City of Cincinnati Retirement System
Board of Trustees Meeting

Agenda

July 13, 2023 / 2:00 P.M.
City Hall, Council Chambers and via Zoom

Call to Order

Public Comment

Approval of Minutes

- Meeting Minutes – June 8, 2023

Report from Governance Committee
Report from Performance Evaluation Committee

Informational – Staff Report

- May 2023 Investment Results (Marquette)
- Procurement Update (RFPs for Investment Consultant, Fiduciary Audit, Dental)
- Status of Executive Director Search Process
- Staff Update
- DROP Actuarial Analysis Update
- Healthcare Funding Policy
- Benefits Committee: July 25

Old Business

- CRS CY2022 Annual Report

New Business

- TBD

Adjournment

Next Meeting: Thursday, August 3, 2023, 2:00 P.M. City Hall Council Chambers and via Zoom

City of Cincinnati Retirement System
Board of Trustees Meeting
Minutes
June 8, 2023/ 2:00 P.M.
City Hall – Council Chambers and remote

Board Members Present
Bill Moller, Chair
Tom Gamel, Co-chair
Kathy Rahtz
Mark Menkhaus, Jr.
Monica Morton
Aliya Riddle

Administration
Mike Barnhill, Consultant
Karen Alder
Keva Elam

Law Department
Linda Smith

CALL TO ORDER
Chair Moller called the meeting to order at 2:08pm and a roll call of attendance was taken. Trustee Juech was absent.

PUBLIC COMMENT
No public comment.

APPROVAL OF MINUTES
Approval of the minutes of the Board meeting of May 4, 2023, was moved by Trustee Riddle and seconded by Trustee Gamel. The minutes were approved by unanimous roll call vote.

Report from the Investment Committee
Chair Moller informed the Board that three Investment Managers were considered for Core Plus and there is a motion that was approved by the Committee approving the hiring of Reams for Core Plus Manager. No second needed since it is coming from the Committee. Motion approved by a unanimous roll call vote. Chair Moller informed the Board $125-130 million will be invested.

Informational – Staff Report

- *April 2023 Investment Results (Marquette)* – Chair Moller informed the Board of the 4.2% return, year-to-date, which is below the benchmark of 7.5%. Chair Moller commented that this return directly impacts the funding ratio.

- *Procurement Update* – Director Alder informed the Board the RFP for the Investment Consultant is out and responses to all vendor questions have been provided and posted. The responses from those vendors that wish to participate are due June 29, 2023. The Fiduciary Audit RFP responses are due June 13, 2023.
- *Status of Executive Director Search Process* – Director Alder informed the Board that the Committee has interviewed three candidates and has selected two additional candidates to interview. The Committee will conduct a final round of interviews after the first round is complete.
- *Staff Update* – Director Alder announced that Terra Williams, a Division Manager from Treasury, has been chosen for the Finance Manager position. She has accepted and is expected to start on June 26th. This will allow a little over a month to learn from Bev Nussman, prior to her departure. Terra has a CPA and many years of treasury and accounting experience. Director Alder believes she will be a great addition to the staff.
- *DROP Actuarial Analysis Update* – Director Alder informed the Board that she expects to receive the report next week.
- *Employer Contribution in City Budget Update: City Manager Recommendation* – Chair Moller informed the Board the employer contribution was increased to 17%, which is half of the request. Still showing 28% funding by 2045. Chair Moller thanked the City Administration for including this in the budget, but he also emphasized that CRS still has a long way to go to achieve 100% funding by 2045. Chair Moller also thanked the Mayor and City Council for their support in increasing the funding to the Retirement System.
- *Healthcare Funding Policy Update* – Director Alder informed the Board she has a meeting scheduled next week with the solicitor and hopes to have more to report at the next meeting.
- *Dental RFP Status* – Director Alder informed the Board the RFP has been pulled down due to the recent benefit survey. At Chair Moller's request, the existing Dental Agreement will be extended for one year to allow consideration of changes suggested through the survey.

<u>Old Business</u>

- *Benefits Survey Update* – Presentation by a representative of Horan.

