

An Innovative Approach to Address Spiking

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Agenda

- **Pension spiking defined**
- **Examples and statistics**
- **Contribution-Based Benefit Cap (CBBC)**
 - Introduction of concept
 - Calculation and application
- **Comparison of CBBC with Various FAS Calculations**
- **Demo**

Our definition of pension spiking

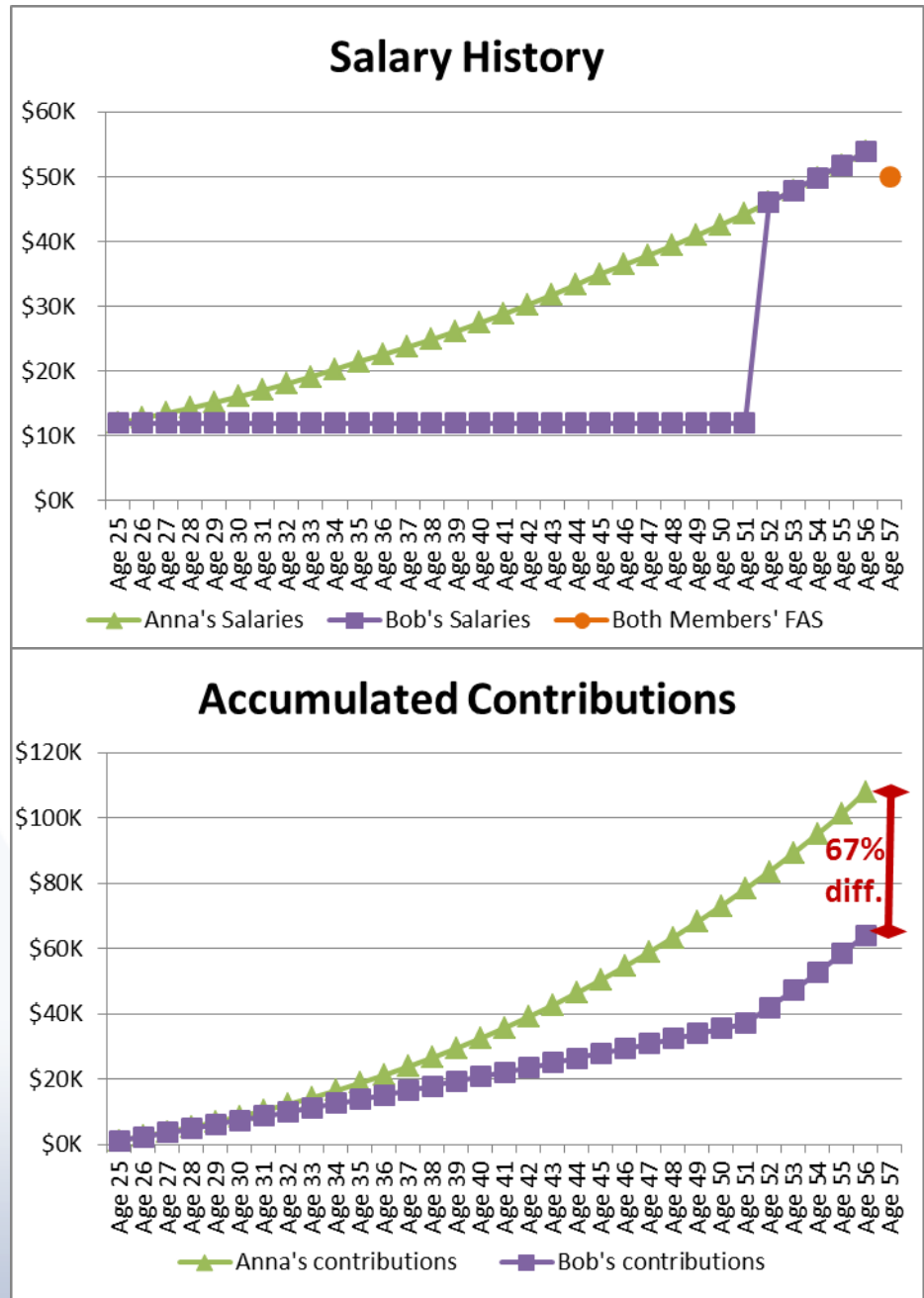
- **“Pension Spiking” refers to the increase in pension benefits by substantially increasing the Final Average Salary (FAS) beyond what is normally expected from normal salary increases.**
 - The most common example of spiking is substantially increase pay during the final years of a member’s career through pay increase, job change or overtime. Members only pay in a few years of high contributions yet achieve a lifetime of higher pension benefits.
 - There are other examples of spiking that occur earlier in a member’s career.
 - The Final Average Salary (FAS) calculation may or may not limit spiking.
- **Although not a widespread issue, it can be harmful to the financial health of the plan and is unfair to other members.**

