



# VRS Update

Patricia S. Bishop, VRS Director  
October 17, 2016

- Retirement Plans Overview
- VRS Defined Contribution Plans Overview
- Hybrid Retirement Plan Potential Changes (HB 1072)
- Other Potential Plan Design Alternatives
- Rate Structure and Other Plan Designs
- General Considerations



## Retirement Plans Overview

# VRS Total Membership



	Plan 1	Plan 2	Hybrid	Total
Teachers	88,904	37,057	20,893	146,854
Political Subdivisions	57,197	32,402	16,055	105,654
State Employees	46,201	19,032	12,418	77,651
State Police Officers' Retirement System (SPORS)	1,400	547	–	1,947
Virginia Law Officers' Retirement System (VaLORS)	4,502	4,645	–	9,147
Judicial Retirement System (JRS)	267	69	82	418
<b>Total Active Members</b>	<b>198,471</b>	<b>93,752</b>	<b>49,448</b>	<b>341,671</b>

Total Active Members	Retirees/ Beneficiaries	Inactive/ Deferred Members	VRS Total Population
<b>341,671</b>	<b>192,065</b>	<b>144,181</b>	<b>677,917</b>

As of June 30, 2016



## VRS DC Plans Overview



# Total DC Assets & Accounts

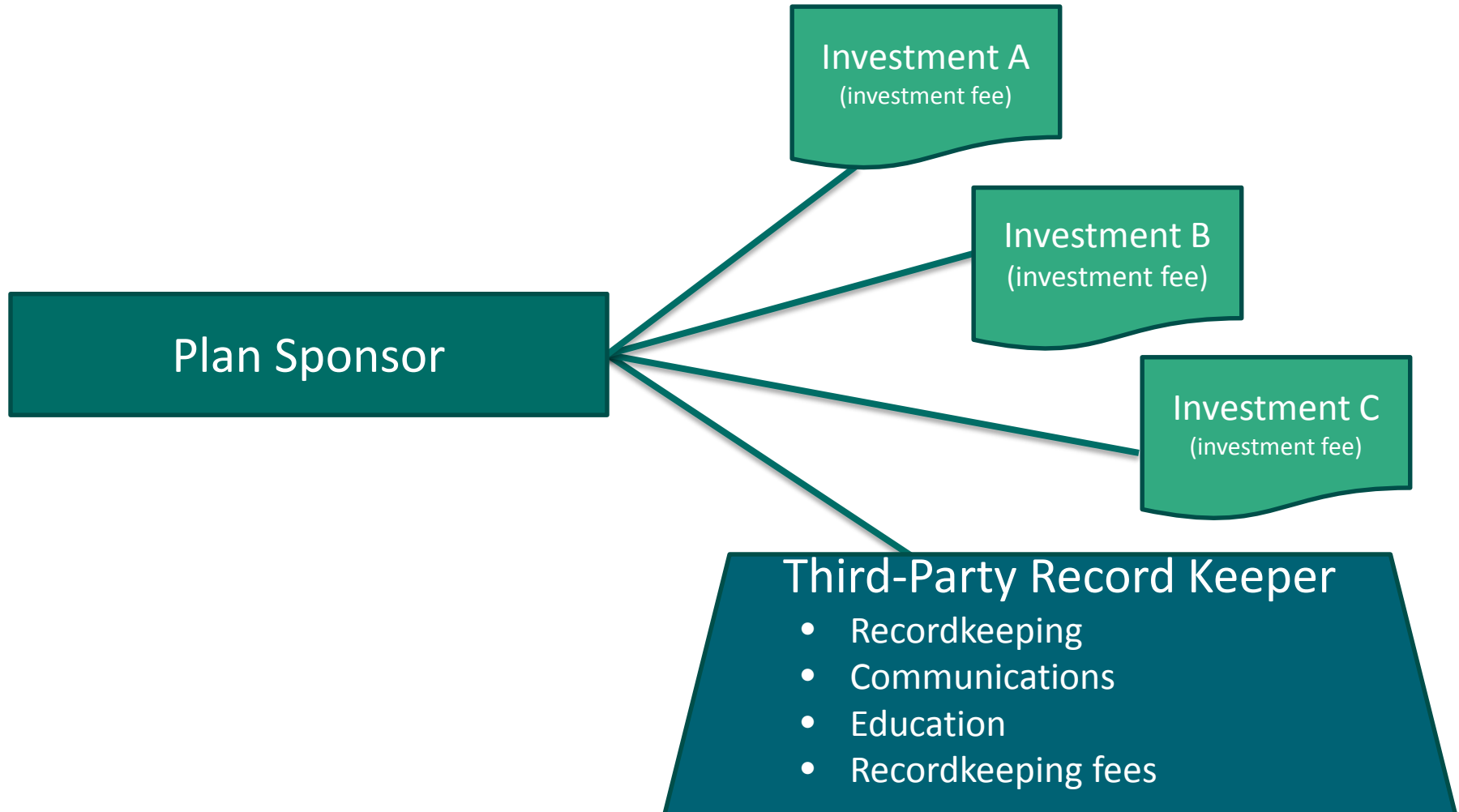


Plan Name	Assets as of 6/30/16	Accounts* as of 6/30/2016
<b>457 Deferred Compensation Plan**</b>	\$2,184,755,502	76,863
<b>Virginia Cash Match Plan**</b>	\$379,078,068	69,779
<b>Hybrid Cash Match Plan**</b>	\$58,078,620	59,772
<b>Hybrid 457 Deferred Compensation Plan**</b>	\$15,834,460	6,602
<b>ORP for Political Appointees (ORPPA)</b>	\$12,444,585	326
<b>ORP for School Superintendents (ORPSS)</b>	\$317,149	3
<b>Virginia Supplemental Retirement Plan (VSRP)</b>	\$103,494	2
<b>Total Unbundled Assets/Accounts (w/ ICMA-RC)</b>	<b>\$2,650,611,878</b>	<b>213,347</b>
<b>ORP for Higher Education</b>	\$939,273,309	11,836
<b>Total Assets/Accounts Across All DC Plans</b>	<b>\$3,589,885,187</b>	<b>225,183</b>
<i>* Does not represent unique participants</i> <i>** May include reserve, beneficiary, and/or forfeiture accounts</i>		

# Plan Structure – Unbundled vs. Bundled



**Unbundled Services:** Investment management and record keeping/administrative services covered under separate contracts

