CBBC EXPLAINED

September 2023

The following Contribution Based Benefit Cap (CBBC) scenarios were developed to demonstrate how the CBBC prevents excessive benefit inflation (spiking) in a manner that provides a measure of equity. The CBBC benefit calculation does not replicate the Formula Benefit calculation (2.2% of FAS x Years of Service Credit); instead, it uses the following three components to determine the CBBC benefit:

- Accumulated contributions: the amount members paid into the system
- Annuity factor: age-based number provided by SERS' actuary that converts the accumulated contributions to an annuity payable over the retiree's expected remaining life; and
- CBBC factor: a figure set by the Board that reflects the acceptable size of the gap between the Formula Benefit and the annuity payable based on the accumulated contributions.

In these scenarios, the CBBC benefit is reflected at a factor of 5.5 and 6. Based on the data reviewed, most SERS members have contribution histories that result in a CBBC factor that is less than 4.

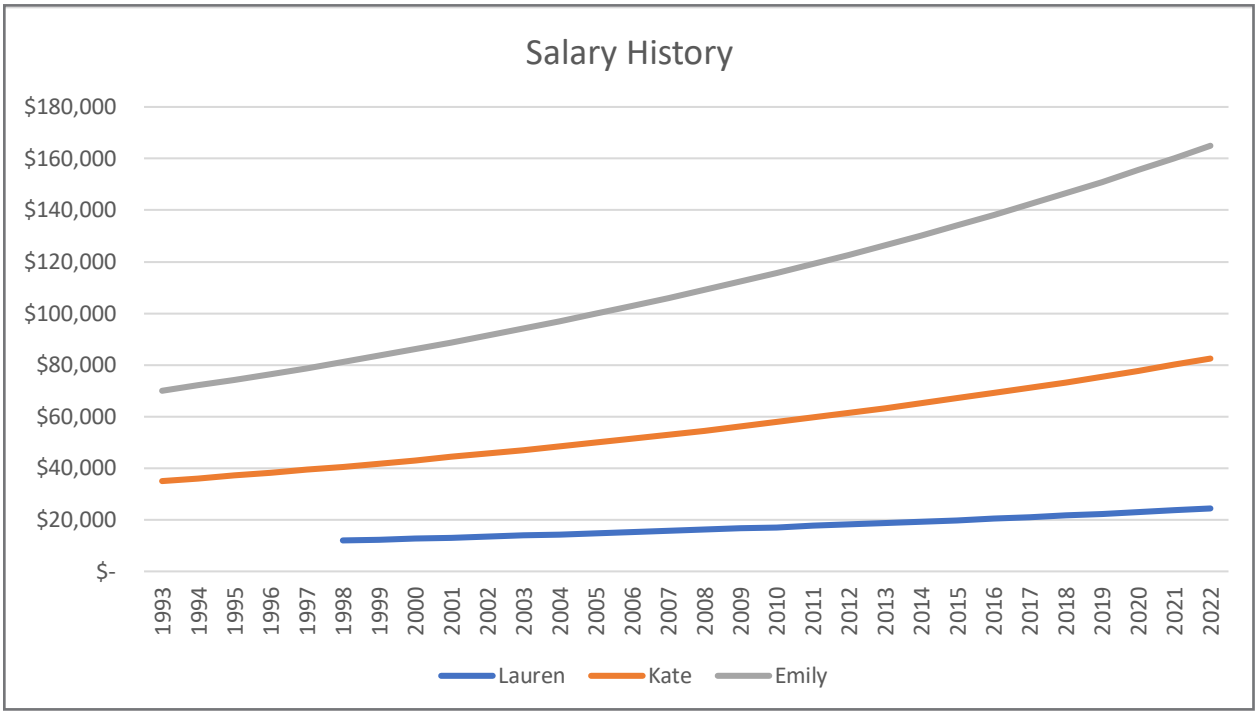
However, as demonstrated below, some members contribute in such a way that their CBBC factor is greater than 5.5 (i.e., their Formula Benefit is at least 5.5 times greater than their contribution-based annuity). With a high annuitized contribution to Formula Benefit ratio, it is the system that subsidizes the Formula Benefits for these members since contributions and investment returns may not adequately fund their benefit. The higher a member's CBBC factor, the greater the likelihood and extent of subsidization by SERS. The CBBC serves as a limit on how much the System will tolerate as to an individual Formula Benefit.