Comparison of common anti-spiking measures

Anti-Spiking Measure	Pros	Cons
Increase number of years used in FAS	Simple; easy to understand; a familiar concept	Universally lowering benefits of all members, including those who do not spike
Contribution-Based Benefit Cap (“CBBC”)	Addresses spiking while not impacting everyone; impacts only those with benefits not reasonably supported by contributions over their career	Brand new concept; no prior examples for reference
Limit percentage of salary growth in the final years	Can only address spiking that occurs during final years	May not address early or mid-career spiking that occurs
Exclude one-time payment at termination from FAS	Removes opportunity to manipulate FAS by abnormal payments near or at retirement	Does little to solve the perceived spiking issue, which relates to base wage spiking
Cap FAS at a certain dollar amount	Easy to implement	Unfair to high-salaried members who have contributed a reasonable amount over their career


An example

- Anna: Worked 32 years and received steady salary increases.
- Bob: Low pay during the first 27 years and high pay during the final five years.
- Anna's accumulated contributions at retirement are 67% higher than Bob's.



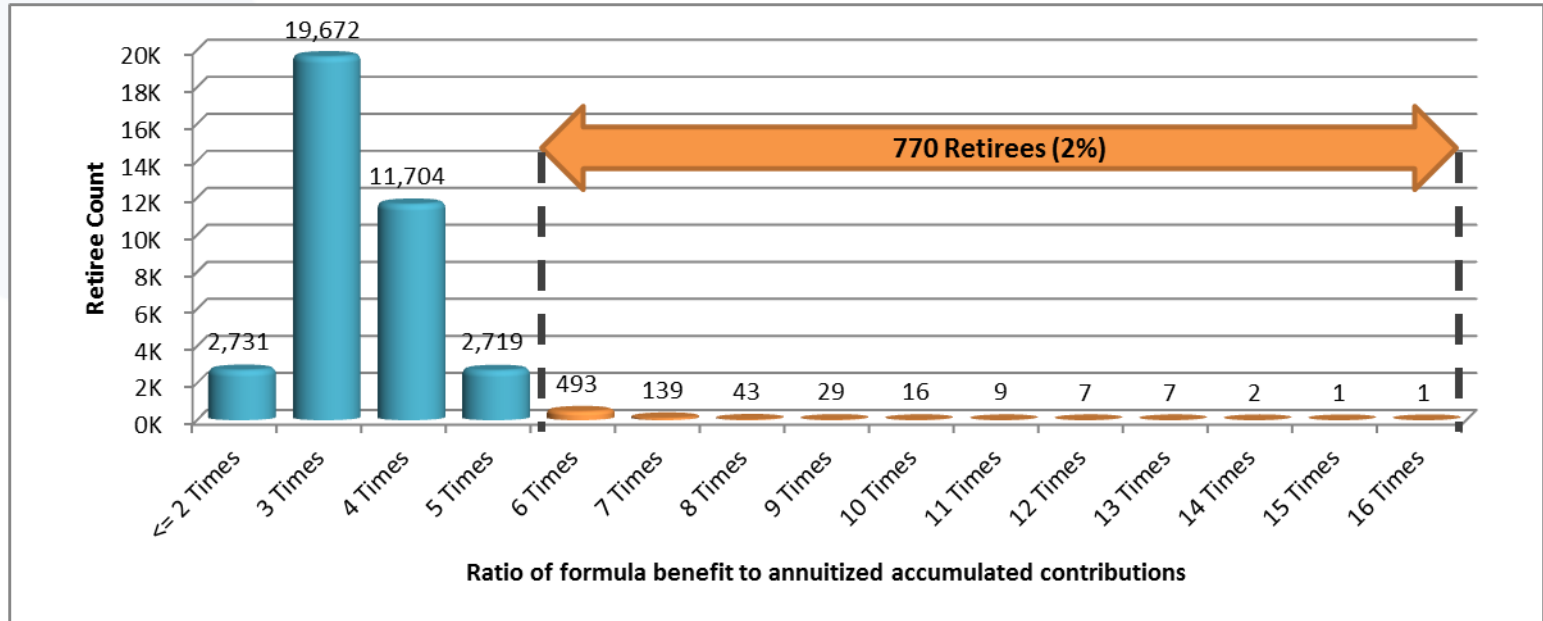
Benefit Calculation

	Anna	Bob
Final Average Salary (FAS)	\$50,000	\$50,000
Service Credit - Years	32	32
Retirement Age	57	57
Formula Benefit per Year	\$35,200	\$35,200
Accumulated Contributions	\$108,000	\$64,000
Annuitized Accumulated Contributions	\$7,841	\$4,646
Ratio of formula benefit to annuitized accumulated contributions	4 times	7 times