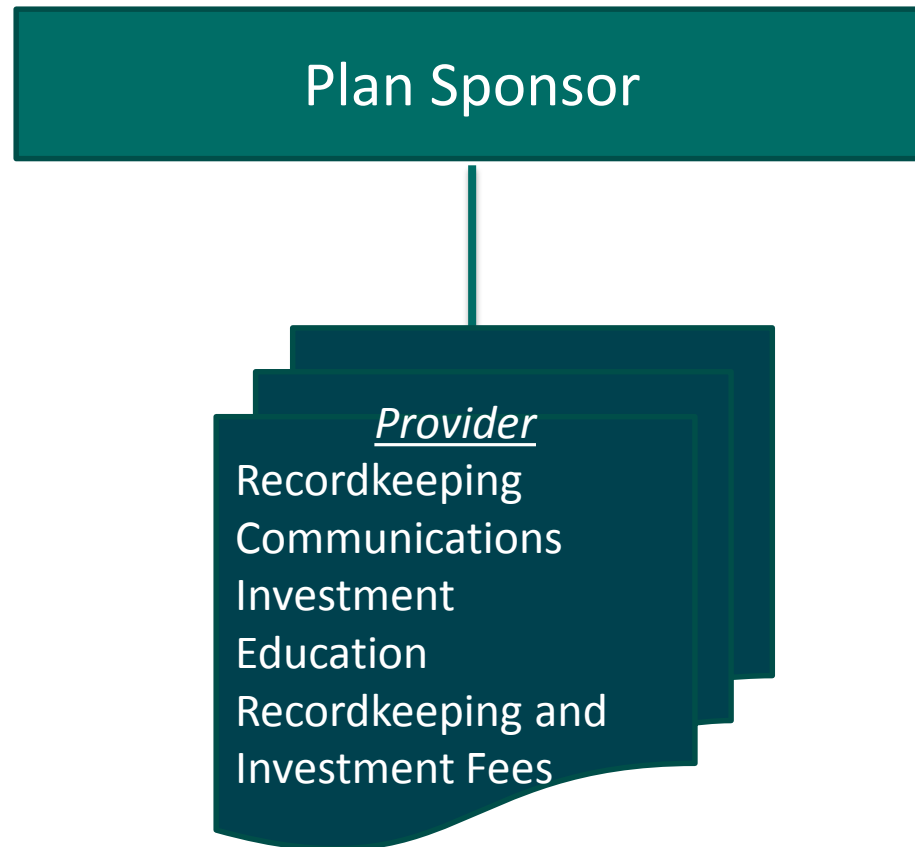


# Plan Structure – Unbundled vs. Bundled



## **Bundled Services:**

Investment Management and record keeping/administrative services covered under one contract





- Creates a generic name for an investment
  - Focus on asset class, as opposed to investment firm(s) providing the investment

## Examples:

- Target Date 2030 Portfolio versus BlackRock LifePath Index 2030 Fund O
  - Stock Fund versus BlackRock Equity Index Fund F
- Simplifies investment menu for participants
  - Provides a higher level of efficiency for plan sponsors
    - When needed, can more easily replace individual fund managers
    - Provides opportunities to reduce costs

## Fees should be competitive

- Administrative and recordkeeping fees should be separate from investment fees
- Increased use of explicit flat dollar fees
- Directly reflect level of servicing
- Increased prevalence of performance standards with financial penalties
- Every dollar saved in fees is an additional dollar for retirement savings

- Investment options organized into three pathways
- Designed to make it easier for participants to implement investment decisions
- Mix and match investment options within each path
- Helps participants meet objectives, risk tolerance and overall investing style

## Do-It-For-Me Path

## Help-Me-Do-It Path

## Do-It-Myself Path

- Includes target-date funds for participants who would like a portfolio that's already diversified.
- Select funds based on your projected retirement date and individual needs.

Fund	Expense Ratio	Fund	Expense Ratio
Retirement Portfolio	0.08%	Target Date 2040 Portfolio	0.08%
Target Date 2020 Portfolio	0.08%	Target Date 2045 Portfolio	0.08%
Target Date 2025 Portfolio	0.08%	Target Date 2050 Portfolio	0.09%
Target Date 2030 Portfolio	0.08%	Target Date 2055 Portfolio	0.09%
Target Date 2035 Portfolio	0.08%	Target Date 2060 Portfolio	0.09%

# Help-Me-Do-It Path



Offers a carefully selected menu of funds for those who prefer to take a slightly more active role in investing.

Fund	Expense Ratio	Fund	Expense Ratio
Money Market Fund	0.08%	Stock Fund	0.01%
Stable Value Fund	0.29%	Small/Mid-Cap Stock Fund	0.04%
Bond Fund	0.04%	International Stock Fund	0.09%
Inflation-Protected Bond Fund	0.04%	Global Real Estate Fund	0.11%
High-Yield Bond Fund	0.39%	Virginia Retirement System Investment Portfolio (VRSIP)	0.59%

## Self-Directed Brokerage Account

- For knowledgeable investors who wish to manage their investments directly
- Thousands of publicly-traded mutual funds, exchange traded funds (ETFs) and individual securities are available
- Additional fees may apply



# Understanding Plan Fees



## Investment Related

- **Investment management and other investment related expenses**
- Mortality and expense risk fees
- Acquired fund fees and expenses
- Liquidity guarantee fees
- 12-b-1 distribution fees
- Short-term Trading Redemption fees

## Recordkeeping/Administration Related

- **Recordkeeping/Administration fees**
- Value added fees



# Fee Example



## Investor A

- Contribute \$6,000/year beginning at age 25
- 6% annual return on investment
- **0.50% annual fee**
- Account value at age 65: \$858,068

## Investor B

- Contribute \$6,000/year beginning at age 25
- 6% annual return on investment
- **1.50% annual fee**
- Account value at age 65: \$656,195

**1.00% increase in fees equals \$201,873 less in account at age 65.**

Examples provided by Mercer for illustrative purposes only.



## Hybrid Retirement Plan Potential Changes

# Hybrid Retirement Plan



- Total combined balance in the Hybrid 401(a) Cash Match Plan and the Hybrid 457 Deferred Compensation Plan is \$65.7 million as of July 1, 2016.
- There were 24,618 teachers, 12,623 state employees, and 12,062 political subdivision employees in the Hybrid Retirement Plan as of July 1, 2016.

