



The Hybrid Handbook

Not All Hybrids Are Created Equal

Dan Doonan, Executive Director, NIRS

Elizabeth Wiley, Consulting Actuary, Cheiron

October 20, 2021



NATIONAL INSTITUTE ON
Retirement Security

Reliable Research. Sensible Solutions.

Agenda

- Overview of Hybrid Handbook
- Overview of Beyond the ARC
- Q&A

THE HYBRID HANDBOOK

NOT ALL HYBRIDS ARE
CREATED EQUAL



NATIONAL INSTITUTE ON
Retirement Security

Reliable Research. Sensible Solutions.

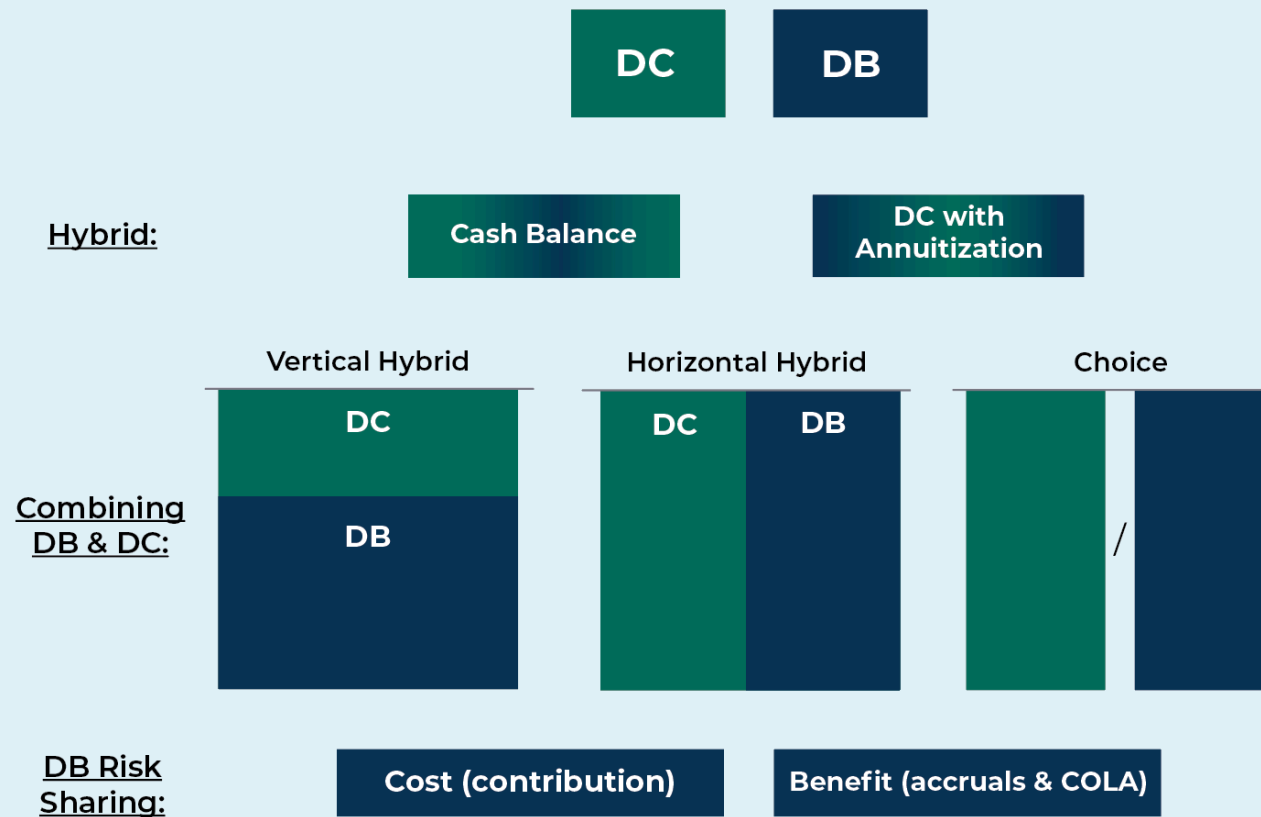


By Dan Doonan and Elizabeth Wiley

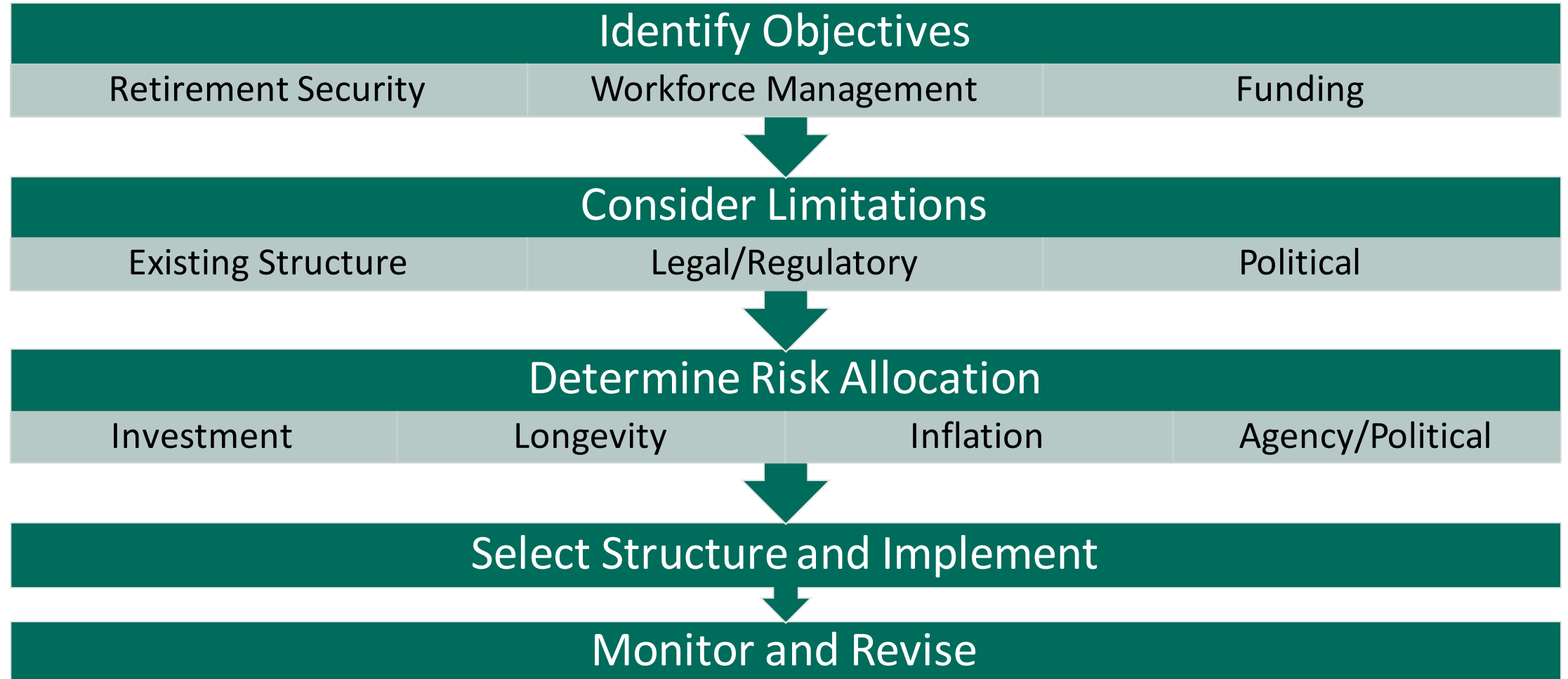
May 2021

Variety of Plan Designs in Public Sector

Figure 1: Overview of Hybrid Retirement Systems



Design Framework



Public Retirement Plan Objectives

- Recruit
- Retain
- Retire

Workforce Management

- Full Career
- Partial Career
 - Hired Mid-Career
 - Hired Young

Retirement Security

- Sustainability
- Predictability
- Volatility

Funding

Public Plan Design Limitations

- Structural
 - Existing Plan/Transition Costs
 - Social Security Coverage
- Political
- Legal/Regulatory
 - State limitations on structure
 - Legal protections for benefits