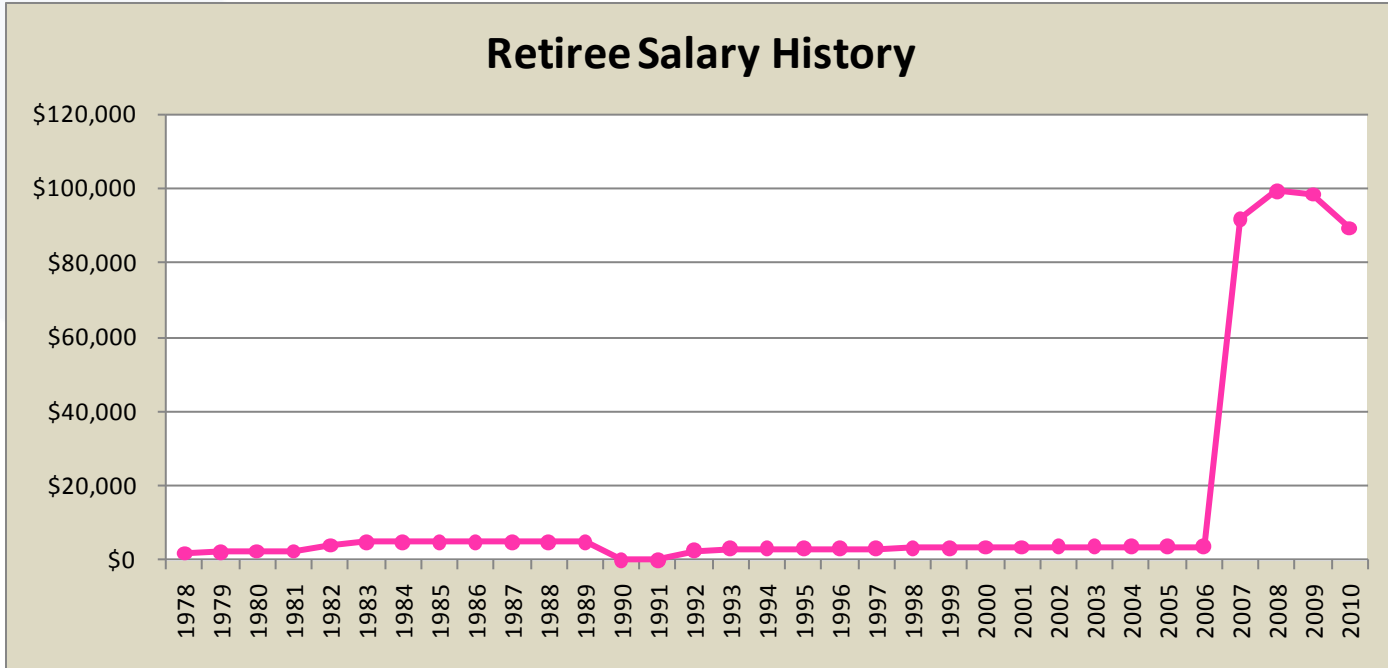
Although Bob contributed significantly less (only five years of higher contributions), both Anna and Bob will receive the same pension benefit.

Recent OPERS Retiree Data



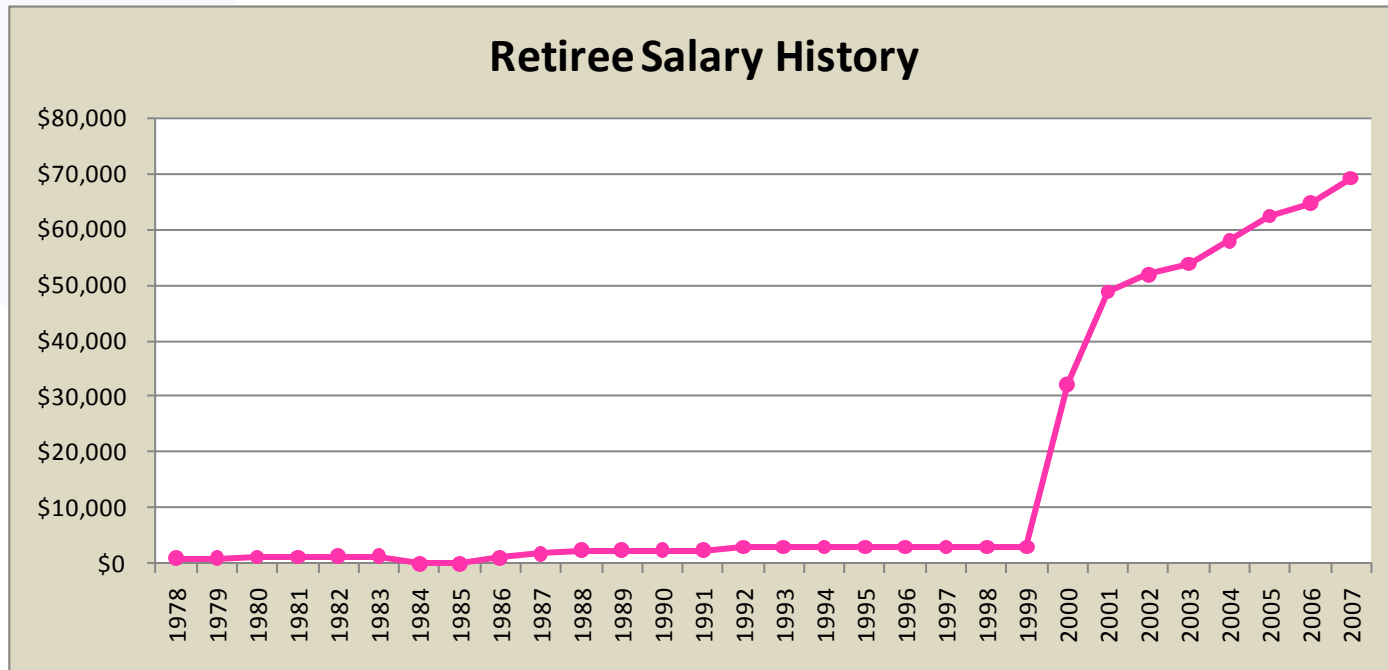
- When comparing each retiree's formula benefit to the annuitized accumulated contributions, the typical ratio is 5 or less.
- 770 retirees' benefits (2% of total) are at least 6 times their annuitized contributions.