Of great importance is the CBBC factor the Board wishes to use – a CBBC factor that is too low may capture too many members, while a CBBC factor that is too high may unfairly reward members whose contributions have not adequately funded their Formula Benefit. The Board will need to decide where the equity line should be drawn.

The following pages demonstrate different scenarios:

- **Full Career, Regular Raises** – Three members with steady compensation increases
- **Full Career, Above Market Raises** – Two members with steady compensation increases compared to a member with salary spiking their last three years
- **Part Time vs. Full Time** – One member with steady compensation increases compared to a member switching to full time after 20 years of part time hours worked
- **Younger vs. Older Retirement Age** – One member retiring at 65 compared to a member retiring at 52. Each member furthered their education and changed jobs 10 years from retirement.
- **Late Career Salary Boost** – One member with extremely low wages for most of their career follow by three years of high earnings
- **Overview** – A summary of all scenarios
- **CBBC Impact on Prior Retirements**

Full Career, Regular Raises

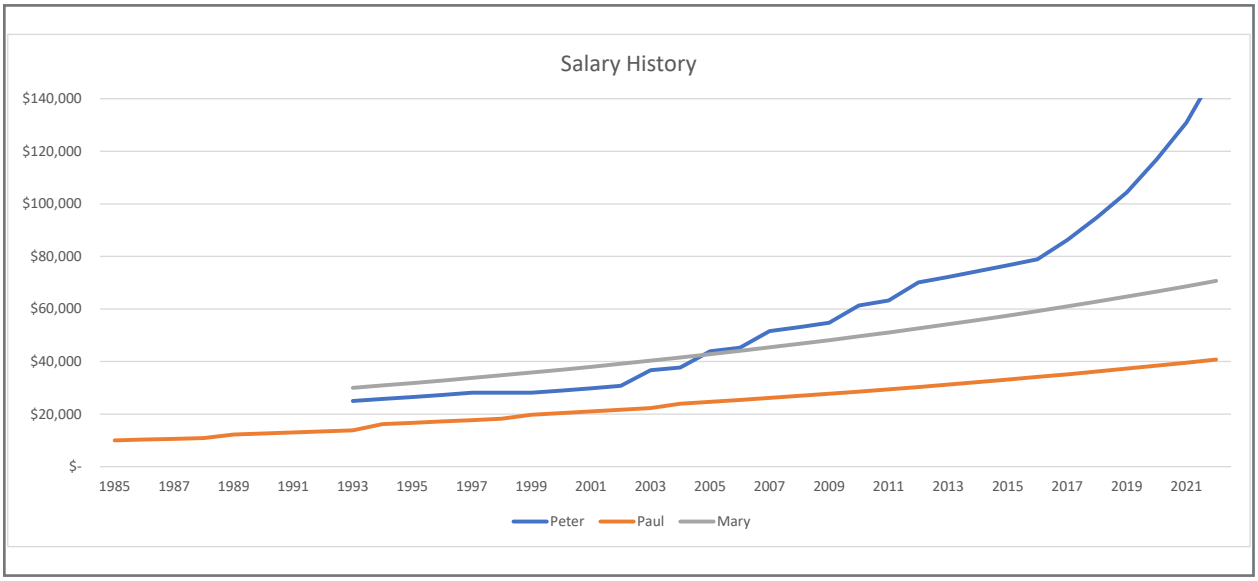


	Lauren	Kate	Emily
Age	67	65	57
Years of Service Credit	25	30	30
3-Yr FAS	$ 23,690	$ 80,101	$ 160,202
Accumulated Contributions	$ 42,975	$ 162,031	$ 324,062
Formula Benefit	**$ 13,029**	**$ 52,867**	**$ 105,733**
Actual CBBC Factor	3.07	3.45	3.88
CBBC Cap - 5.5	$ 23,311	$ 84,370	$ 149,947
CBBC Cap - 6	$ 25,430	$ 92,040	$ 163,578

This scenario reflects three members with different salaries, but they all received the same 3% salary increase annually over their 25-30 years of service.