Public Plan Risks and Allocations

Sponsor/Taxpayers

Members



Investment

Longevity

Inflation

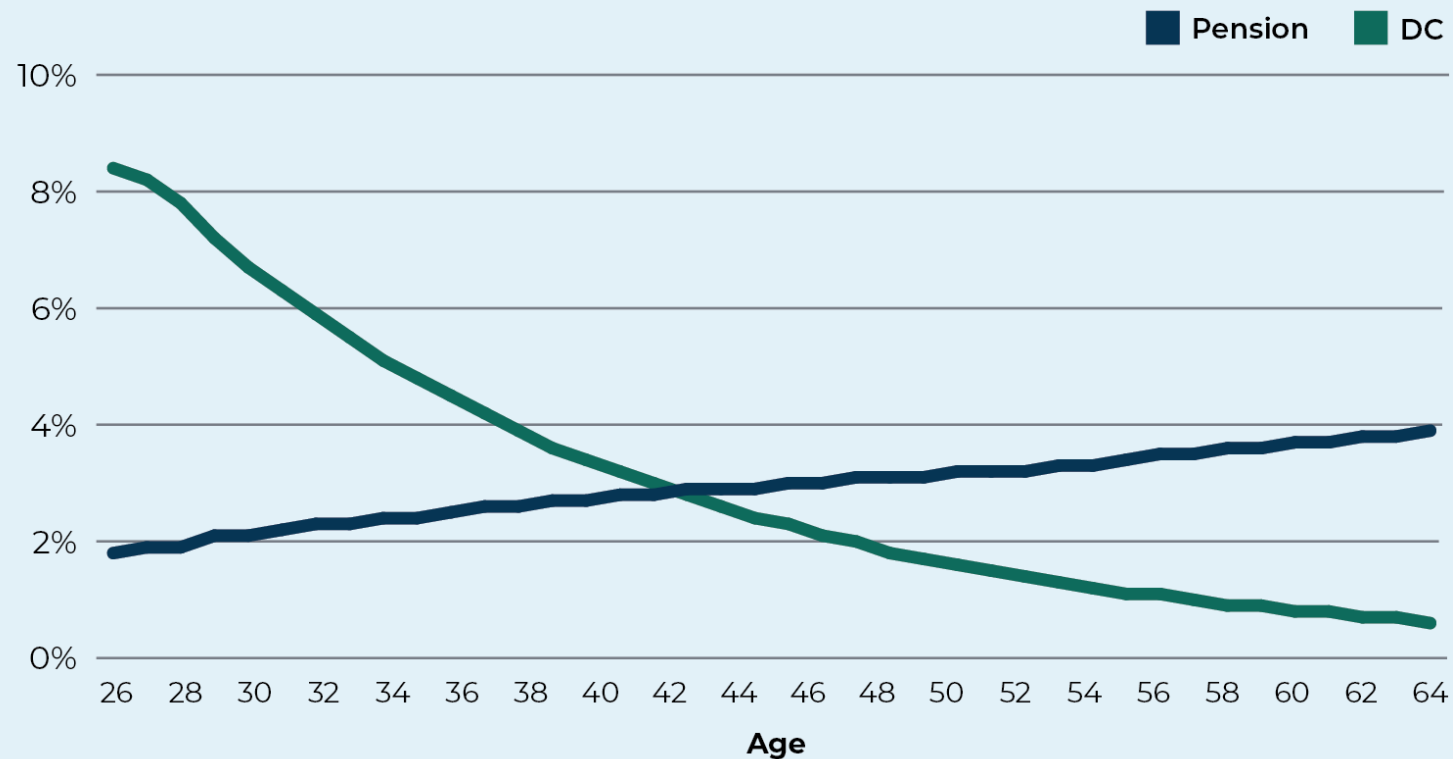
Retirement Plan Designs Evaluated According to Several Different Metrics

Table 1: Evaluating Key Features of Various Retirement Benefits

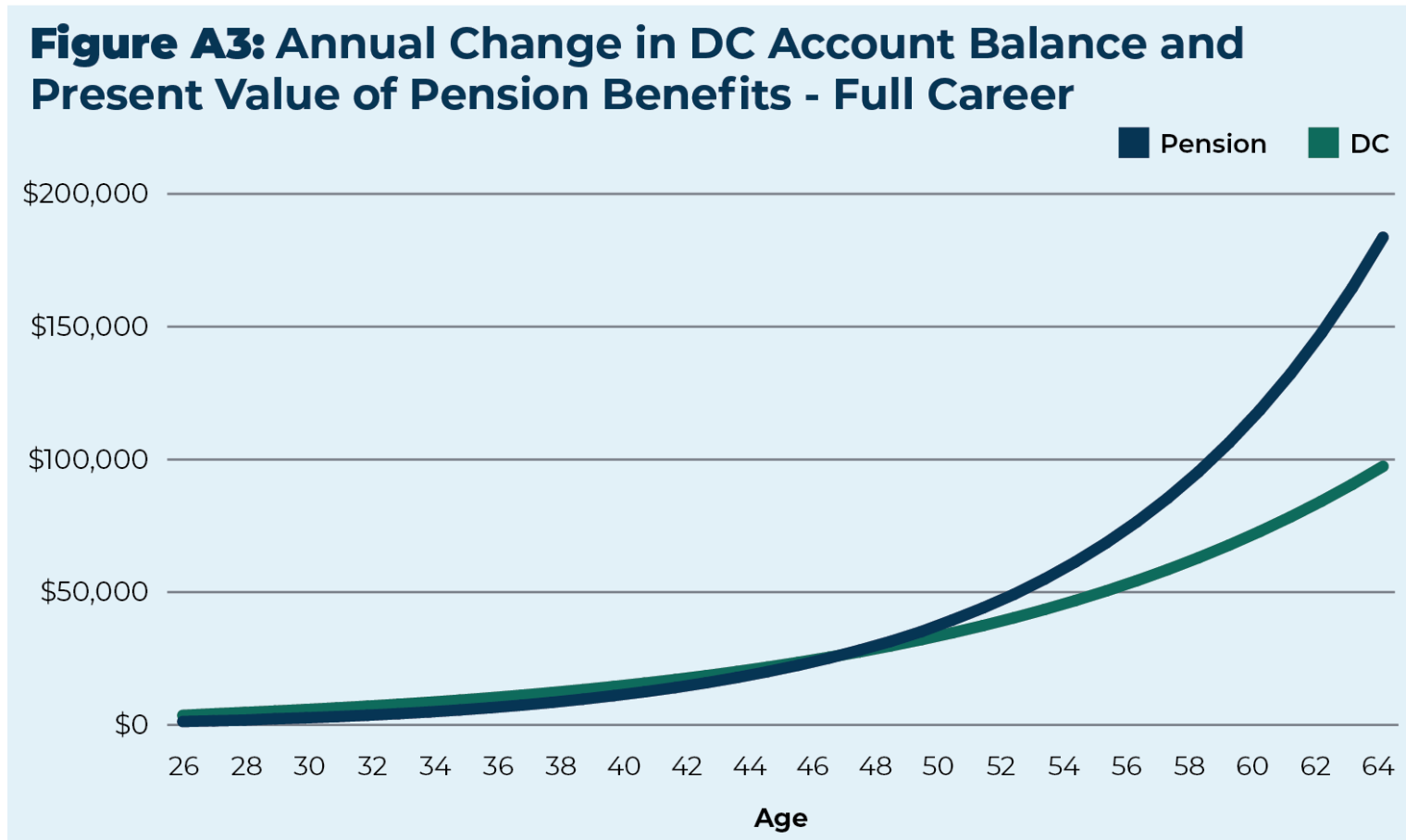
Key Features and Goals	Final Pay Pension	Cash Balance	Parallel DB/DC	Stacked DB/DC	Contribution Rate Risk Sharing DB	Variable Benefit DB	DC
Adequacy and provision of lifetime income to those who:							
• Worked a full career and retire from the plan	●	◐	◐	●	●	◐	◑
• Mid-career hire, retire from plan	●	◑	◐	◐	●	◐	◑
• Hired young, but terminated before retirement	◐	◐	◐	◐	◐	◐	◐
Purchasing power preservation in retirement	◐	◐	◐	◐	◐	◐	
Funding predictability	◑	◐	◐	◐	◐	◐	●
Funding flexibility	●	●	◐	◐	◐	●	
Benefit predictability and transparency	●	◐	◐	●	●	◑	
Workforce management effectiveness	●	◐	◐	●	◐	◐	◑