Retiree (16 Times)



- **This retiree receives a starting benefit of \$73,000 which exceeds the accumulated contributions of \$49,000 in less than a year.**
- **Without the salary jump, the starting benefit would have been \$3,600 a year.**

Retiree (10 Times)



- **This retiree has a starting benefit of \$41,000 and accumulated contributions of \$49,000.**

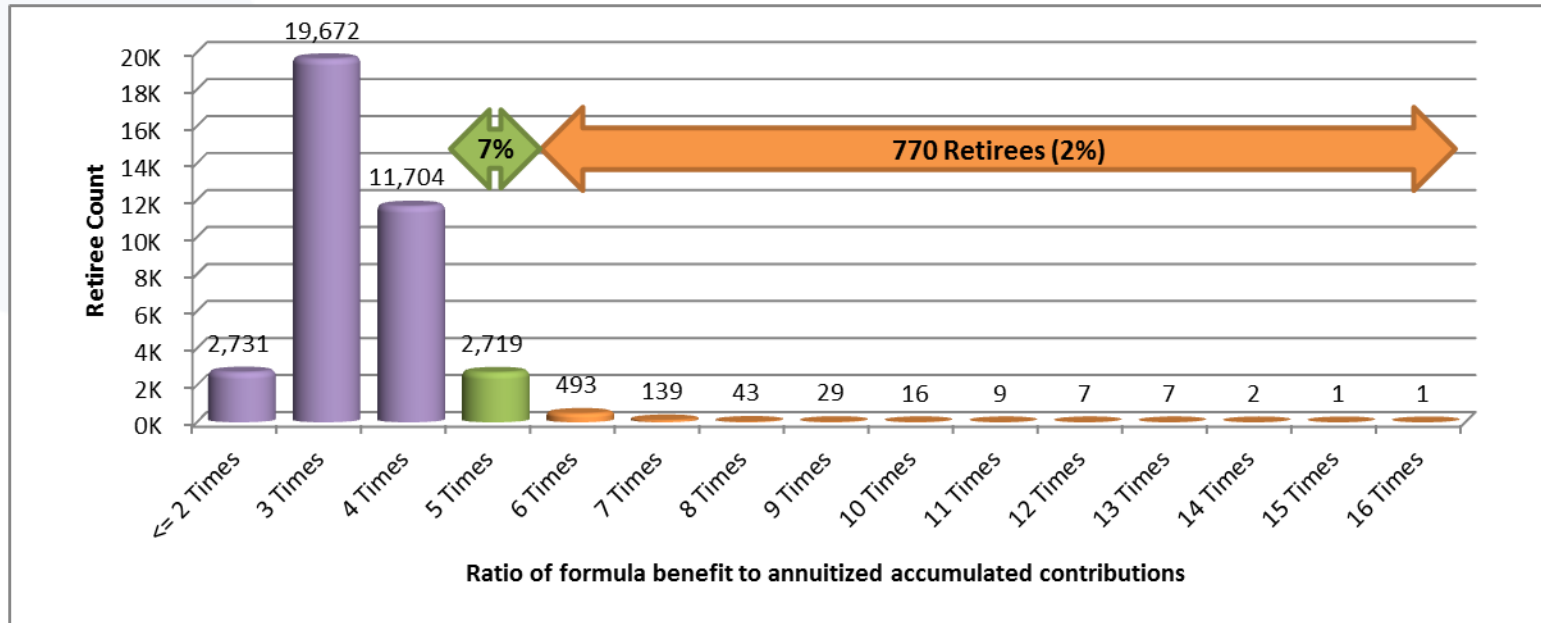
Contribution-Based Benefit Cap (CBBC)