# Normal Costs of Current Plans



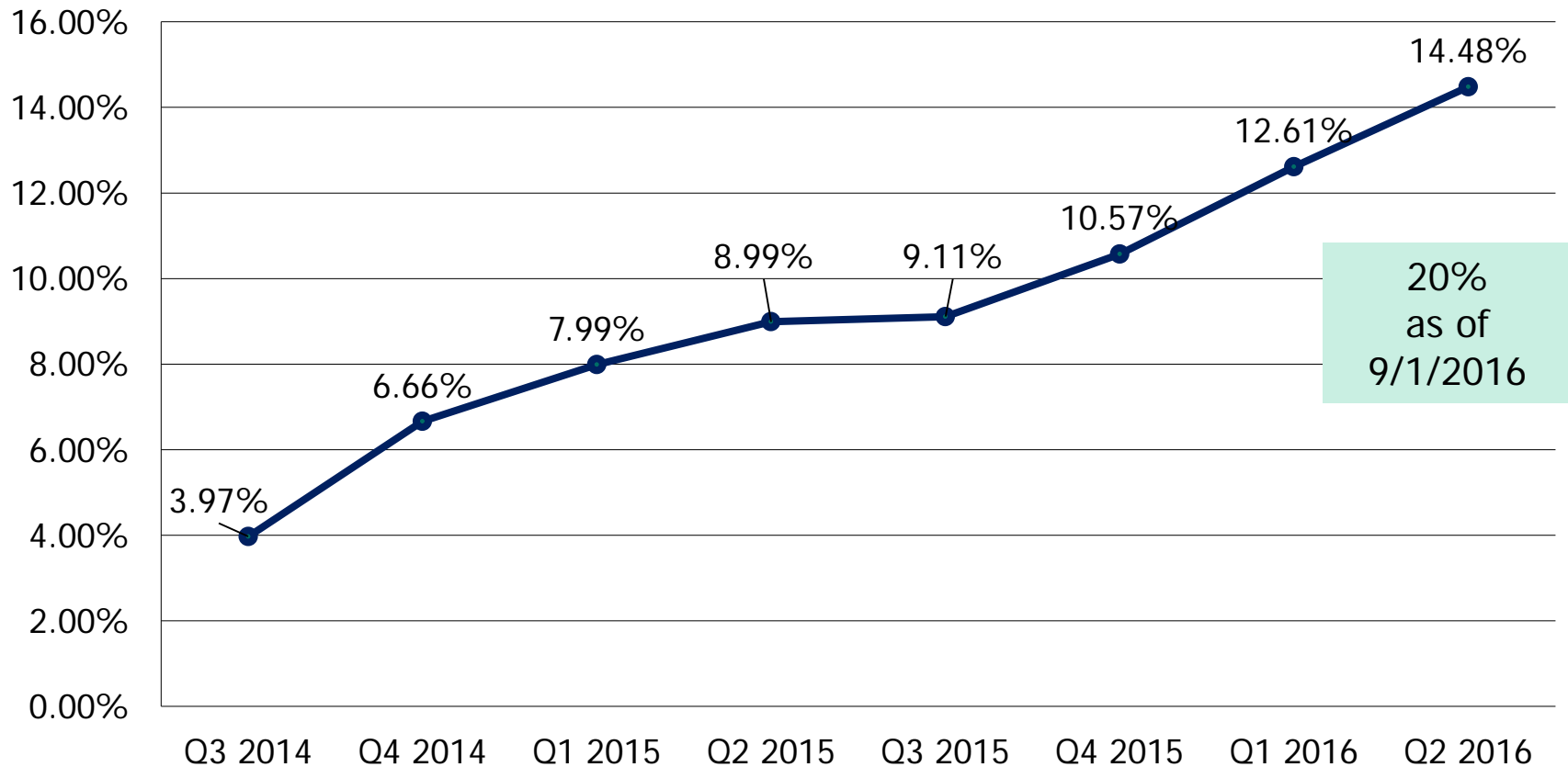
	VRS State Retirement Plan			
	VRS Plan 1	VRS Plan 2	Hybrid	Blended Rate
<b>Total Benefit Normal Cost</b>	9.64%	8.95%	5.17%	9.10%
<b>Member Contribution Rate</b>	5.00%	5.00%	4.00%	4.92%
<b>Employer Normal Cost Rate</b>	4.64%	3.95%	1.17%	4.18%
<b>Employer Match to Hybrid DC Plan</b>	0.0%	0.0%	1.21%	0.10%
<b>Administrative Expense</b>	0.27%	0.27%	0.27%	0.27%
<b>Total Employer Rate without Unfunded Amortization Cost</b>	4.91%	4.22%	2.65%	4.55%
<b>Percentage of Normal Cost Paid by Member</b>	51.87%	55.87%	77.37%	54.07%

- With advent of pension reforms in recent years, the normal cost rate for employers has been reduced as more members enter the new plan designs.
- Employers are provided a blended rate based on the demographics of the members in the plan.
- As more members enter the hybrid plan, the employer normal cost rate will continue to move towards the lower 2.65% rate; thereby lowering overall contribution requirements.

# Hybrid Retirement Plan



## Hybrid Voluntary Contribution Participation Rate



As of July 1, 2016

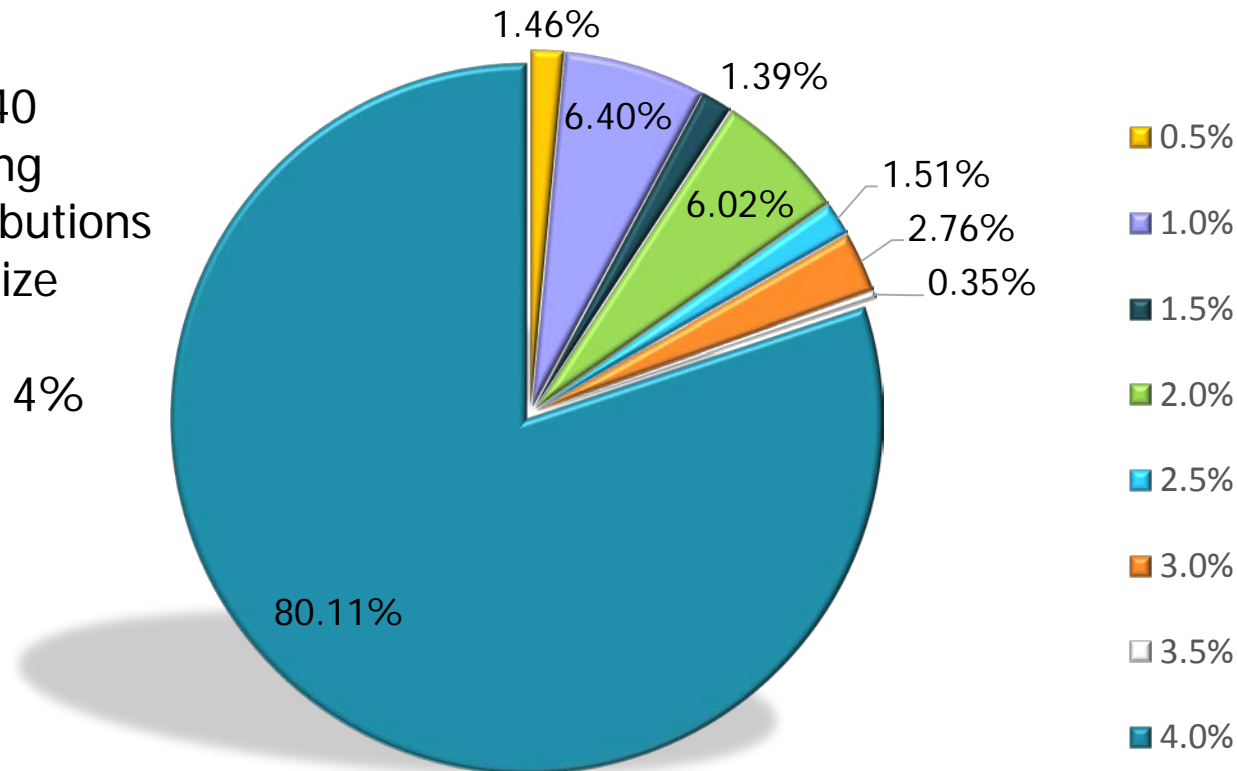


# Hybrid Retirement Plan



## Percent of Voluntary Contribution Members Electing Each Voluntary Contribution Percentage

80% of the 7,140 members electing voluntary contributions chose to maximize their voluntary contributions at 4%



As of July 1, 2016

# Hybrid Modifications – HB 1072



- Moves more mandatory contributions to the defined contribution component of the plan.
  - Decreases the employee contribution to the defined benefit component from 4% to 3% of creditable compensation.
  - Increases the employee mandatory contribution to defined contribution component from 1% to 2% of creditable compensation.
  - Increases the employer mandatory match from 1% to 2% of creditable compensation.
- HB 1072 accelerates auto-escalation and adds auto-enrollment of voluntary contributions at 0.5% level.