Accruals of Retirement Income as a Percentage of Pay: DB Flattens, DC Heavily Frontloaded

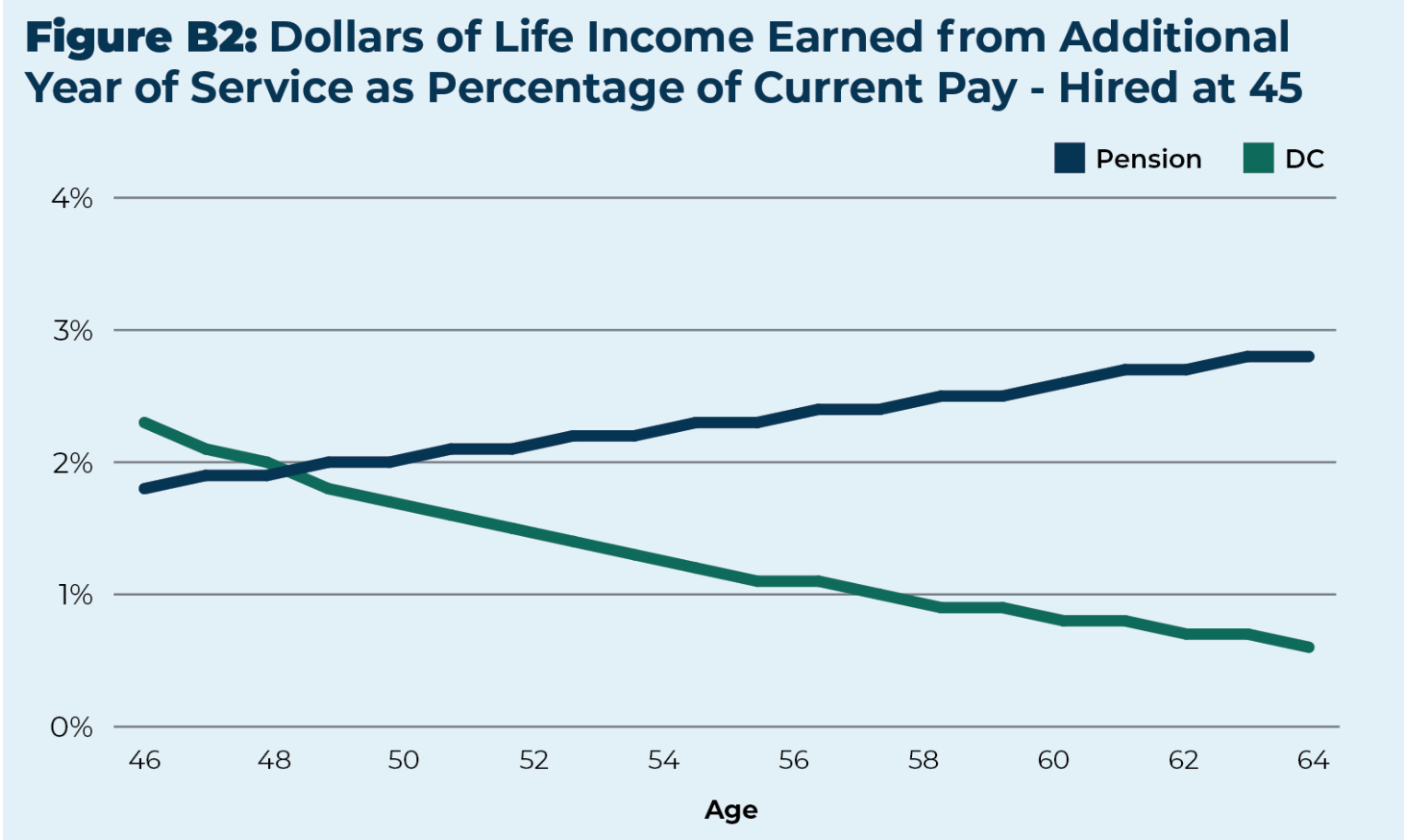
Figure A2: Dollars of Life Income Earned from Additional Year of Service as Percentage of Current Pay - Full Career