- **A new approach to address spiking. It limits the pension benefit of members who have not contributed a reasonable amount towards pension.**
- **Formula benefit (e.g. $2.2\% * FAS * \text{service credit}$) is compared to accumulated contributions. If formula benefit is out of proportion with contributions, the benefit will be capped.**

Calculation Components

- **Accumulated Contributions:**
 - The amount that the member paid into to the pension, plus interest
- **Annuity Factor:**
 - An age-based figure that converts the accumulated contributions to an annuity payable over the retiree's expected remaining life
- **CBBC Factor:**
 - A number that reflects the size of the gap between the formula benefit and the annuitized accumulated contributions
 - A lower CBBC factor results in more members whose benefit will be capped, and vice versa
 - OPERS currently uses “6”, which will be used in examples throughout this presentation
 - OPERS Board has authority to set the CBBC rate, anticipate reviewing in conjunction with the five year experience study

Recent OPERS Retiree Data



- If a CBBC factor of 6 were applied, 2% of the members (orange columns) would have been capped.
- If a CBBC factor of 5 were applied, an additional 7% of the members (green column) would have been capped as well.

Calculation

CBBC is a member's annuitized accumulated contributions multiplied by a CBBC factor:

Accumulated Contributions

Multiplied by

Annuity Factor

Multiplied by

CBBC Factor

Comparing Formula Benefit to Cap

Formula Benefit
($2.2\% * \text{FAS} * \text{Service Credit}$)



Benefit



Retiree will receive the lesser of the two



CBBC

($\text{Accumulated Contributions} * \text{Annuity Factor} * \text{CBBC Factor (6)}$)



Cap

Applying CBBC To Bob's Benefit

Formula Benefit
($2.2\% * \$50,000 * 32 \text{ Years}$)



\$35,200



Bob's benefit will be capped at \$27,878



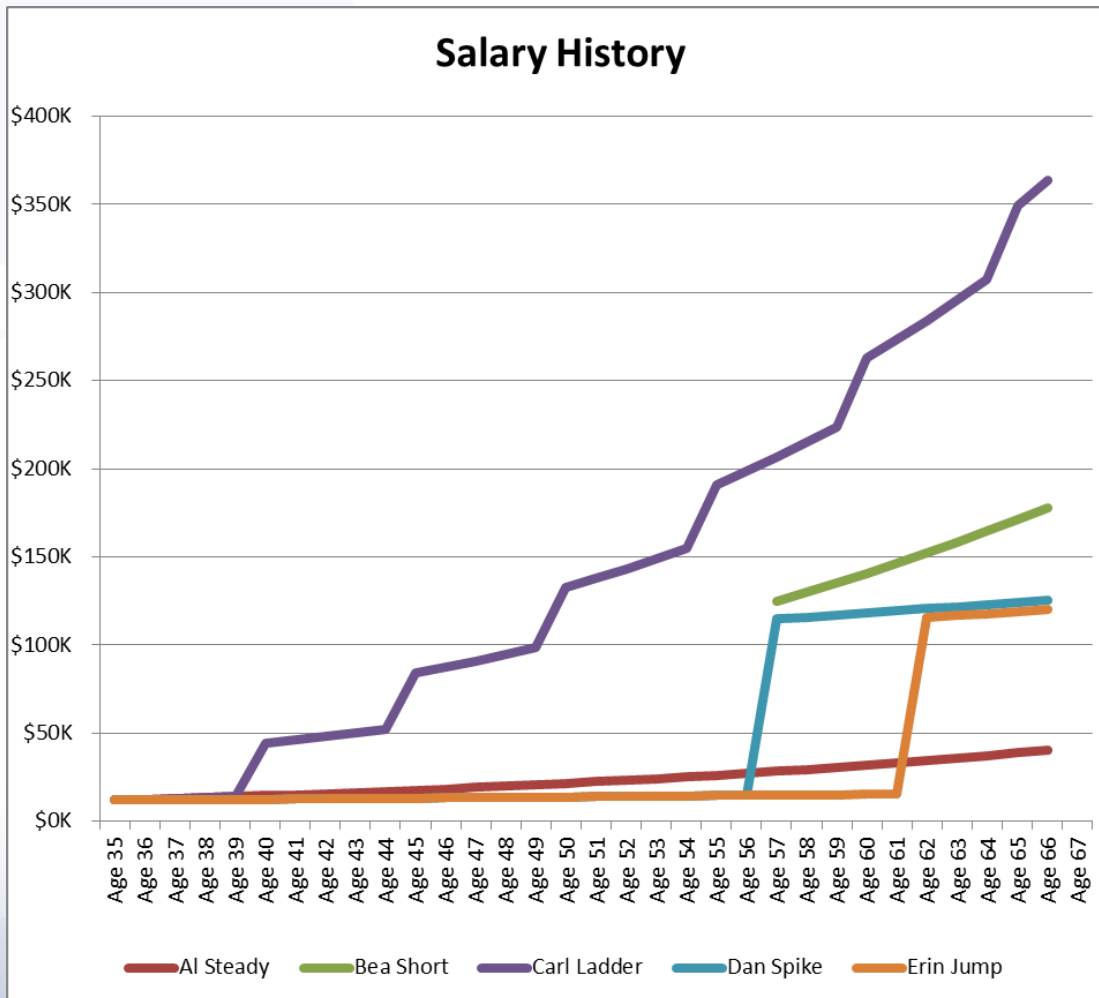
\$27,878

CBBC
($\$64,000 * 0.07260 * 6$)

