the buck”
- These efficiencies drive significant cost savings for taxpayers and employers
- Decision makers should continue to carefully evaluate claims that “DC plans will save money”

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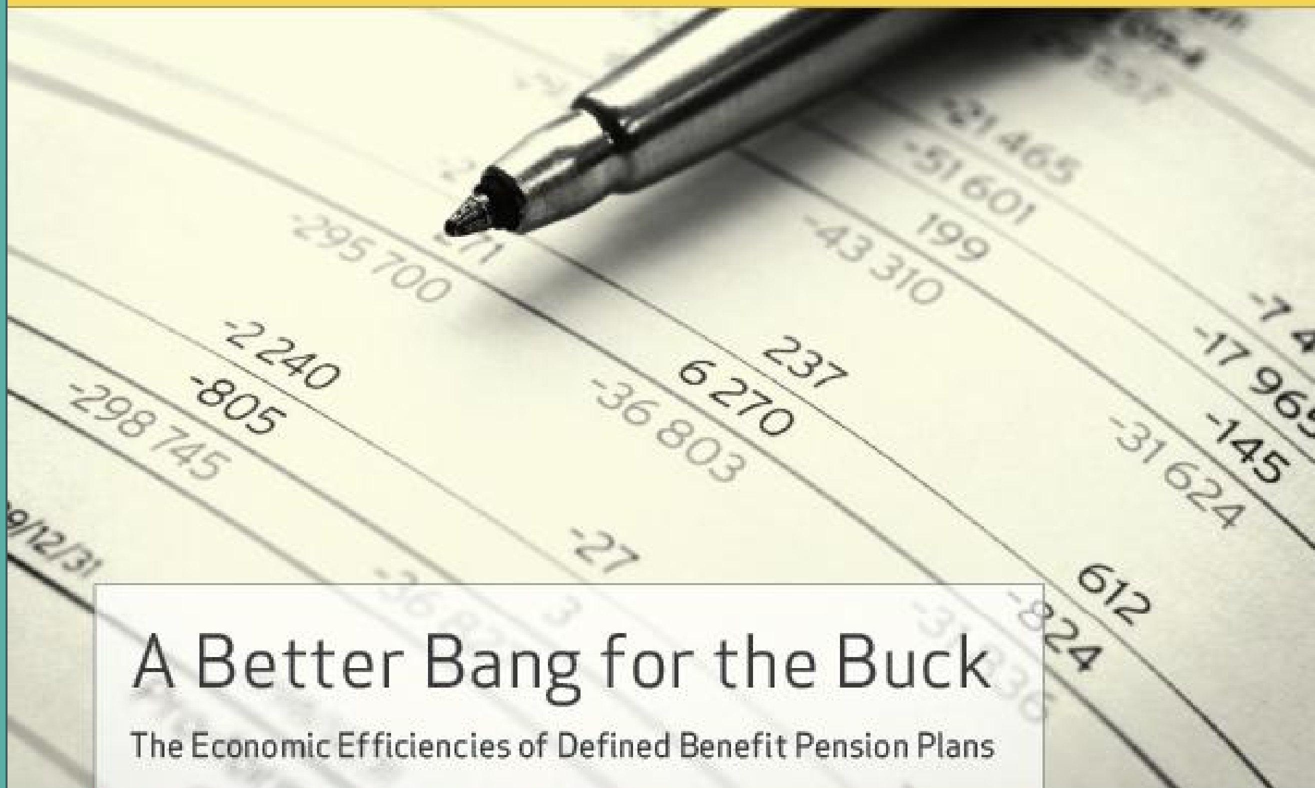

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