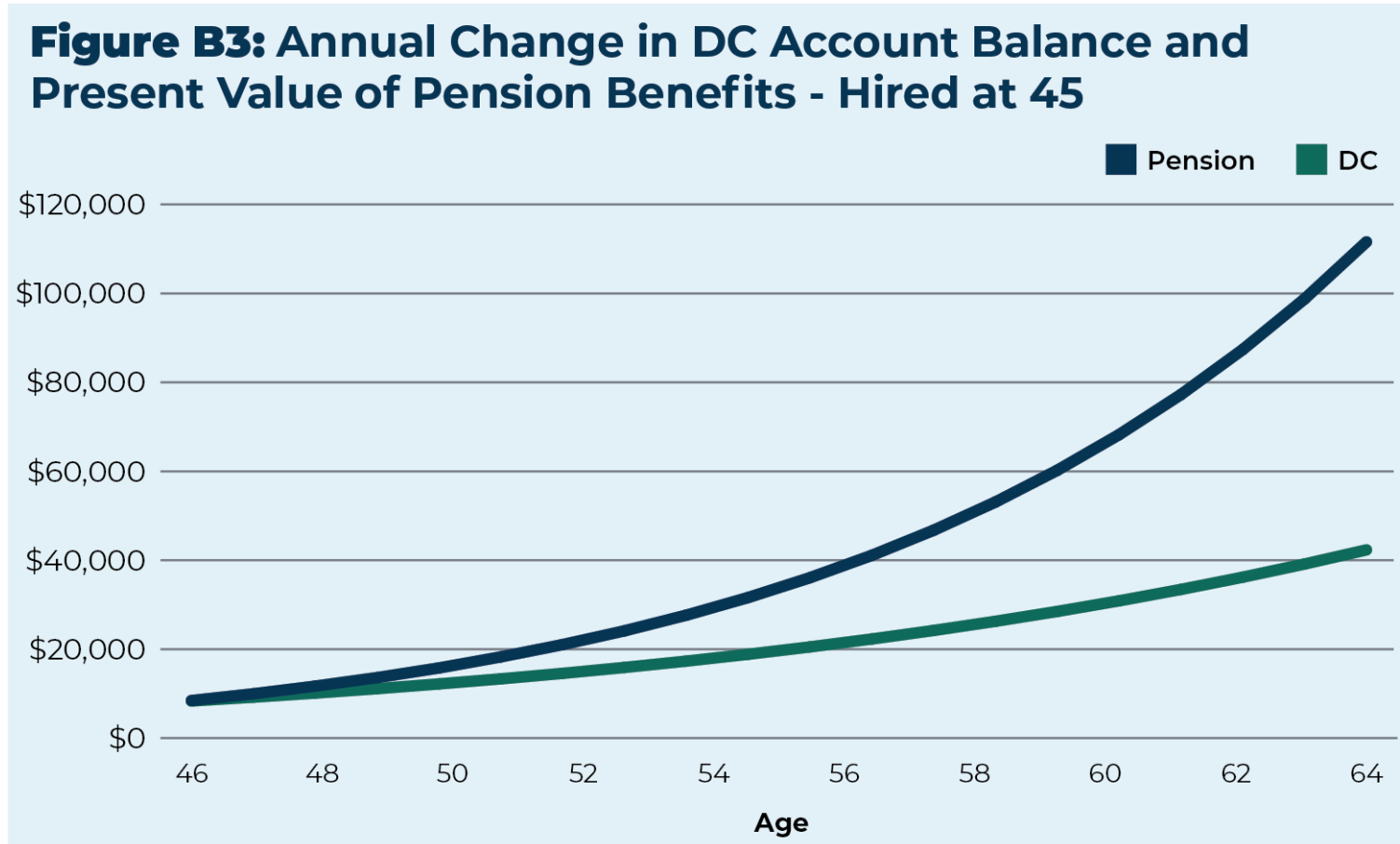
Late Growth in DC Account Balance Driven by Returns on Earlier Contributions, Not Contributions