  The original survey was mailed out on April 13, 2023. The survey remained open for 47 days. Originally, the survey was to end on May 15, 2023, but at the request of the Board, the survey was extended to May 29, 2023.

  The survey was sent in two different mediums: email and regular mail. Originally 1,750 emails were sent; however, some bounced back. Some corrections to email addresses were made and resent, so the net emailed survey count is 1,644. Approximately 1,637 surveys were slated for mail. Around thirty were recalled due to printing issues, so Horan estimates that approximately 1,537 surveys were received in the mail by the retirees.

  Out of the 3,181 surveys that were sent, 931 surveys were completed for a 29% response rate. The overall themes from the survey were: Cost, Coverage, Appreciation, and Choice.

  Trustee Gamel asked, on a scale of 1-10, what is considered good vs average or poor. The Horan representative informed Trustee Gamel that anything rated 6-10 is considered favorable.

  Trustee Riddle asked if age was a factor in the survey and the Horan representative informed the

Board that the age of the respondent was not considered in the survey. Chair Moller informed the Board that this is the first survey done and there will be more in the future so it can be tightened up moving forward.

Chair Moller asked about long-term care insurance. He asked if this were offered to CRS members as a group, would the cost be better than retirees obtaining the coverage individually. The representative of Horan informed the Board that through the plan, the cost would potentially be better, but it would still be very expensive.

Chair Moller asked how the results of the survey would be communicated to the CRS members. Director Alder informed the Board that the best way to communicate the results will be in the next retiree newsletter with an article highlighting the results. Chair Moller asked if there were any issues with also posting these results on the website and Director Alder informed the Board that the handout can and will be posted to the website.

- *Draft City Ordinance re Disabled Adult Children Eligibility* – At the last meeting, the Board referred this to the Benefits Committee. The plan is to schedule a special meeting by the end of July. Trustee Gamel informed the Board that he will work with staff to schedule the meeting and get the Ordinance published.
- *Draft Ethics Policy* – Chair Moller informed the Board that this is in the packet, and it will be referred to the Governance Committee for discussion. Originally, the Law Department was to give a brief explanation of this but given the volume of material for today's Investment and Board Meetings, this was pushed for discussion in the next Governance Committee meeting. Chair Moller recommends that there be a Performance Committee and Governance Committee meeting, one hour each, prior to the next Board meeting in July. Trustee Rahtz and Trustee Menkhaus agreed with Chair Moller on this decision.
- *Survivor Benefits Ordinance Status* –Director Alder informed the Board that staff would like to get some clarification on this. The last time this was discussed, there was some confusion around the dollar volume and what that really means to a survivor when someone dies in-service. She believes there was discussion regarding the option of collecting a payment on a regular basis vs a lump-sum payment. There are concerns regarding continuing the lump-sum payment and eliminating the continual payment to alleviate the staff time it takes to make those payments, which are relatively small payments on an ongoing basis.

  Trustee Menkhaus informed the Board there was a motion approved for an option with the lump-sum being the default option to get as many people moving in that direction as possible. Chair Moller advised bringing this to the Benefits Committee for discussion.

  Director Alder informed the Board she will have the staff draft a report to share with the Board on how many people this affects and the dollar volume to get a better understanding before bringing it back.

New Business

- *CRS Annual Report* – Chair Moller suggests the report stay in the same format and changes can be made for the next year. The Executive Director and staff will put together a draft then put it on the Board agenda for consideration. Director Alder informed the Board that the report is almost ready for their review. Once it is complete, she will share it with Consultant Barnhill for his review and then send it to Chair Moller and Trustee Gamel.

Adjournment

Following a motion to adjourn by Trustee Gamel and it was seconded by Trustee Morton, the Board approved the motion by a unanimous roll call vote. The meeting adjourned at 2:47PM.

Meeting video link: https://archive.org/details/crs-board-6-8-23

Next Meeting: July 13, 2023, at 2:00 p.m.