# Current Schedule of Hybrid Contributions

Defined Benefit (DB) Plan Contributions		
CONTRIBUTIONS	EMPLOYEE	EMPLOYER
Mandatory	4.00%	Total employer contribution rate, less employer DC contributions
Defined Contribution (DC) Plan Contributions		
CONTRIBUTIONS	EMPLOYEE HYBRID 401(a)	EMPLOYER HYBRID 401(a)
Mandatory	1.00%	1.00%
Voluntary	<b>VOLUNTARY HYBRID 457</b>	<b>MATCHING HYBRID 401(a)</b>
	0.00% .....	..... 0.00%
	0.50% .....	..... 0.50%
	1.00% .....	..... 1.00%
	1.50% .....	..... 1.25%
	2.00% .....	..... 1.50%
	2.50% .....	..... 1.75%
	3.00% .....	..... 2.00%
	3.50% .....	..... 2.25%
	4.00% .....	..... 2.50%

# Proposed Changes to the Hybrid Retirement Plan



- Improve plan outcomes
- Increase voluntary contributions
  - Shift portion of member contributions from DB to DC portion of the plan and provide analogous employer match
  - Accelerate auto-escalation (every two years instead of every three)
  - Implement auto-enrollment
- Adjust portion of normal cost paid by employee,
  - In current design, the member pays approximately 77% of defined benefit normal cost of the benefit
  - Plan 1 and Plan 2 members pay between approximately 52% and 56% of plan normal cost

# Comparison of Costs

## Proposed Hybrid HB 1072

	VRS State Retirement Plan				Proposed Hybrid HB 1072 Initial Impact	Proposed Hybrid HB 1072 After 25 Years 50% Opt Out
	VRS Plan 1	VRS Plan 2	Hybrid	Blended Rate		
Total Benefit Normal Cost	9.64%	8.95%	5.17%	9.10%	5.17%	5.17%
Member Contribution Rate	5.00%	5.00%	4.00%	4.92%	3.00%	3.00%
Employer Normal Cost Rate	4.64%	3.95%	1.17%	4.18%	2.17%	2.17%
Employer Match to DC Plan	0.0%	0.0%	1.21%	0.10%	2.21%	2.75%
Administrative Expense	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%
Total Employer Rate without Unfunded Amortization Cost	4.91%	4.22%	2.65%	4.55%	4.65%	5.19%
Amount to Amortize Unfunded Liability	8.94%	8.94%	8.94%	8.94%	8.94%	8.94%
Total Employer Rate	13.85%	13.16%	11.59%	13.49%	13.59%	14.13%

- The proposed hybrid design does increase employer cost, but the 2.21% employer match to the defined contribution component of the hybrid has no future risk to the employer.



## **Discussion of Other Potential Plan Design Alternatives**



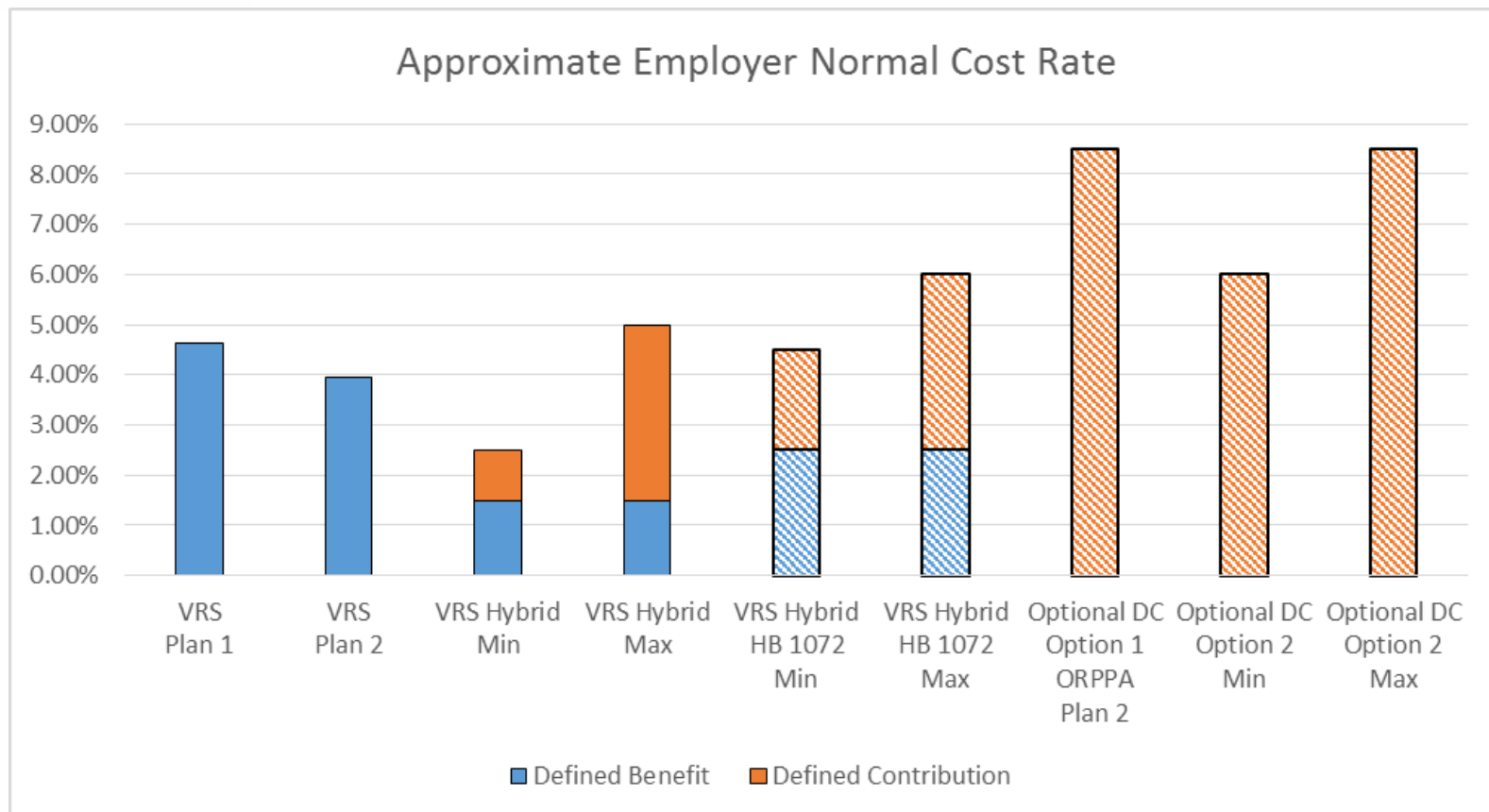
# Examples of Optional Defined Contribution Plan Designs

- In order to develop cost estimates of Optional DC plan, the following designs have been modeled:

Option	Mandatory Member Contribution	Voluntary Member Contribution	Employer Contributions
Option 1	5.00%	0.00%	8.50%
Option 2	5.00%		6.00%
		1.00%	0.75%
		1.00%	0.75%
		1.00%	0.50%
		1.00%	0.50%
	5.00%	4.00%	8.50%

- Option 1 reflects the current ORPPA Plan 2 design, where the member contributes 5.0% of compensation and the employer contributes 8.5% of employer compensation. Vesting is immediate.
- Option 2 is designed more like the current hybrid defined contribution component which would require a mandatory 5.0% member contribution and a 6% employer matching contribution. The employee could put in an additional 4.0% in voluntary contributions which the employer would match up to an additional 2.5%.