Mid-Career Hires Miss Vital Early Years in DC Plans

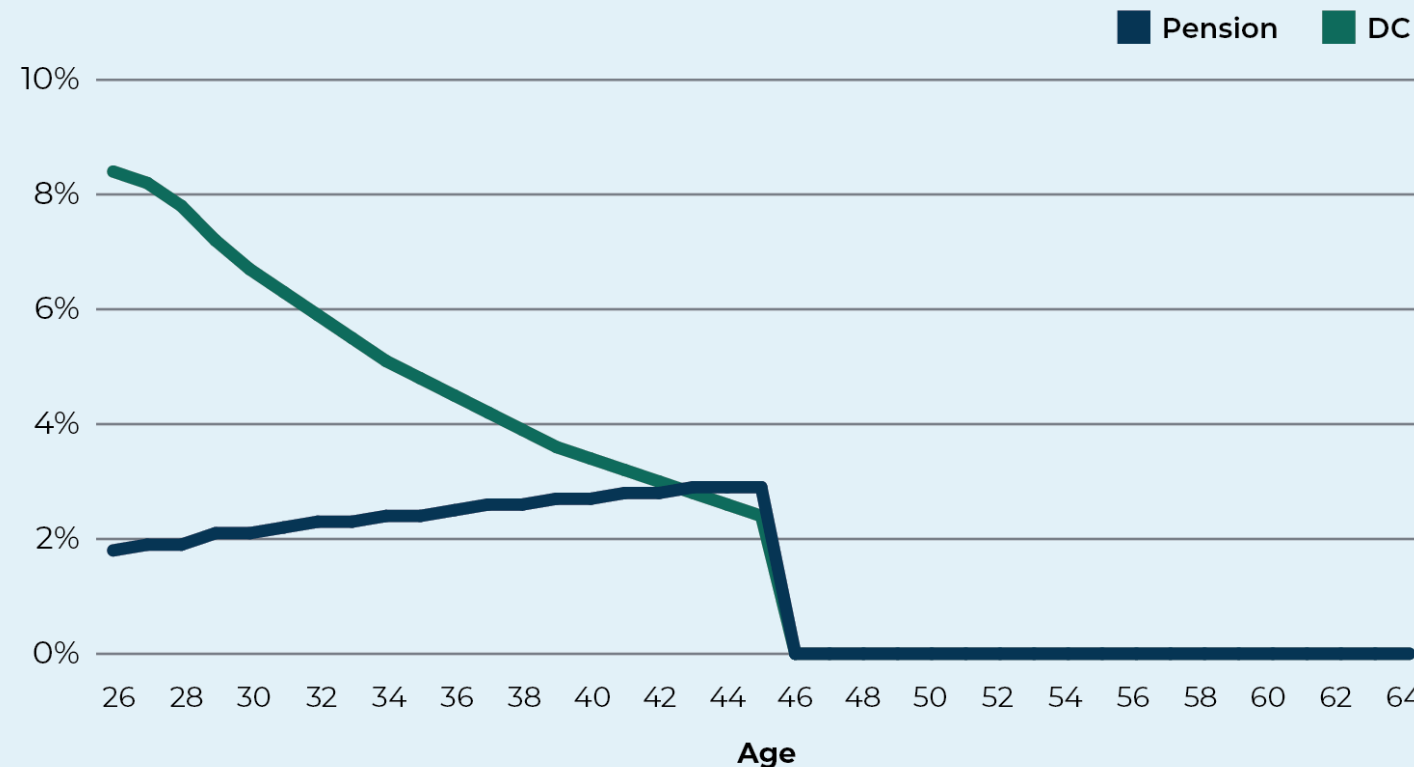


Mid-Career Hires Receive a Much Greater Benefit from DB Pension Plans

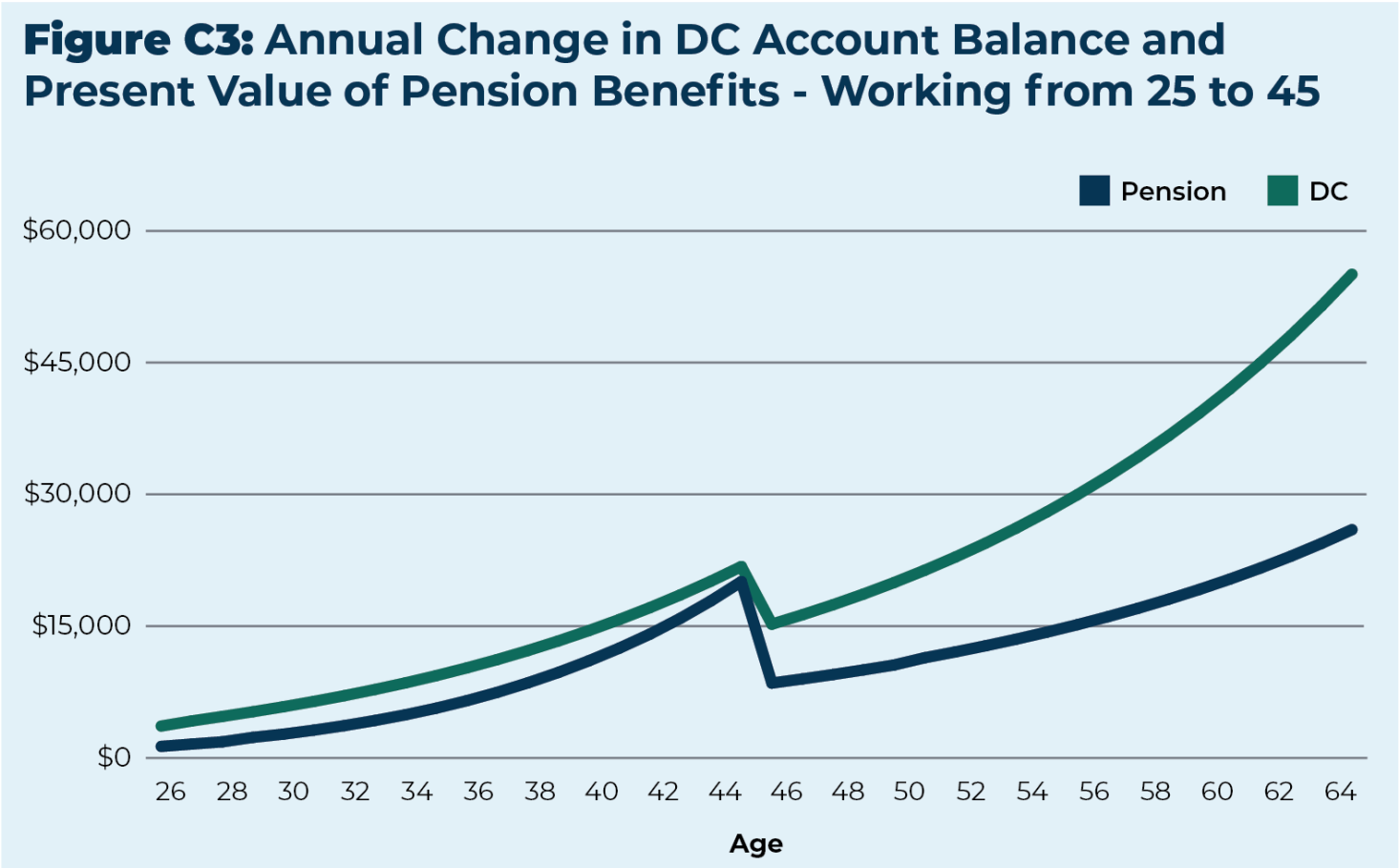


High Value of Early DC Contributions Not Impacted by Termination

Figure C2: Dollars of Life Income Earned from Additional Year of Service as Percentage of Current Pay - Working from 25 to 45



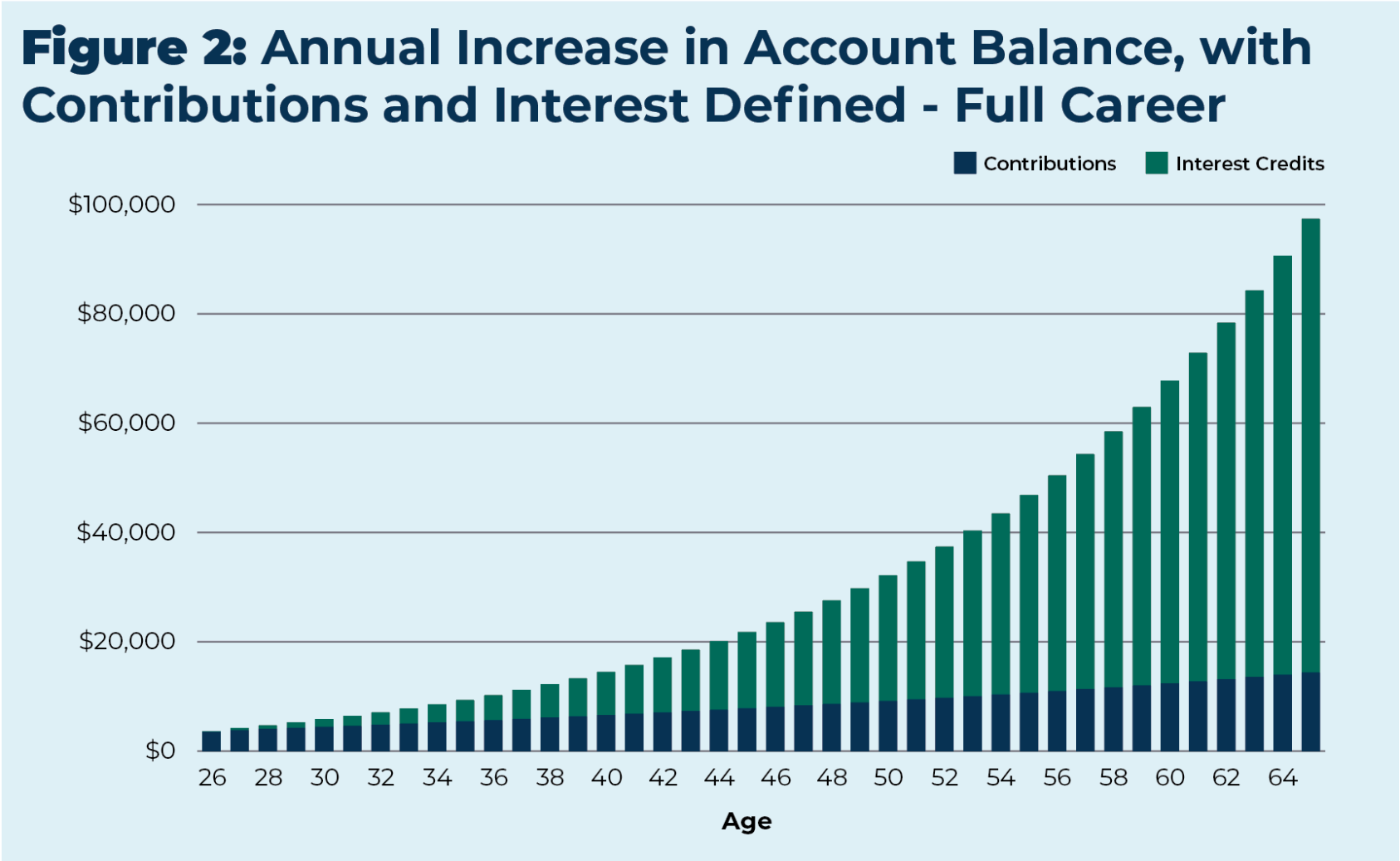
DC Account Balance Continues to Grow with Returns after Termination; DB Present Value Grows as Deferral Period Shortens