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Secretary

Cincinnati Retirement System

City of Cincinnati

Retirement System

Executive Summary

May 31, 2023

Total Fund Composite

As of May 31, 2023

Summary of Cash Flows

	Last Month
Beginning Market Value	$2,236,380,297
Net Cash Flow	-$10,200,064
Net Investment Change	-$21,535,159
Ending Market Value	$2,204,645,074

Market Value

	Market Value ($)	% of Portfolio	Policy %	Policy Difference ($)
Total Fund Composite	**2,204,645,074**	**100.0**	**100.0**	**0**
Fixed Income Composite	**357,894,207**	**16.2**	**22.5**	**-138,150,935**
Private Debt Composite	**33,618,570**	**1.5**	**3.0**	**-32,520,783**
U.S. Equity Composite	**635,854,671**	**28.8**	**28.5**	**7,530,825**
Non-U.S. Equity Composite	**390,392,948**	**17.7**	**18.0**	**-6,443,166**
Volatility Risk Premium Composite	**57,586,538**	**2.6**	**2.5**	**2,470,411**
Real Estate Composite	**192,895,138**	**8.7**	**7.5**	**27,546,758**
Infrastructure Composite	**266,773,908**	**12.1**	**10.0**	**46,309,401**
Private Equity Composite	**250,569,489**	**11.4**	**8.0**	**74,197,883**
Total Cash Equivalents	**16,059,605**	**0.7**	**--**	**16,059,605**

Performance

	1 Mo	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Total Fund Composite	**-1.0%**	**1.1%**	**3.2%**	**-0.2%**	**10.2%**	**6.1%**	**7.1%**	**8.7%**	**May-85**
Target Benchmark	*-0.9%*	*1.0%*	*3.5%*	*-0.8%*	*9.1%*	*6.2%*	*7.2%*	*--*	*May-85*
Fixed Income Composite	**-0.9%**	**1.9%**	**3.0%**	**-0.8%**	**-0.3%**	**1.7%**	**2.4%**	**5.0%**	**Nov-95**
Bloomberg US Aggregate TR	*-1.1%*	*2.0%*	*2.5%*	*-2.1%*	*-3.6%*	*0.8%*	*1.4%*	*4.2%*	*Nov-95*
Private Debt Composite	**0.0%**	**4.6%**	**4.8%**	**4.7%**	**--**	**--**	**--**	**1.6%**	**Sep-20**
Bloomberg US Aggregate TR	*-1.1%*	*2.0%*	*2.5%*	*-2.1%*	*-3.6%*	*0.8%*	*1.4%*	*-4.5%*	*Sep-20*
U.S. Equity Composite	**-0.6%**	**0.9%**	**5.2%**	**-0.8%**	**14.7%**	**7.9%**	**10.0%**	**9.1%**	**Feb-89**
Russell 3000	*0.4%*	*4.2%*	*8.7%*	*2.0%*	*12.2%*	*10.1%*	*11.5%*	*10.3%*	*Feb-89*
Non-U.S. Equity Composite	**-3.4%**	**0.9%**	**4.7%**	**-1.4%**	**8.5%**	**1.3%**	**3.9%**	**5.5%**	**May-93**
MSCI ACWI ex USA	*-3.6%*	*0.4%*	*4.8%*	*-1.4%*	*7.2%*	*2.2%*	*3.8%*	*--*	*May-93*
Volatility Risk Premium Composite	**1.3%**	**6.3%**	**8.3%**	**5.1%**	**--**	**--**	**--**	**0.7%**	**Jan-22**
CBOE Put Write Index	*1.4%*	*5.9%*	*9.8%*	*5.9%*	*13.1%*	*5.8%*	*6.9%*	*2.9%*	*Jan-22*
Real Estate Composite	**-0.2%**	**-1.9%**	**-2.7%**	**-5.1%**	**8.3%**	**7.4%**	**9.4%**	**5.9%**	**Aug-07**
NFI-ODCE	*0.0%*	*-1.1%*	*-3.3%*	*-6.7%*	*7.9%*	*6.3%*	*8.2%*	*5.0%*	*Aug-07*
NPI	*0.0%*	*-0.6%*	*-1.8%*	*-3.7%*	*7.4%*	*6.5%*	*8.1%*	*6.4%*	*Aug-07*
Infrastructure Composite	**-0.2%**	**1.7%**	**2.0%**	**7.5%**	**10.7%**	**8.5%**	**7.3%**	**8.2%**	**Aug-08**
3 Month T-Bill +4%	*0.7%*	*2.1%*	*3.5%*	*7.3%*	*5.1%*	*5.5%*	*4.9%*	*4.7%*	*Aug-08*
Private Equity Composite	**0.0%**	**0.4%**	**0.4%**	**-2.3%**	**20.3%**	**14.8%**	**13.9%**	**8.7%**	**Jul-93**
Burgiss Global All Private Equity	*0.0%*	*0.0%*	*0.0%*	*-6.7%*	*23.2%*	*17.1%*	*15.9%*	*15.6%*	*Jul-93*