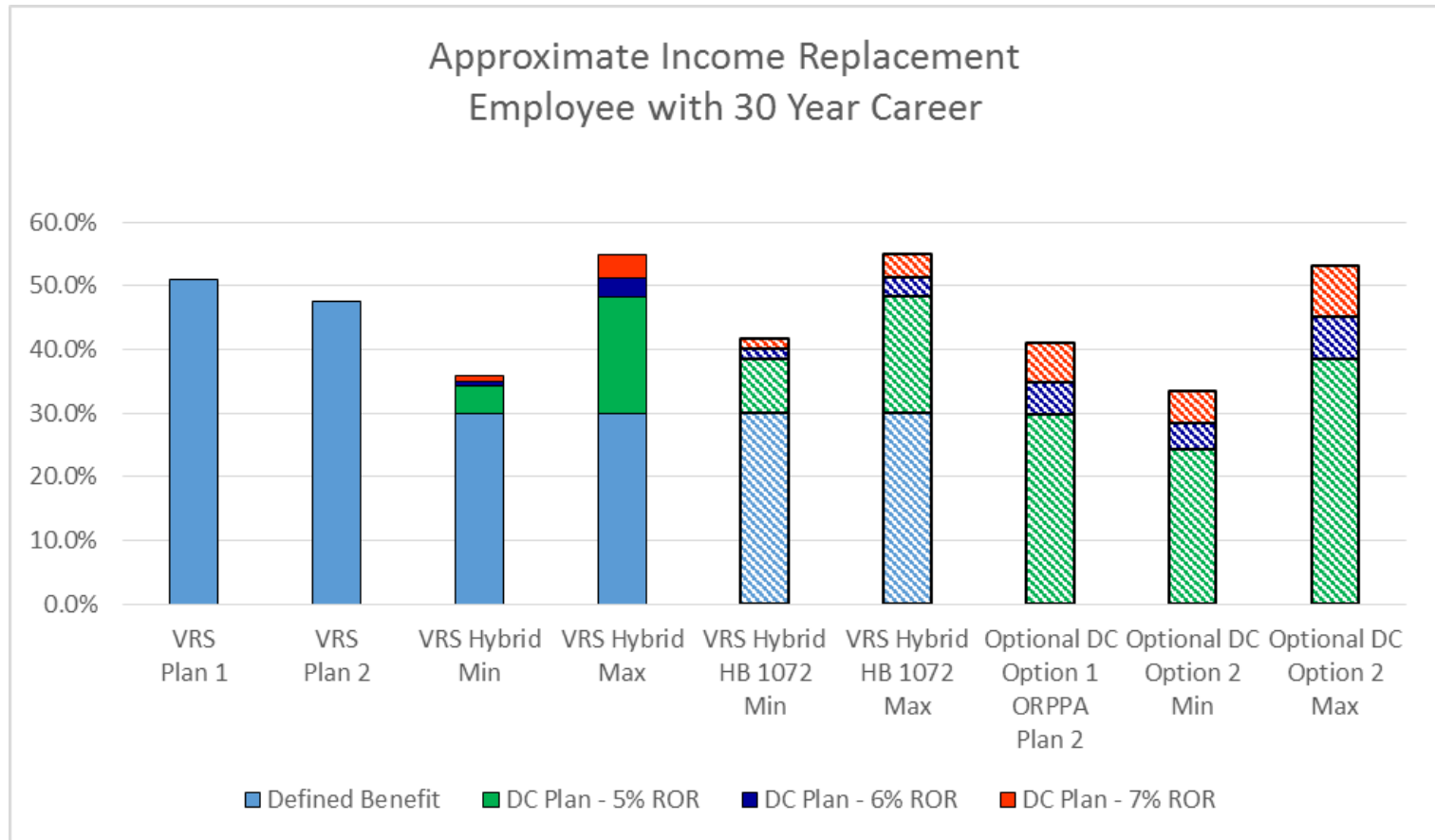
# Comparison of Plan Normal Costs



- Optional DC designs will likely have a higher normal cost rate than current plan designs.
- The advantage to employers is that costs are predictable and that they will not have any investment or longevity risk after making the higher contribution, those risks will now generally reside with the member.

# Income Replacement Ratios

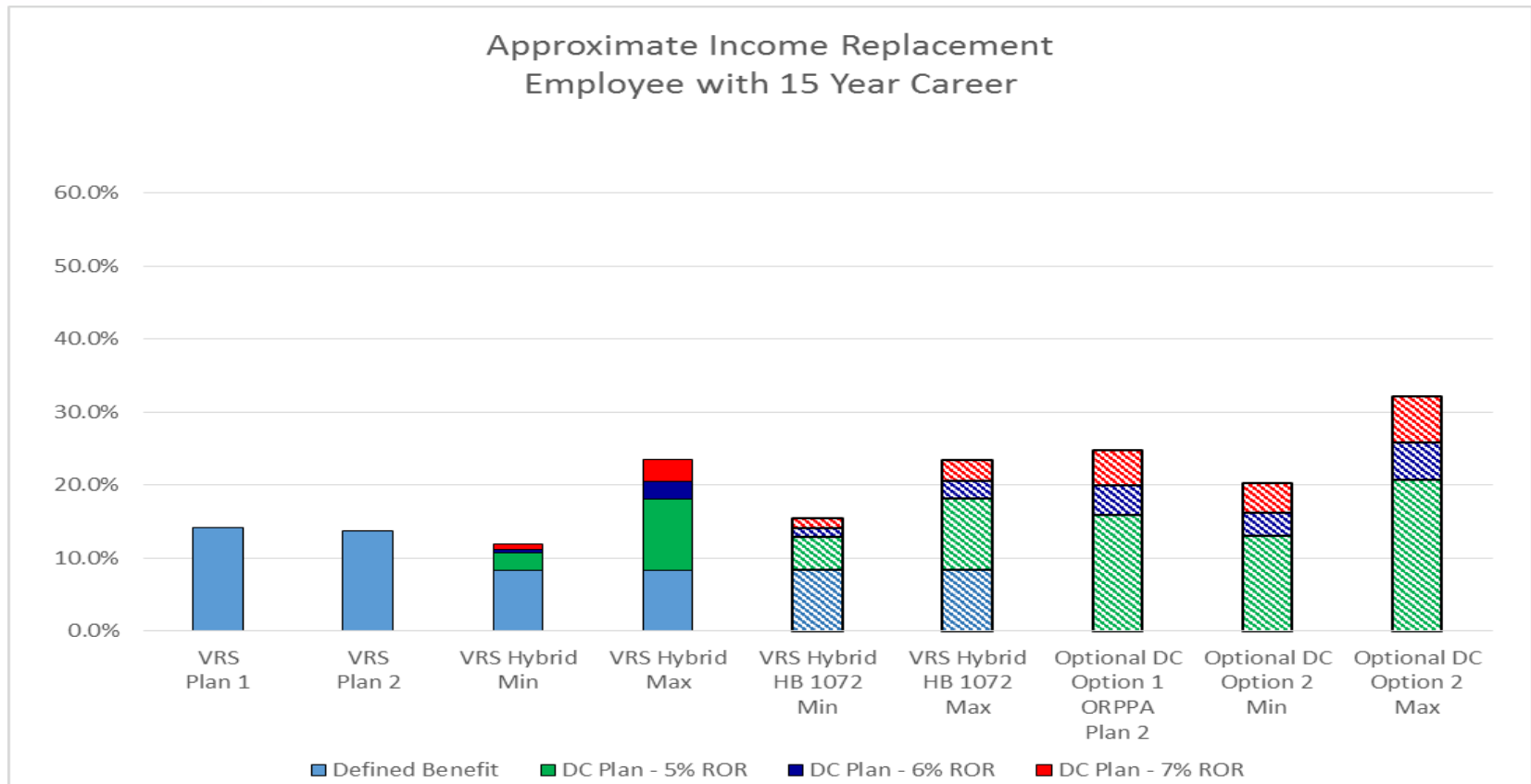
## 30-Year Career Employee



- Modeled above are the estimated replacement ratios for a 30-year employee hired at age 35. The Hybrid plan and Optional DC plans are modeled assuming 3 sets of long-term rates of return (ROR) on fund balances, 5%, 6% and 7%.