Spiking can occur at points throughout a career

- **Make sure your Board/membership has the same definition of spiking** (many think spiking occurs only in final years)
- **Our workgroup elected to address spiking throughout career**
- **OPERS included a transition plan which limited the impact of the CBBC for those closest to retirement (CBBC cap)**
- **Need to determine how to handle purchases of service credit, disability, etc.**

Contribution-Based Benefit Cap vs. Various FAS Calculations



Member	Salary Increase
Al Steady	4%/Year
Bea Short	4%/Year, only worked 10 years
Carl Ladder	4%/Year + \$30K/5 Years
Dan Spike	1%/Year, \$100K spike at 10 yrs before retirement
Erin Jump	1%/Year, \$100K spike at 5 yrs before retirement

Assumptions:

- **10% member contribution rate**
- **1% interest on balance**
- **Retires at age 67**

Pension Benefit Comparison: CBBC vs. Various FAS Calculations

	Pension Benefit				
Member	Al Steady	Bea Short	Carl Ladder	Dan Spike	Erin Jump
Annual Salary Increase	4%	4%, worked 10 yrs	4% + \$30K/5 Yrs	1%, \$100K jump @ 10 yrs	1%, \$100K jump @ 5 yrs
3-Year FAS	\$28K	\$38K	\$241K	\$88K	\$85K
5-Year FAS	\$26K	\$36K	\$225K	\$87K	\$83K
7-Year FAS	\$25K	\$35K	\$215K	\$86K	\$62K
10-Year FAS	\$24K	\$33K	\$196K	\$85K	\$47K
CBBC	\$26K	\$36K	\$225K	\$84K	\$54K
Accumulated Contributions	\$85K	\$157K	\$510K	\$161K	\$104K

Orange = 5-Year FAS benefit is capped at CBBC

In the example ...

- **Increasing the number of FAS years reduces all five members' benefits. CBBC only impacts the members whose benefits are above the cap.**
- **CBBC:**
 - Caps two spiking members' (Dan & Erin) benefits.
 - Does not affect non-spiking member (Al), short-service member (Bea), and member with large pay increases (Carl).
 - 98% of recent retirees would not have been capped if CBBC were applied.

Summary

- **CBBC is a new approach to address spiking.**
- **It aligns benefits with member contributions, thus eliminating subsidization.**
- **CBBC does not impact everyone. It only impacts members with a formula benefit out of proportion with contributions.**
- **If two members have the same formula benefit, CBBC is more likely to affect the member with lower accumulated contributions.**

Considerations

- **Careful selection of a cap calculation method is important.**
 - A low cap may limit members with large salary increases.
 - A high cap may only limit the most extreme spiking cases.
- **Cap level can be seen as arbitrary.**
- **Cap level will fluctuate whenever actuarial assumptions are updated.**
- **It may impact members who have paid no cost or a very low cost to purchase service.**
- **It is more likely to impact members who spike late in their career than members who spike early in their career due to time value of money.**

Demo – OPERS CBBC Calculator

- <https://www.opers.org/downloads/CBBC-Calculator.xls>

Questions



Back-pocket slides

Applying CBBC To Anna's Benefit

Formula Benefit
($2.2\% * \$50,000 * 32 \text{ Years}$)