DISCLOSURE

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Via Electronic Mail

August 20, 2020

Ms. Paula Tilsley
Executive Director
Cincinnati Retirement System
801 Plum Street
Cincinnati, Ohio 45202

Re: Estimated Impact of the Deferred Retirement Option Plan on the Cincinnati Retirement System

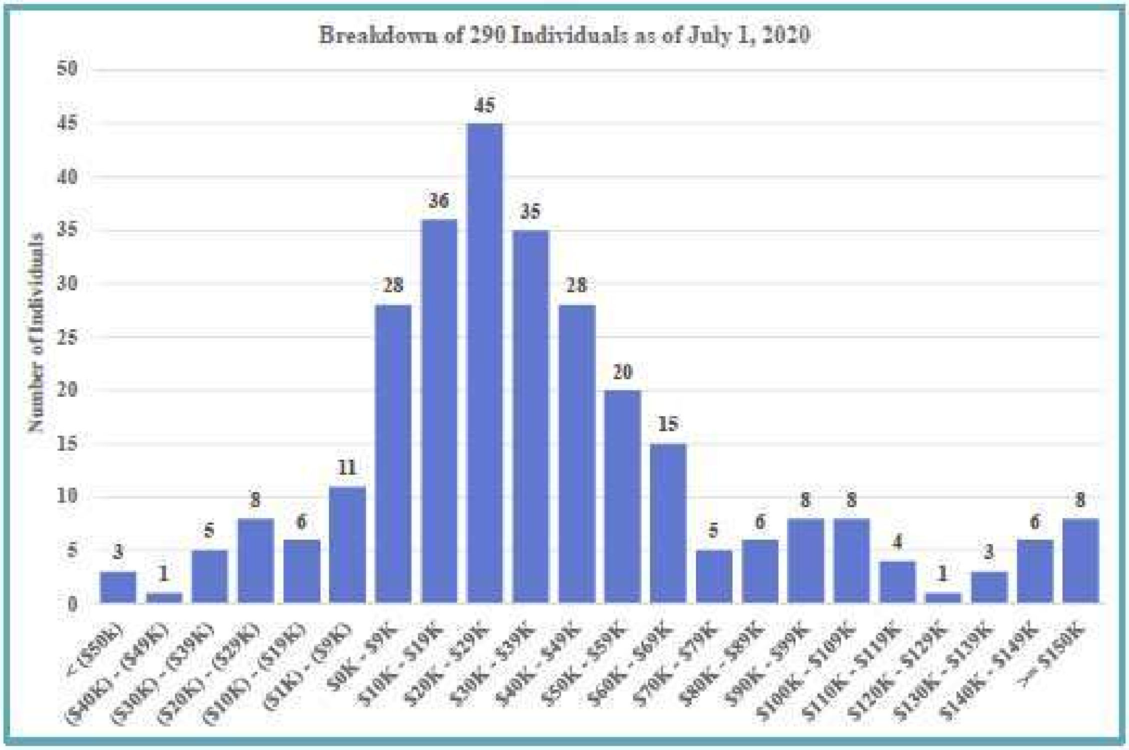
Dear Paula:

As requested, we are writing to estimate the impact on the Cincinnati Retirement System (System) for the 290 participants who elected to participate in the Deferred Retirement Option Program (DROP) between January 1, 2016 and April 1, 2020. We measured the impact to the System by calculating the following difference for each participant as of July 1, 2020: the liabilities reflecting their DROP participation compared to the liabilities as if they remained an active participant and retired on their actual or assumed exit from DROP. The City provided information for this analysis in May 2020. As of that time, 74 of the 290 participants had exited DROP. When calculating the liabilities reflecting their participation in DROP, we also reflected the 75% of the anticipated employee contributions that the City credits to the DROP account which is then paid out to the participants after they exit DROP.

Based on the methodology above, we determined the impact on the liability of the System to be approximately $11.6 million as of July 1, 2020. Total liabilities for the System as of December 31, 2019 (the most recent valuation performed) were $2,466.3 million.

The average impact for these 290 participants as of July 1, 2020 was approximately $40,000. However, the amount significantly varied based on each participants' characteristics (age, salary, service, etc.) at the time of DROP entry as well as subsequent pay levels and amount of time they spend in DROP. For the 74 participants that have exited DROP, the average time in DROP was 22.2 months. Participants in DROP are assumed to be in DROP for a total of 36 months before exiting.

Ms. Paula Tilsley
August 20, 2020
Page 2



The actual impact of the DROP cannot be measured until many years from now, i.e., after all the DROP participants' actual experience is known. Therefore, this calculation provides the City with an estimate of the cost impact to the System from the time these participants entered DROP until June 30, 2020. It should be noted that the average age for these 290 participants was 57.3 with an average service of 30.9 years at the date they entered DROP. Since DROP participants must have at least 30 years of service to participate in the DROP, and the assumed probability of retirement is high for these participants, it is possible that these participants may have retired within the next few years even if the DROP had not existed, based on the current assumptions.

As mentioned, we also took into consideration the reduction in participant contributions to the System, since when participants are in the DROP, 75% of the 9% employee contributions made during the DROP are credited to the participant's DROP account.

This analysis only reflects the financial impact to the System and does not factor in additional costs that the City incurs such as salaries and other benefits, including health insurance, had the participants retired on a date different than their actual or assumed DROP exit date.

These results were based on the same census data, financial information, methods and assumptions, and plan provisions used in the December 31, 2019 actuarial valuation, except as otherwise noted. The assumptions used were the same for all participants regardless of the participant's date of entry into the DROP. For any participant that has not yet exited DROP, we assumed that the DROP account would accumulate 3.25% per year based on the DROP crediting rate used in our December 31, 2019 valuation.

In preparing these results, we relied on information (some oral and some written) supplied by the Retirement System's staff as well as information available through Pension Gold. This information includes, but is not limited to, plan provisions, employee data, financial information, and earnings information after DROP entry through June 30, 2020. Where data was incomplete, reasonable assumptions were used. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standards of Practice No. 23.

Future actuarial measurements may differ significantly from the current results due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in plan provisions or applicable law; and final audited fiscal year financial results.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This letter was prepared solely for the Cincinnati Retirement System for the purposes described herein. Other uses of this letter are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

If you have any questions, please let us know.

Sincerely,
Cheiron

Kevin J. Woodrich, FSA, EA, MAAA
Principal Consulting Actuary

Janet Cranna, FSA, FCA, EA, MAAA
Principal Consulting Actuary

CINCINNATI RETIREMENT SYSTEM

SPECIAL ACTUARIAL ANALYSIS
DEFERRED RETIREMENT OPTION PLAN
June 14, 2023

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

June 14, 2023

Retirement Board
Cincinnati Retirement System
801 Plum Street, #328
Cincinnati, OH 45202

Re: DROP Analysis

Dear Board:

Effective January 1, 2016, provisions for the Deferred Retirement Option Plan (DROP) were implemented for the Cincinnati Retirement System (CRS or System).

This report has been prepared for CRS and its stakeholders by Foster & Foster Inc. to determine whether the DROP in its current form is cost neutral to the System and whether it negatively impacts the CRS Funded Ratio.