Cash Balance and DC Annuitization

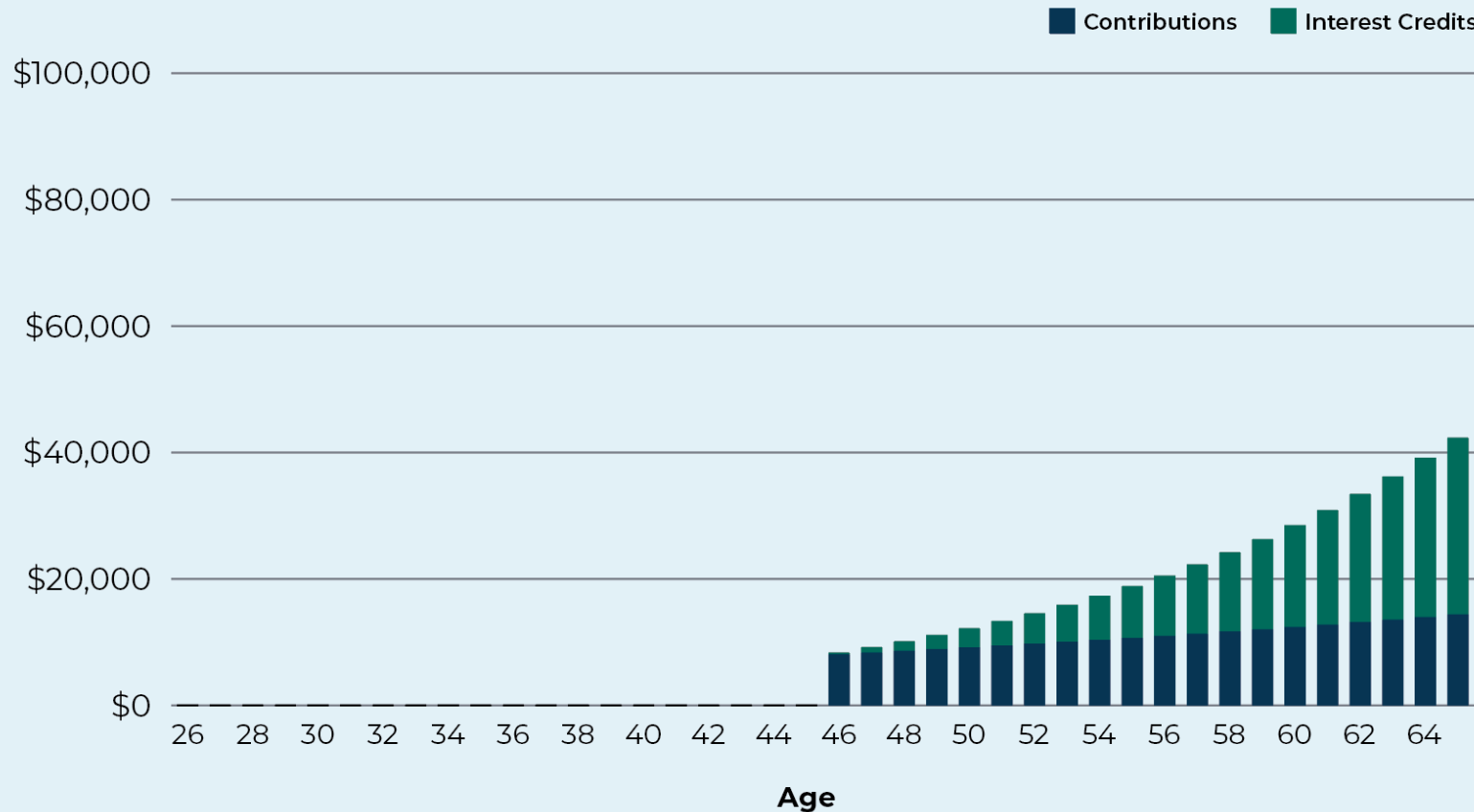
- Cash balance have existed in public sector since at least 1947
- Effectiveness at meeting objectives based primarily on:
 - Accruals
 - Interest
 - Annuitization
 - Adjustments related to inflation, both during employment and retirement
- Annuitized DC plans similar post retirement

Cash Balance Account Growth: Full Career

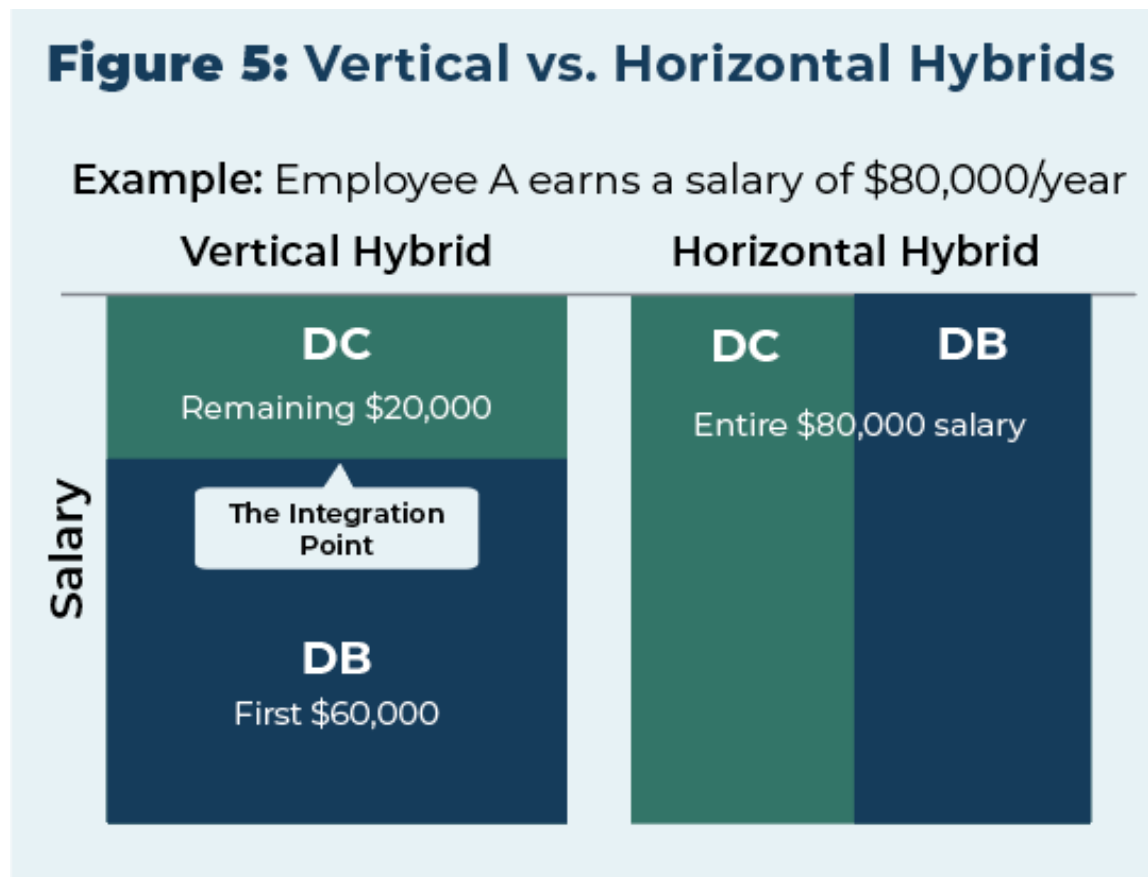


Cash Balance Account Growth: Mid-Career Hire

Figure 3: Annual Increase in Account Balance, with Contributions and Interest Defined - Mid-Career Hire