Members with normal salary increases adequately contribute toward their formula benefit. However, members should consider their age at retirement when planning for retirement, as younger retirement ages can lead to incremental increases in their CBBC factor.

Full Career, Above Market Raises

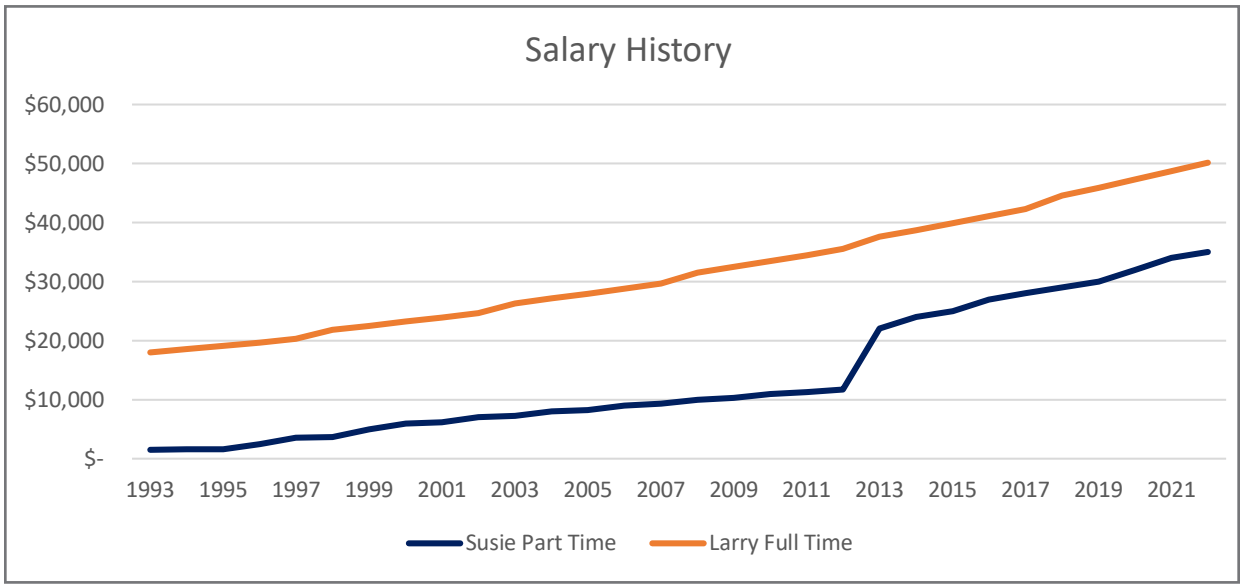


	Peter	Paul	Mary
Age	60	60	60
Years of Service	30	38	30
3-Yr FAS	$ 132,797	$ 39,581	$ 68,658
Accumulated Contributions	$ 175,065	$ 86,815	$ 138,884
Formula Benefit	$ 87,646	**$ 34,040**	**$ 45,314**
Actual CBBC Factor	5.74	4.49	3.74
CBBC Cap - 5.5	**$ 84,038**	$ 41,675	$ 66,670
CBBC Cap - 6	$ 91,678	$ 45,463	$ 72,731

In this scenario, we have three members of the same age with various years of service. Peter's salary history reflects a 30-year career with varying changes in salary including periods of steady increases, no increases, various bonuses, and above market salary increases near the end of his career. Paul's salary history reflects a 38-year career with steady salary increases. Mary's career, while shorter, also reflects steady salary increases.