\$35,200



Anna's
benefit
stays at
\$35,200



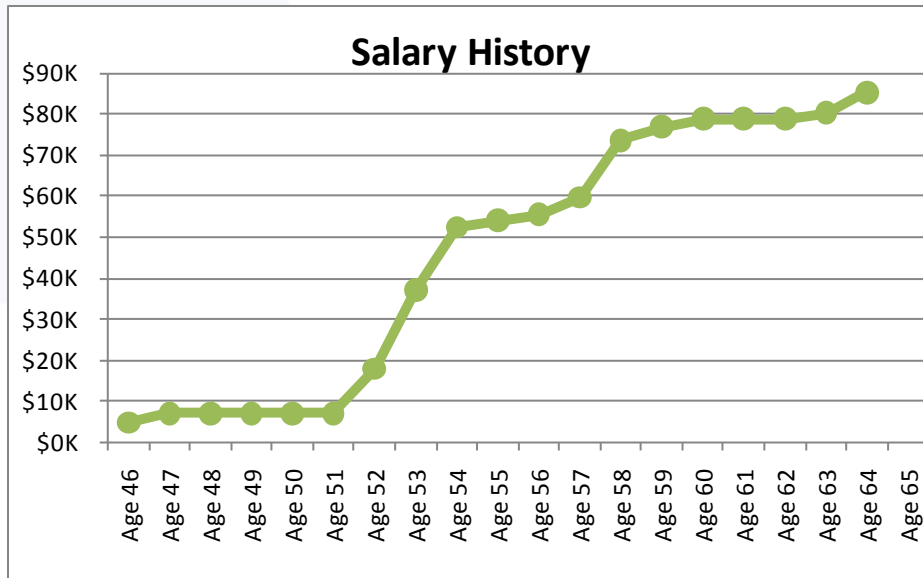
\$47,045

CBBC
($\$108,000 * 0.07260 * 6$)

Earnable Salary

- **Earnable salary currently includes:**
 - **Base Wages**
 - **Overtime**
 - **Bonuses**
 - **Longevity pay**
 - **Retroactive pay increases**
 - **Sick and Vacation pay (with approved conversion plan)**
 - **Comp Time**
 - **Settlement Agreements**
 - **Stipends**
 - **Denied interim salary increases**
 - **Salary paid for housing, etc.**

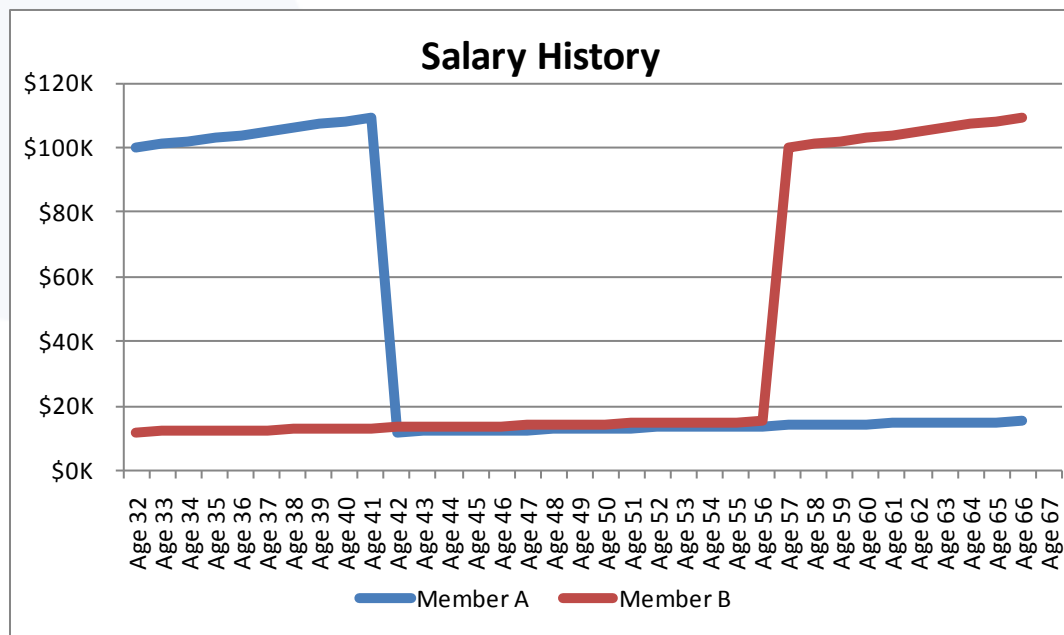
Low-Cost Service Purchases



Formula Benefit	\$80K
CBBC	\$53K
Accumulated Contributions	\$106K
Contributing Service	18.332
Purchased Service Credit	24.833
Purchased Service Contributions	\$18K

- This member paid \$18K to purchase 24.833 years of service.
- Accumulated Contributions is only \$106K while formula benefit is \$80K per year.
- A cap would limit benefit to \$53K due to low contributions.