Vertical and Horizontal Hybrid Plans Combine DB & DC Plans, but Apply Them to Different Portions of Salary



DB Plans Share Risk Through Benefits in Two Ways

- Post-retirement benefit adjustments
 - Adjustments limited based on funded status
 - Limitations based on investment returns
 - Suspensions
- Variable benefit accruals

Existing DB Plans Share Costs in Various Ways

**Table 2: Risk-Sharing Provisions
Present in Public Plans**

Pre-determined Contribution Split
between Employee and Employer

Actuarially Determined Employer
Contribution (ADEC) Split

Dividing Only the Normal Cost
Between Employee and Employer

Risk-Sharing Based on Investment
Returns of the Plan

Risk-Sharing Based on the Funded
Status of the Plan

DB Plans Can Offer Attractive Benefits to Non-Career Workers

- Colorado PERA: In lieu of refunding non-vested contributions, participants can choose:
 - Leave funds, which receive interest and 50% match
 - Employer match increases to 100% at age 65
 - Annuitization of non-vested benefits at cost
 - Shares access to PERA's efficiency & longevity pooling
 - Likely helps prevent leakage
- Index frozen benefits

Considerations in Implementing Design

- Transition procedures and considerations
 - Stakeholder communications
 - Investment adjustments
 - Workforce impacts
 - Legacy unfunded amortization
- Monitor and revise



Beyond the ARC: Innovative Funding Strategies from the Public Sector



NATIONAL INSTITUTE ON
Retirement Security

Reliable Research. Sensible Solutions.

Key Findings

- **Liability Partition:** for states with large unfunded liabilities, some method of partitioning those liabilities can help in confronting legacy costs.
- **Employer Side Accounts:** employers in large public plans often have little power over contribution rates. Establishing employer side accounts enables employers to manage costs over time by pre-paying or setting aside funds for future contributions.
- **Withdrawal Liabilities:** when employers exit a pension plan, they can leave their existing liabilities with the remaining employers in the plan. Enforcing a withdrawal liability means exiting employers must still cover their portion of existing liabilities.
- **Pension Obligation Bonds and Dedicated Revenues:** there exist multiple ways of guaranteeing revenue for a plan outside of the regular employer and employee contributions.

Key Features and Accomplishments

Table 1: Key Features and Accomplishments of Various Reforms

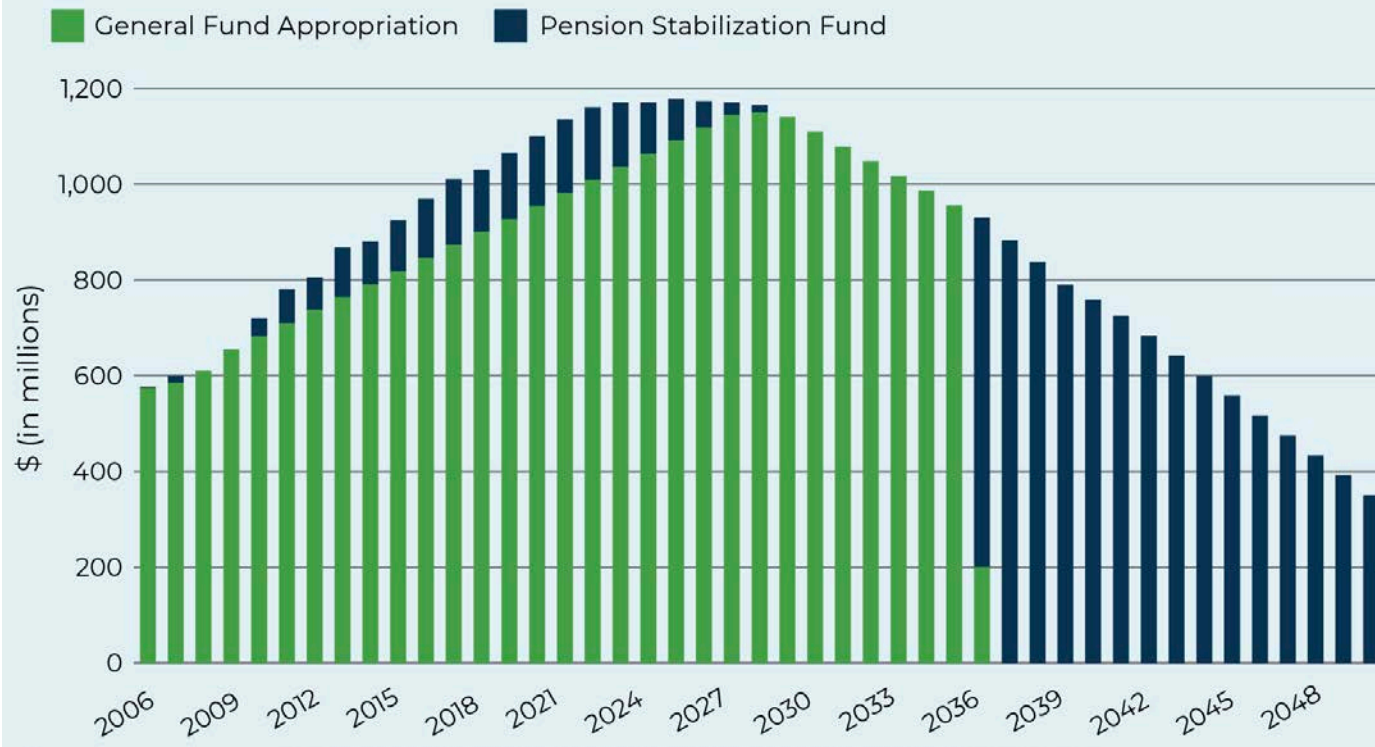
Funding Policies & Reforms	Increase Stability/ Predictability of Costs	Delink Legacy Costs from Contribution Rate	Utilize Partial Paygo Funding	Helps Prevent Employer Exits	Prevents Cost- Shifting Among Employers	Participating Employers Have More Control Over Costs	Contribution Rate Better Reflects Value of Benefits	Improves Contribution Discipline
Liability Partition (INPRS TRF)	●	●	●				●	●
Liability Partition (KY KRS NH)	●	●		●	●	◐	●	●
Side Accounts	●			◐		●		◐
Pension Bonds	●	●		◐			●	
Contribution Collars and Withdrawal Liability (Maine PERS)	●			●	●	●	●	
Withdrawal Liability	●			●	●			●
Dedicated Revenues	●	●					●	◐

Indiana Partition

- **The Problem:** Indiana's Teacher Retirement Fund (TRF) was late to transition to prefunding, remaining largely pay-go until the mid-1990s. This resulted in a significant unfunded liability.
- **The Solution:** Indiana created a new TRF plan with the same benefit structure, but which would be prefunded from the beginning. This effectively "partitioned" the existing legacy debt in the Pre-96 TRF.
- Plan administrators were clear that the Pre-96 TRF's funded status was low by design, but they also set out to systemically exceed their low bar for funding.
 - A Pension Stabilization Fund (PSF) was created for the legacy costs and seeded with \$425 million
 - The cash flow needs were mapped out
 - A general fund appropriation would be made each year, which largely covers the pay-go benefit costs until 2037
 - The PSF also would receive lottery proceeds, and 50 percent of state reserve balances above 10 percent of appropriations. The PSF also would retain investment earnings.