Peter's above market salary increases near the end of his career would result in his benefit being capped with a CBBC factor of 5.5; however, it would not have been capped with a CBBC factor of 6.

Part Time vs. Full Time

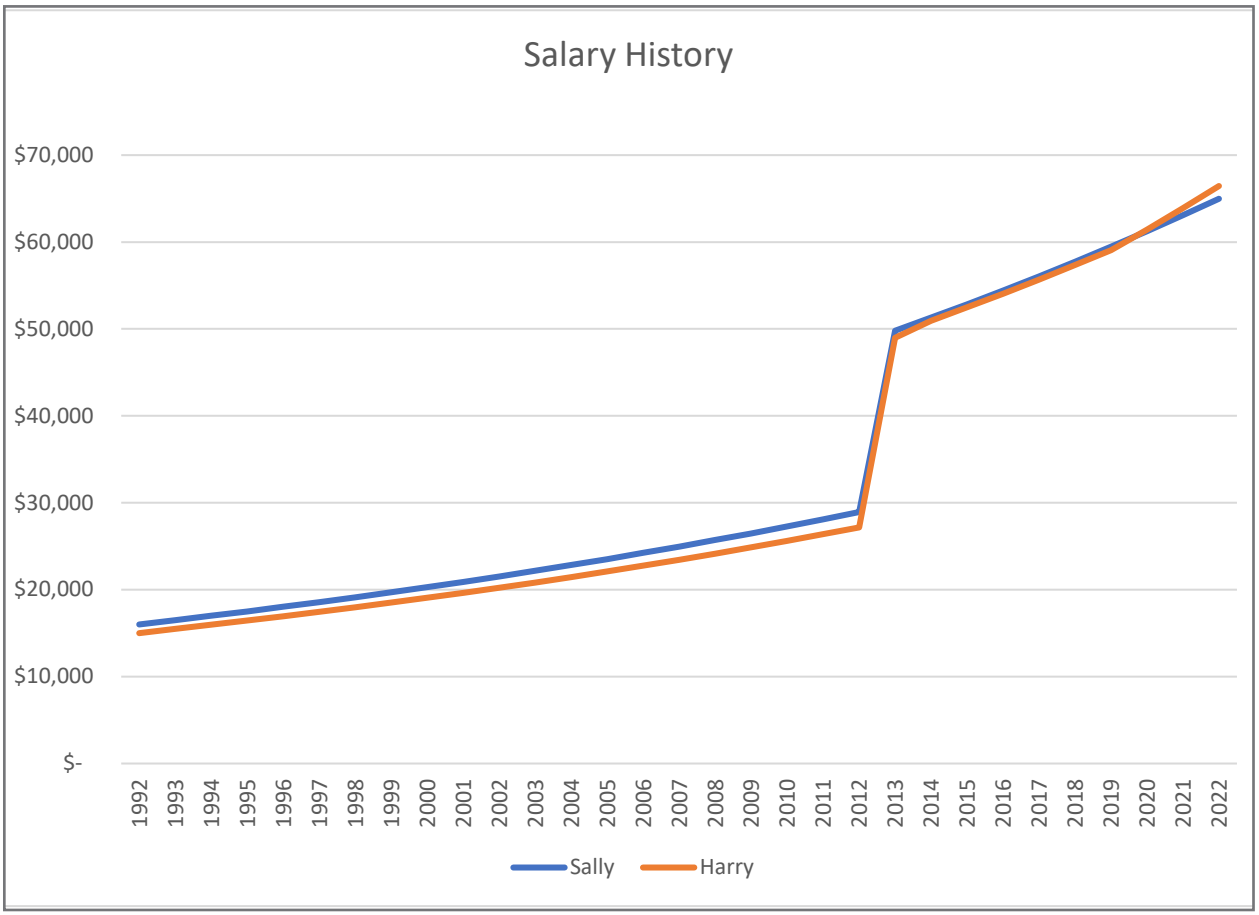


	Susie P-T	Larry F-T
Age	65	65
Years of Service	30	30
3-Year FAS	$ 33,673	$ 48,701
Accumulated Contributions	$ 41,606	$ 93,126
FAS Benefit	$ 22,224	**$ 32,143**
Actual CBBC Factor	5.64	3.65
CBBC Cap - 5.5	**$ 21,664**	$ 48,491
CBBC Cap - 6	$ 23,633	$ 52,899