Based on the relevant information discussed throughout the remainder of this report, we believe that the existence of DROP in its current form is cost neutral to the CRS and does not negatively impact the CRS Funded Ratio.

The findings, conclusions, and recommendations for consideration presented in this report are specific to CRS. Foster & Foster may produce different findings or arrive at different conclusions in other situations or even in cases involving similar plans. As such, it is important to keep in mind that the use of this information for purposes other than those expressed here may not be appropriate.

To the best of our knowledge, the analysis was prepared in accordance with the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.

When reviewing the results, it is important to keep in mind that future actuarial measurements may differ significantly from current measurements due to such factors as: plan experience differing from that anticipated by the assumptions; changes in assumptions; changes in plan provisions or applicable law.

Please also note that the true cost of any DROP program cannot be fully recognized until each DROP participant terminates employment with the System. The findings presented in this report are based on assumptions of future experience. Deviations from expectations may lead to significant changes in actuarial measurements. Due to the limited scope of the analysis, we did not perform an analysis of the potential range of such future measurements. This report does not consider all possible scenarios.

Foster & Foster does not provide legal, investment or accounting advice. Thus, the information in this report is not intended to supersede or supplant the advice or the interpretations of the System or its affiliated legal, investing or accounting partners.

The undersigned are familiar with the relevant aspects of retirement benefit valuations and collectively meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All the sections of this report, including any appendices and attachments, are considered an integral part of the actuarial opinions.

We look forward to presenting the conclusions contained in this report to the Board and are available to answer any questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER INC.

By: ______________________________
Bradley R. Heinrichs, FSA, EA, MAAA

By: ______________________________
Luke Schoenhofen, FSA, EA, MAAA

SECTION I. SUMMARY OF CRS DEFERRED RETIREMENT OPTION PLAN

The DROP program was established effective January 1, 2016 for members of the Active Employee Class covered in the Collaborative Settlement Agreement (CSA) and affords eligible members a one-time election to enter DROP upon attainment of 30 or more years of credible service. The primary features of DROP include:

- When participating in DROP, members continue to make contributions based upon the member contribution rate of 9.00%. During this time, 75% of member contributions are deposited to their DROP account. The remaining 25% of member contributions are retained by the System to offset the cost of administering this benefit.

- 100% of the member's computed benefit (based upon service and salary at the time of DROP) is credited to the member's DROP account. Participation in DROP is limited to a total of five consecutive years.

- Cost-of-living adjustments (COLAs) are applied beginning on the fourth anniversary of the retirement effective date, which is when the participant officially leaves employment. DROP participation does not count toward the COLA deferral period, and COLAs are not applied while in DROP.

- The DROP account is credited with interest quarterly at a rate equal to the 10-year U.S. Treasury Note Business Day Series, as publish by the United States Federal Reserve, with a maximum rate of 5.00%. Any member participating in DROP for less than two years will forfeit all earned interest.

- Once the member's employment has been terminated, his/her accumulated DROP balance will be fully distributed within 120 days.

SECTION II. OUR APPROACH

Background Information

Paragraph 21 of the Operative Settlement Terms of the Collaborative Settlement Agreement between the City of Cincinnati, City employees, City retirees, and the American Federation of State and Municipal Employees (AFSCME) states that "The Parties agree to facilitate an independent actuarial analysis of the DROP during the fifth year of its implementation. If, based on the analysis, the program is not cost-neutral to the CRS Pension Trust Fund, the Parties shall then submit the matter to the Court for possible reformation or closure of the DROP, as warranted by the facts and determined by the Court to assure the DROP is cost-neutral, provided that any individual who has entered the DROP shall be entitled to participate in the DROP for five full years".

We encourage that you keep in mind the term "cost-neutral" as you read through the remainder of this analysis. Cost-neutral does not carry a specific definition and is a subjective term that may differ between various stakeholders, including actuaries. It is also difficult to quantify what cost-neutral represents when considering all interrelationships that exist in the normal operation of the system. We will do our best to convey, consider and analyze these interrelationships in conjunction with this analysis.