# Income Replacement Ratios

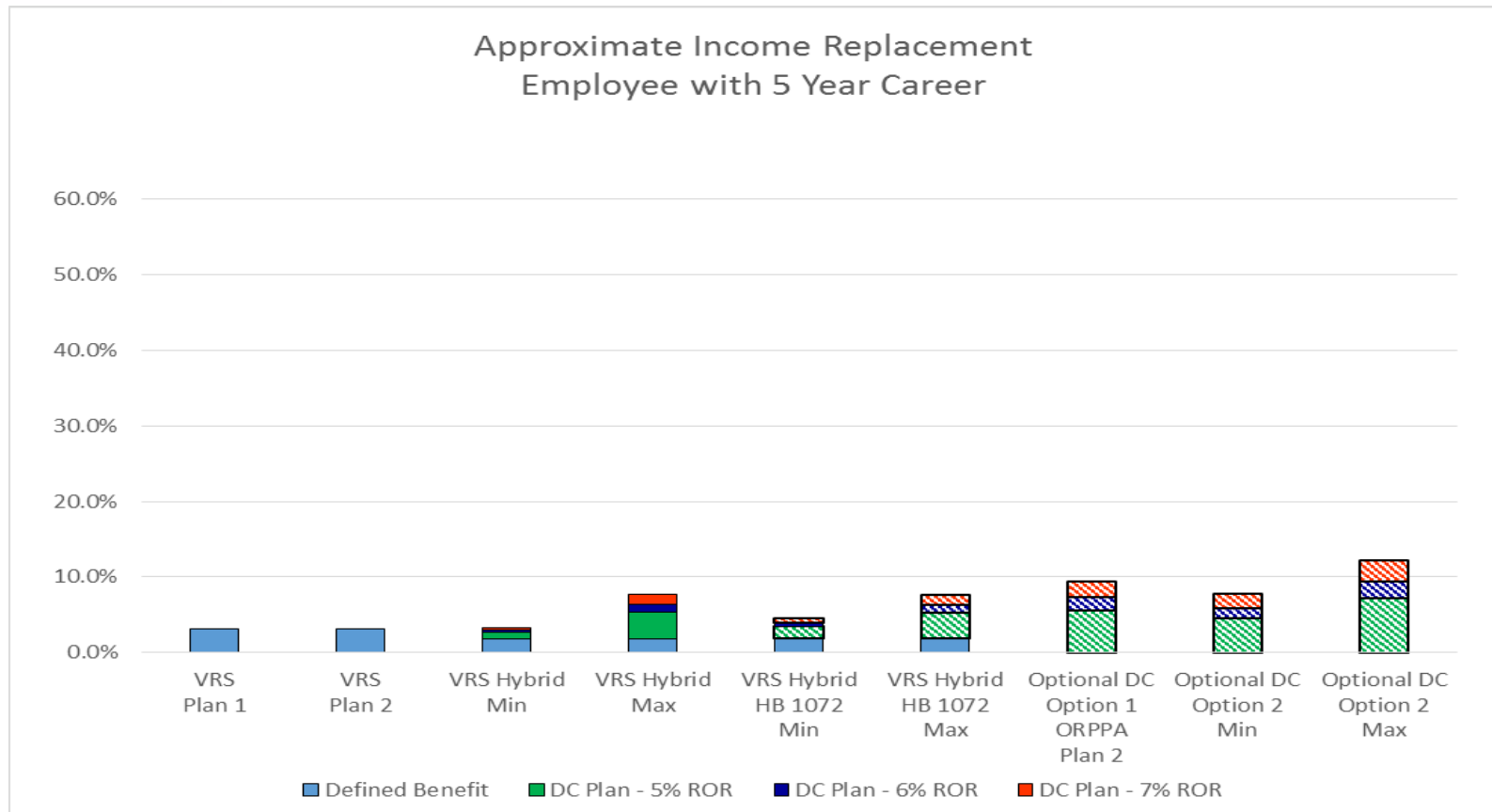
## 15-Year Employee



- Modeled above are the estimated replacement ratios for a 15-year employee hired at age 35, who terminates at age 50 and defers benefit to age 65. The Hybrid plan and Optional DC plans are modeled assuming 3 sets of long-term rates of return (ROR) on fund balances, 5%, 6% and 7%.

# Income Replacement Ratios

## 5-Year Employee



- Modeled above are the estimated replacement ratios for a 5-year employee hired at age 35, who terminates at age 40 and defers benefit to age 65. The Hybrid plan and Optional DC plans are modeled assuming 3 sets of long-term rates of return (ROR) on fund balances, 5%, 6% and 7%.
- For members, defined contribution plans have the advantage of continuing to earn interest income.