In this scenario we have one member, Susie P-T, who worked part time while her children were in school. Once they graduated, she switched to full-time hours. Larry F-T worked full time his entire career, receiving normal salaries increases.

Susie's switch to full-time work during her final 10 years would result in her benefit being capped with a CBBC factor of 5.5; however, it would not have been capped with a CBBC factor of 6.

Younger vs. Older Retirement Age



	Sally	Harry
Age	65	52
Years of Service	31	31
3-Year FAS	$ 63,105	$ 63,923
Accumulated Contributions	$ 100,754	$ 98,050
FAS Benefit	**$ 43,227**	$ 43,787
Actual CBBC Factor	4.53	5.57
CBBC Cap - 5.5	$ 52,463	**$ 43,257**
CBBC Cap - 6	$ 57,232	$ 47,189

In this scenario we have one member, Sally, who started her career at 35. Harry started his career at 22. They both work the same number of years with similar salaries. While they both worked 31 years, Harry retired at 52, as he was grandfathered under the previous retirement eligibility rules.

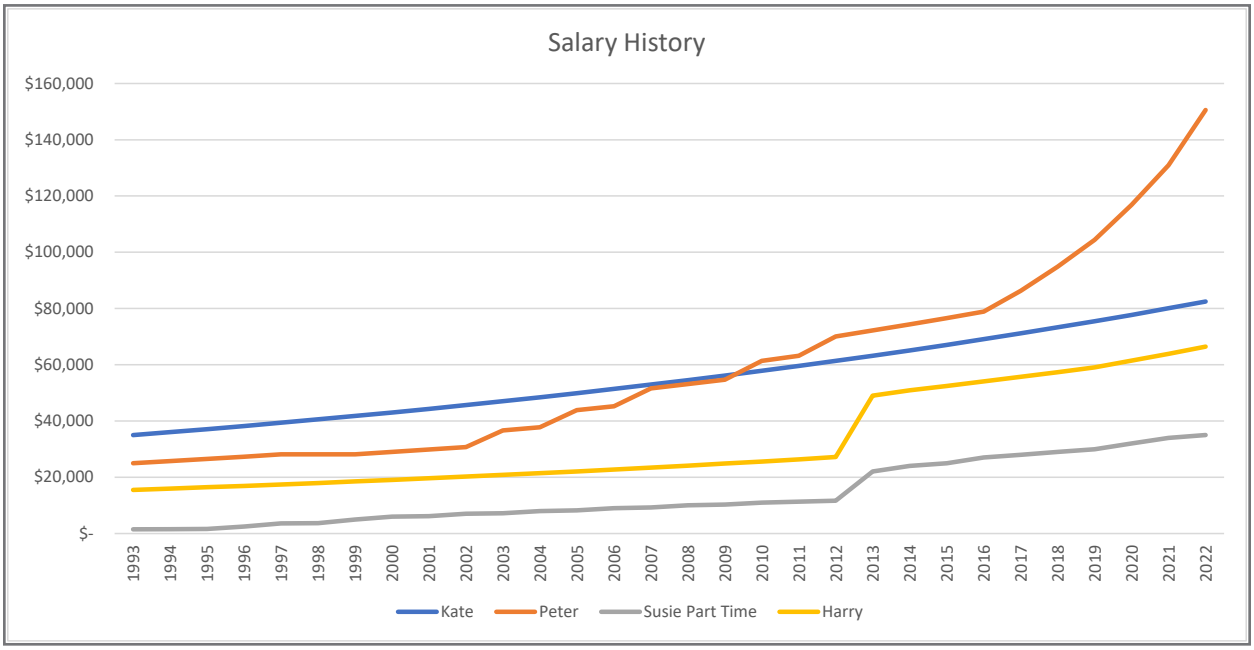
Given Harry's young retirement, he is expected to receive retirement benefits longer than Sally. The annual benefit based on his accumulated contributions would be paid out over more years resulting in a smaller annual benefit and a higher CBBC factor. Harry's scenario would result in his benefit being capped with a CBBC factor of 5.5; however, it would not have been capped with a CBBC factor of 6.