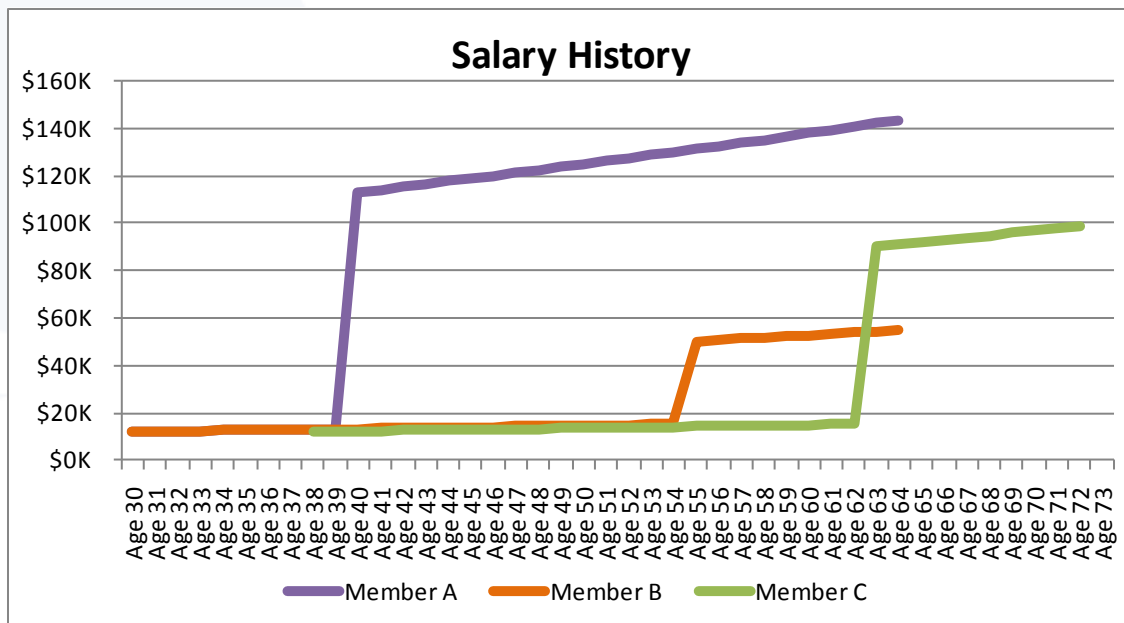
Timing of Salary Jump



	Member A	Member B
Formula Benefit	\$83K	\$83K
CBBC	\$89K	\$76K
Accumulated Contributions	\$178K	\$151K

- Member A earns a high salary early in career and Member B has a salary jump late in career.
- With large contributions on deposit longer, Member A has a higher Accumulated Contributions than Member B.
- In this example, the cap will limit Member B's benefit.

Other Spiking Scenarios




	Mbr A	Mbr B	Mbr C
Formula Benefit	\$108K	\$41K	\$75K
CBBC	\$188K	\$48K	\$90K
Accumulated Contributions	\$376K	\$97K	\$141K

- **CBBC might not impact ...**
 - **Members with an early salary jump and made high contributions for an extended period of time. (Member A)**
 - **Members with a relatively small salary jump. (Member B)**
 - **Members with a salary jump and retire older. (Member C)**

Benefit Calculation (With CBBC)

	Bob1	Bob2
5-Year FAS	\$50,000	\$50,000
Service Credit	32	32
Retirement Age	57	70
Accumulated Contributions	\$64,000	\$64,000
Formula Benefit	\$35,200	\$35,200
CBBC	\$27,878	\$35,666
Lesser of formula benefit or CBBC	\$27,878	\$35,200

} Compare



- **Bob1's CBBC is lower than Bob2's.**
- **If two members have the same formula benefit and the same amount of accumulated contributions, CBBC is more likely to affect the member retiring at a lower age.**

CBBC Calculation – Anna and Bob

	Anna	Bob
Accumulated Contributions (assuming 1% interest rate)	\$108,000	\$64,000
	X	X
Annuity Factor (Age 57)	0.07260	0.07260
	X	X
CBBC Factor	6	6
	=	=
CBBC	\$47,045	\$27,878

Benefit Calculation (With CBBC)

	Anna	Bob
5-Year FAS	\$50,000	\$50,000
Service Credit	32	32
Retirement Age	57	57
Accumulated Contributions	\$108,000	\$64,000
Formula Benefit	\$35,200	\$35,200
CBBC	\$47,045	\$27,878
Lesser of formula benefit or CBBC	\$35,200	\$27,878

} Compare


- **Anna gets the formula benefit whereas Bob's benefit is capped.**
- **If two members have the same formula benefit, CBBC is more likely to affect the member with lower accumulated contributions.**

Anti-Spiking Policies

System	FAS Calculation	Anti-Spiking Policy
Delaware SEPP	Average of salaries over the final three years	Eliminate overtime from pension creditable compensation.
Idaho PERF	Average of salaries over each employee's highest-earning consecutive 42 months	Exclude from FAS any lump sum payments inconsistent with usual compensation patterns made upon termination from service.
Illinois MRF	Average of the highest total earnings during any consecutive eight years within the last 10 years of service	FAS is capped at \$106,800 in 2011, which will increase annually by the lesser of 3% or one-half of the increase of the CPI.
New York STRS	Average of highest three consecutive years of salary	Exclude from FAS yearly increases in regular salary exceeding 10% of the average of the previous two years' salaries. Also exclude bonuses, payments of unused leave, and payments made outside contract terms and on the eve of retirement.
North Carolina	Average of salaries over a four-year period	Exclude salary not considered "compensation" under state statute from the pension calculation.
Texas TRS	Average of salaries over a five-year period	Salary cannot increase by more than \$10,000 or 10% a year for the final three or five years of service.

Source: Lessons from Well-Funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm, NIRS (June 2011)