## Rate Structure and Other Plan Designs

# Comparison of Plan Costs

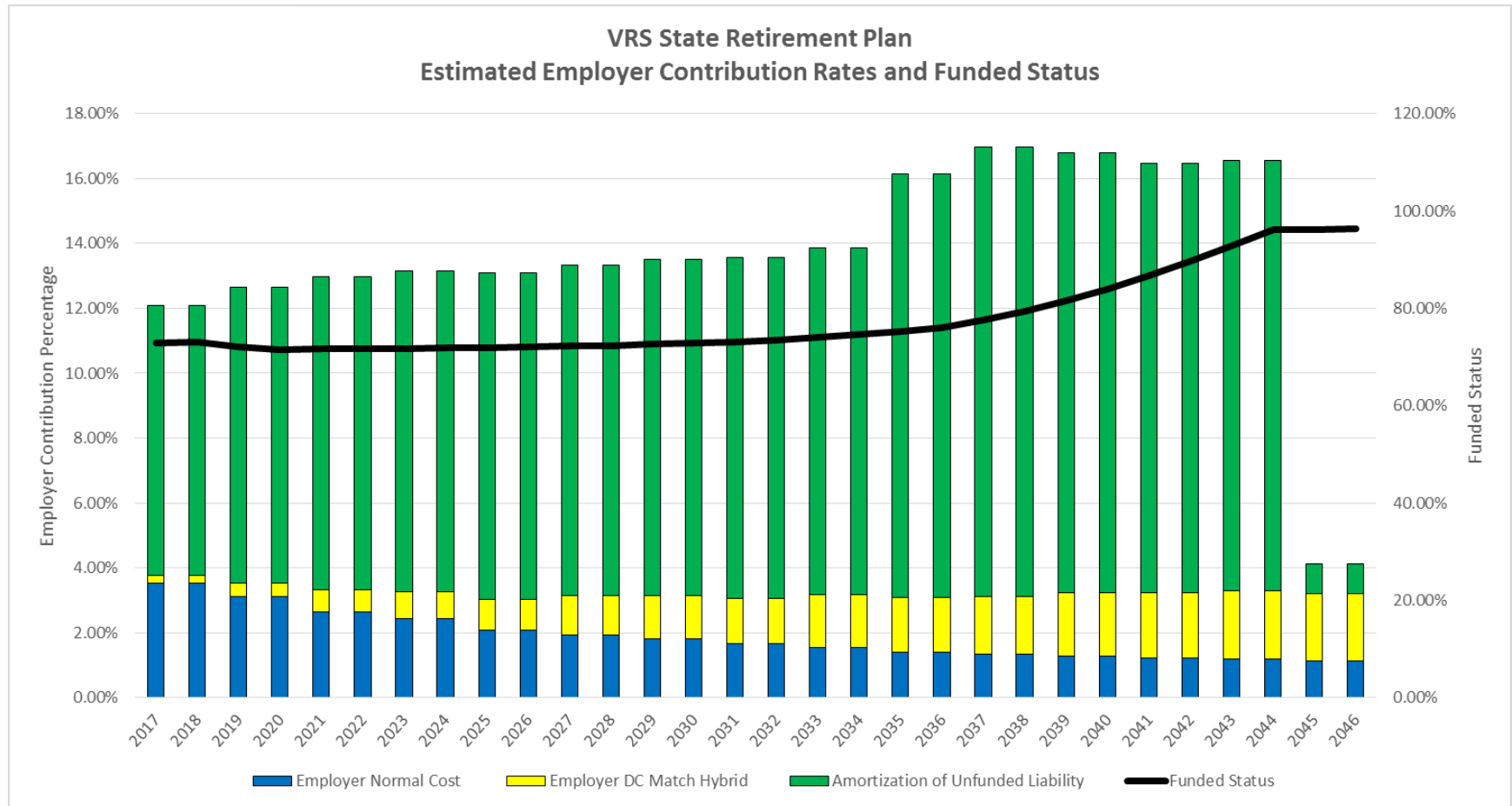
## Optional DC Plans

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<b>Amount to Amortize Unfunded Liability</b>	8.94%	8.94%	8.94%	8.94%
<b>Total Employer Rate</b>	13.85%	13.16%	11.59%	13.49%

<b>Proposed Hybrid HB 1072 After 25 Years 50% Opt Out</b>
5.17%
3.00%
2.17%
2.75%
0.27%
5.19%
8.94%
14.13%

Optional Defined Contribution Plans		
Option 1	Option 2 (Minimum)	Option 2 (Maximum)
5.00%	5.00%	9.00%
8.50%	6.00%	8.50%
0.27%	0.27%	0.27%
8.77%	6.27%	8.77%
8.94%	8.94%	8.94%
17.71%	15.21%	17.71%

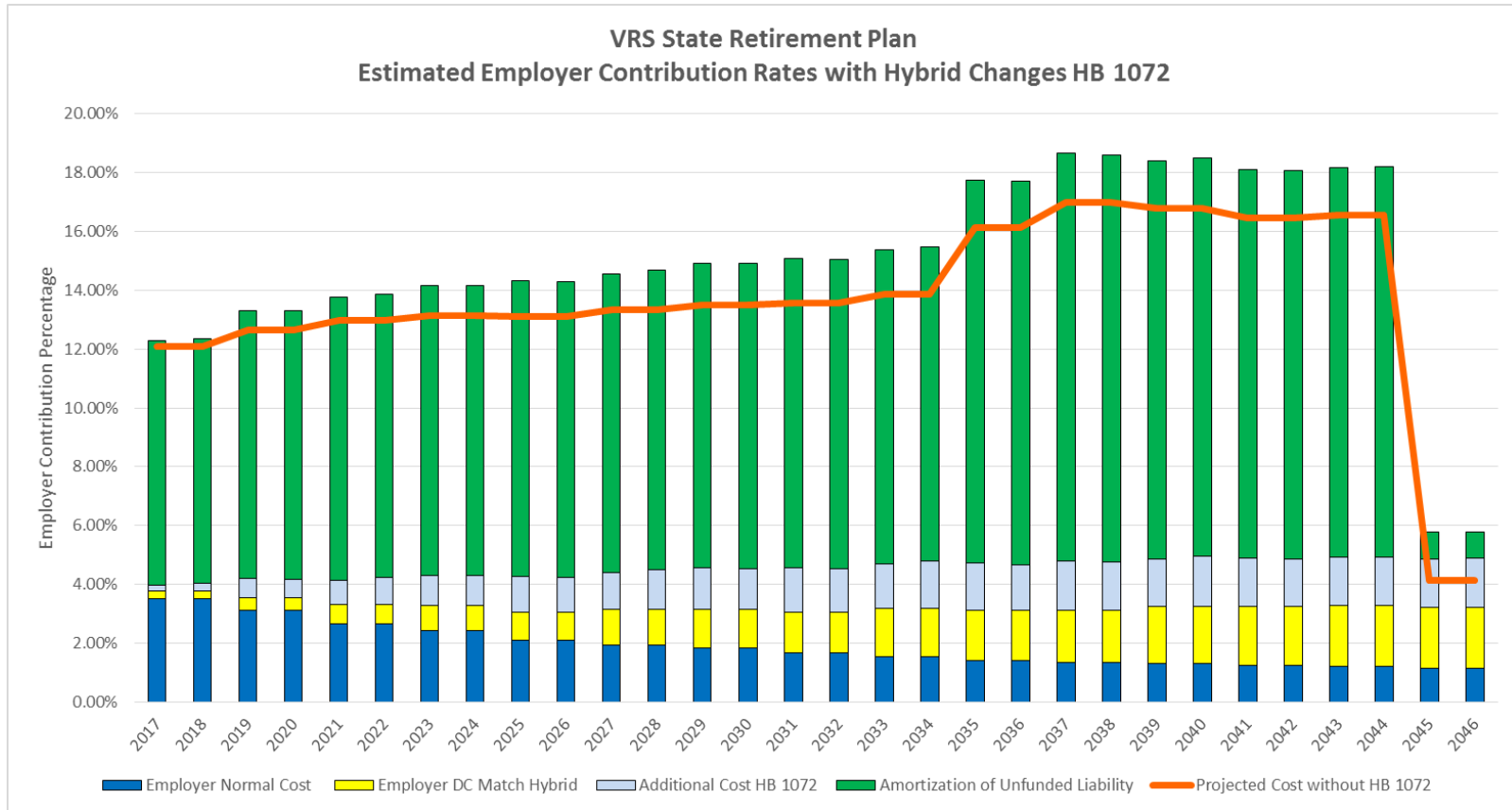
# State Retirement Plan Estimated Employer Costs under Current Plan Design



- Largest component of employer rate is amortization of legacy unfunded liability. Legacy unfunded is being amortized over a 30-year closed period which is set to expire in 2044.
- Defined benefit normal cost decreases over time as hybrid plan membership grows.