Late Career Salary Boost

	Max
Age	65
Years of Service	30
3-Year FAS	$ 200,000
Accumulated Contributions	$ 111,800
FAS Benefit	$ 132,000
Actual CBBC Factor	12.47
CBBC Cap - 5.5	**$ 58,214**
CBBC Cap - 6	**$ 63,506**

Max contributes on a salary in the lower to mid-20's his first 27 years, but Max's salary increases drastically during his last three years of service to a quarter-million dollars. This results in a Formula Benefit for Max that exceeds his accumulated contributions in one year. The CBBC ensures Max's benefit is more consistent with his earnings history.

Overview



	Kate	Peter	Susie P-T	Harry
Scenario	3% annual increase	3% annual increase, occasion bonuses, above market increases last three years	Part time first 20 years. Full time final 10 years	3% annual increase, one $20K mid-career increase, retire early
Age	65	60	65	52
Years of Service	30	30	30	31
3-Yr FAS	$ 80,101	$ 132,797	$ 33,673	$ 63,923
Accumulated Contributions	$ 162,031	$ 175,065	$ 41,606	$ 98,050
Formula Benefit	**$ 52,867**	$ 87,646	$ 22,224	$ 43,787
Actual CBBC Factor	3.45	5.74	5.64	5.57
CBBC Cap - 5.5	$ 84,370	**$ 84,038**	**$ 21,664**	**$ 43,257**
CBBC Cap - 6	$ 92,040	$ 91,678	$ 23,633	$ 47,189

A member's CBBC factor at retirement can be influenced by a variety of elements such as the timing of bonuses, above market salary increases, part-time work, and/or career changes. All these scenarios individually or combined have the potential to impact a member's Formula Benefit. While Peter, Susie PT, and Harry's salary scenarios exceeded a CBBC of 5.5, none of them exceed a CBBC of 6. Only the egregious salary increases included in the Late Career Salary Boost scenario produced a CBBC factor greater than 6 for the scenarios included in this analysis.

CBBC Impact on Prior Retirements

CBBC Factor	All Age and Service Retirements	
	5/2020-6/2021	7/2022-6/2023
<2	330	262
≥2 but <3	1,380	1,376
≥3 but <4	1,179	961
≥4 but <4.50	309	207
≥4.50 but <5	123	85
≥5 but <5.50	55	34
≥5.50 but <6	17	12
≥6.0	11	10
TOTALS	**3,404**	**2,947**

SERS staff consulted with Cavanaugh Macdonald to analyze the CBBC impact on SERS member retirements with benefit effective dates of July 2022 to June 2023 as compared to those with benefit effective dates of May 2020 to June 2021.

Query Results

- Time Frame July 2022 – June 2023 (compared to May 2020 – June 2021)
- Excludes new disability conversion retirements
- 2,947; Total age and service retirements
- Lowest CBBC: .937
- Highest CBBC: 7.721
- 56 age and service retirements with a CBBC greater than or equal to 5.0 (1.90% of the 2,947 retirements)
- 22 age and service retirements with a CBBC greater than or equal to 5.5 (0.75% of the 2,947 retirements)
- 10 age and service retirements with a CBBC greater than or equal to 6.0 (0.34% of the 2,947 retirements)