Indiana Mapped Out Its Cash Flow Needs

Figure 1: Pre-96 Account DB Appropriations Forecast



Indiana Partition, Continued

- Over time the balance of liabilities has shifted as a greater portion of active workers are in the new, prefunded plan. Today there are more workers in the prefunded plan than in the Pre-96 plan: only 15% of active teachers remain in the Pre-96 TRF.
- When the plan was closed, liabilities continued to grow, and workers continued to accrue benefits in the Pre-96 TRF plan. However, those liabilities seem to have peaked in 2015 at \$17.0 billion. Since then, the Pre-96 TRF liabilities have drifted down to \$14.3 billion.
- The success of the partition of existing liabilities in Indiana's TRF has earned the state credibility with stakeholders and external groups, including bond ratings agencies. A large part of this success has been the state's commitment to stick with the strategy in times when it was convenient and times when it wasn't.

Kentucky Considers Another Approach to Partitioning Existing Liabilities

- **The Kentucky Employees Retirement System Non-Hazardous plan is deeply underfunded.**
 - As of June 30, 2020, the plan is 14.2 percent funded.
 - Due to the plan's large unfunded liabilities, the contribution rate for retirement benefits increased to 81 percent of payroll for 2020, of which 73 percent is going solely to service that was earned in the past.
 - Employers have attempted to reduce plan payroll in order to avoid paying these high costs, causing plan payroll to fall by 24 percent between 2010 and 2020. This shifts the burden of existing liabilities to other employers in the system.
 - If enough employers adopt strategies to reduce payroll, it can create a vicious downward cycle.
- A proposal was passed unanimously by the House (90-0) to address this problem by determining each employers' share of unfunded liabilities as of June 30, 2019, as a fixed dollar amount, and requiring employers to pay their share of obligations over 27 years. The Senate was unable to act when the pandemic hit.

Kentucky's Fixed Allocation of UAL, Continued

- With this proposal, an employer's share of unfunded liabilities would no longer be driven by their share of the plan payroll, preventing employers from "gaming" the funding formula with employment practices.
- Contribution rates would more accurately reflect the cost of benefit accruals, and the cost of past underfunding would become a separate cost item.
- Similarities with Indiana:
 - In each case, some costs were separated from traditional plan funding methods. However, customary actuarial funding strategies were used for benefits going forward with contribution levels that were closer to the value of the benefits being earned.
 - A key difference is that Indiana kept the legacy costs largely on a pay-go basis, while the effort in Kentucky is more aggressive in moving toward full funding.

Oregon Employer Side Accounts

- The Oregon legislature authorized the use of side accounts in 2002 for the Public Employees Retirement System (PERS) system.
- In this version of side accounts, the excess contributions are typically used to reduce contributions by amortizing those funds over 20 years. However, legislation passed in 2018 (SB 1566) and 2019 (SB 1049) have added more flexibility, whereby the side account can now be used to reduce minimums for the next six, 10, 16 or 20 years.
- In 2018 the legislature established an Employer Incentive Fund (EIF) that “provides a 25 percent match (up to the greater of five percent of an employer’s UAL or \$300,000) on qualifying employer lump-sum payments made after June 2, 2018.”
- Thus far, the state has made \$64.7 million in matching contributions for PERS employers, and the EIF program has brought \$541.7 million into PERS.

Side Accounts in California and New York

- **CalPERS' California Employers' Pension Prefunding Trust:**
 - Employers can submit pre-payments to CalPERS, with those funds being deposited into a Section 115 trust that is administered by CalPERS.
 - Employers have flexibility regarding when to use these funds to reduce their pension contributions.
 - CalPERS will offer this service to all jurisdictions in California, even if they do not contract with CalPERS for pension benefits.
- **New York** jurisdictions participating in the Employees' Retirement System (ERS) and the Teachers' Retirement System (TRS) can establish reserve funds on their own to help stabilize their pension costs over time.
 - These funds are not managed by ERS or TRS, but by employers who establish and fund accounts themselves.
 - Employers can contribute up to two percent of an employees' salary into the reserve fund in a given year. In addition, the total amount cannot exceed ten percent of payroll.

Maine PERS Reforms

- In 2018, Maine passed reforms to the Participating Local District (PLD) plan within Maine PERS.
- While the plan was fairly well-funded, it is an optional plan for most local governments and there was concern that employers could leave the plan if rates increased.
- A set of reforms adopted which included:
 - Adjusted how employee and employer contribution rates would be set
 - Imposing minimum and maximum contribution rates for both employees (42% of NC, 9%) and employers (58% of NC, 12.5%)
 - Added a withdraw liability that protects the plan from financial harm if employers cease participation in the system
 - Benefit changes included: establish a process for determining Cost of Living Adjustments (COLAs) & reduced early retirement subsidies and various other non-core benefits

Withdrawal Liabilities

- **Indiana Public Retirement System (INPRS):**
 - HB 1466, passed in May 2015, established a withdrawal liability for employers who exclude future hires from participating in INPRS.
 - HB 1466 provided “that an employer that is eligible but not required to participate in the public employees’ retirement fund (PERF) must pay the employer’s share of the unfunded liability attributable to the employer’s current and former employees if the employer withdraws from PERF or otherwise phases out its participation in PERF.”
 - Four employers who had recently decided to exclude future employees from INPRS participation ended up owing the retirement system a total of \$73 million.
- **California Public Employees Retirement System (CalPERS):**
 - The Terminated Agency Pool (TAP) is a separate fund to pay the benefits accrued at employers who end their contract with the retirement system.
 - TAP uses a conservative investment policy and generally a lower discount rate than the main CalPERS plan.

Dedicated Revenues

- **Sports Betting and Gambling:**
 - Kentucky – legislation introduced in 2020
 - Oregon – SB 1049 dedicated sports betting revenue to PERS
 - Illinois – Chicago casino will fund police and fire pensions
 - Kansas – casino revenue
 - Oklahoma – state lottery proceeds
 - New Jersey – transfer of state lottery
- **Stabilization Funds:** Louisiana, North Carolina, Oklahoma
- **Coal Severance Tax:** Montana
- **Tobacco Settlement Securitization:** West Virginia's Teacher Retirement System

Questions