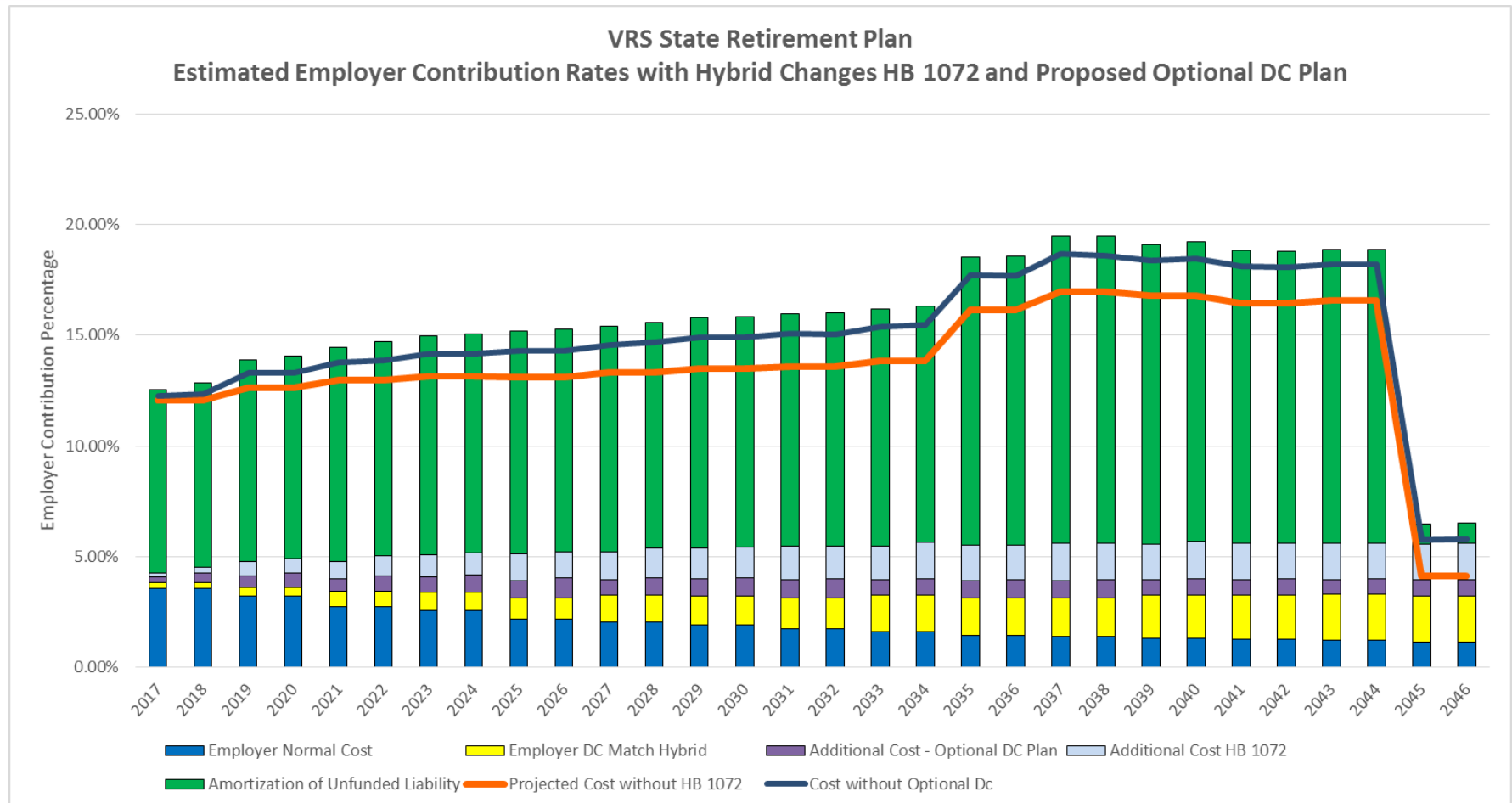
# State Retirement Plan Estimated Employer Costs with Changes to the Hybrid



- Due to blending in hybrid participants, initial impact is estimated at 0.19% of state payroll and is expected to approach 1.65% of payroll over the next 30 years.
- Estimated costs assume 50% of the eligible members retain auto-escalation and auto-enrollment.

# State Retirement Plan

## Estimated Employer Costs with HB 1072 and Optional DC Plan (Option 1)



- Largest component of employer rate is still amortization of legacy unfunded liability, which will be paid off through 2044.
- Assumes 25% of new hires would elect Optional DC plan each year.

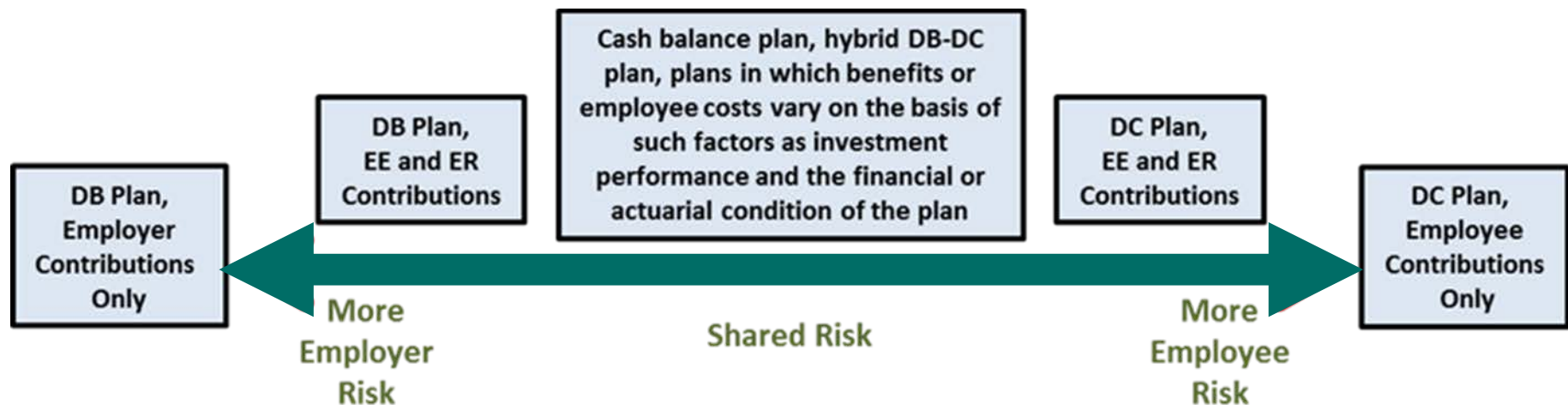
- Maintaining Commitment to Fully Funding Contribution Rates
- Participant and Employer Outcomes
- Cost and Complexity
- Unfunded Liabilities
- Recruitment and Retention Impacts
- Rate Structure
- Education and Outreach
- Impact on Modernization Program Completion and Cost
- Sufficient time required to ensure successful implementation
- Goals

# Appendix

- **Defined benefit (DB)** plans provide members a monthly retirement benefit based on a formula using salary, age and years of service.
- Members and employers make contributions to the plan, contributions are invested over the working life of the employee
- Annual costs are based on:
  - Normal Cost Rate – Actuarially determined cost to pay for current annual accrual of benefit.
  - Amortization of Unfunded Liability Rate – Cost to pay down liabilities that have been accrued but funds do not exist to cover liability.

- **Defined contribution (DC)** plans provide individual accounts where members and employers make contributions to the plan, contributions are invested by the members during their careers; the retirement benefit is paid out of this account; member contributions are tax-deferred until withdrawn
- Annual costs are based on:
  - Fixed percentage of a member's pay
  - DC plans typically do not have unfunded liabilities
- Any new plan design(s) would require inclusion of surcharge to pay down legacy unfunded liabilities and to avoid increasing costs for Plan 1, Plan 2 and hybrid members.

# Retirement Plan Design – Risk Sharing



Risk Distribution in a Defined Benefit Pension Plan

Risk	Employer	Employee
Investment	X	
Inflation	X	
Longevity	X	
Market Timing	X	
Portability / Accrual		X
Vesting		X

Risk Distribution in a Defined Contribution Pension Plan

Risk	Employer	Employee
Investment		X
Inflation		X
Longevity		X
Market Timing		X
Portability / Accrual		
Vesting		X