Based on the actuarial assumption used in the Actuarial Valuation as of December 31, 2022, 70% of CRS Employee members eligible for DROP benefits are assumed to elect DROP participation. Additionally, those electing participation are assumed to remain in DROP for three years.

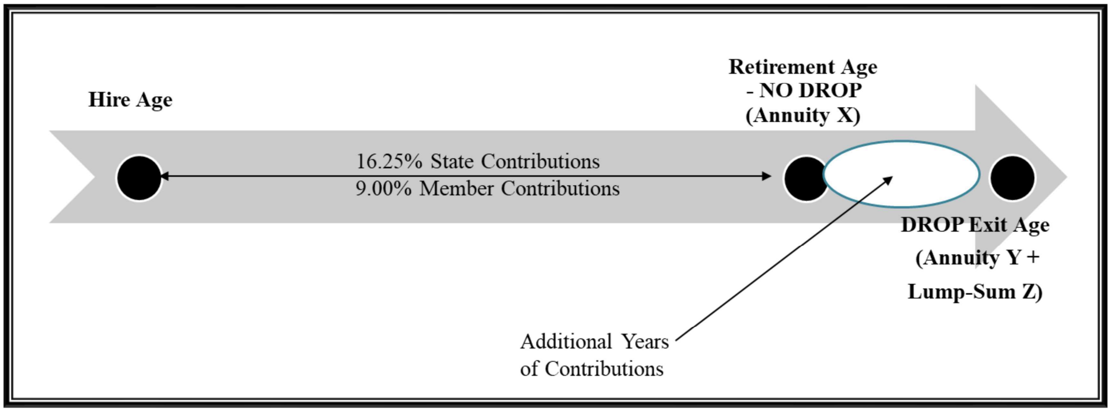
Based on an analysis of the data provided, it appears that members are working to later ages than they were before the implementation of the DROP. In a review of actual retirement ages from 2011 through 2015, the average actual retirement age was 59.5. In reviewing the retirement ages from 2016 through 2022, the average actual retirement age was 61.0, an increase of 1.5 years older.

It is not possible to pinpoint a single reason for delayed retirement ages, but this trend should not be ignored in combination with the existence of DROP. When examining whether existence of DROP results in a financial impact to the system, the idea that members are working longer due to DROP utilization must be an important consideration of the analysis.

Hypothetical Retiree/DROP Comparison Calculations

There are several components that need to be considered anytime one tries to analyze a DROP plan's financial impact on a retirement system. From a benefit perspective, we feel that it is important to illustrate and examine a comparison of the benefit value members will receive as a DROP participant versus regular service retirement.

Specifically, one must consider the net contributions (to the system) for the benefit value received (from the system) at retirement. For DROP members, the system will receive additional years of contribution at a higher salary than if the member retired at an earlier age and was replaced with a new hire at the entry salary rate, based on the presumption that DROP extends the average retirement age. Consider the illustration on the following page as it applies to any hypothetical member of the system.



As previously established, it is expected that due to the existence of DROP, members will work longer on average. As you can see, the illustration portrays that the DROP exit age will be at an age beyond what the regular service retirement age would have been had DROP not been implemented. The white oval in the illustration indicates the period of the member's career in which the system will generate additional year(s) of contributions. The net effect of these additional contributions when compared to the difference in the benefit values (DROP versus retirement) allows us to examine an instrumental component when determining if DROP has a financial impact on the retirement system.

In order to do so, we considered several hypothetical members based on various hire and exit ages and performed the following calculation steps:

- Step 1 – Calculate the actuarial present value of benefits of Annuity X at service retirement age (no DROP)
- Step 2(a) – Calculate the actuarial present value of benefits of {Annuity Y + Lump-Sum Z} at DROP exit age, discounted to Step 1 retirement age
- Step 2(b) – Determine additional contributions received by system between retirement age (no DROP) and DROP exit age, less the Normal Cost for a new entrant (assumed to be 12.4% of salary), discounted to Step 1 retirement age
- Step 3 – Compare Step 1 to {Step 2(a) minus Step 2(b)}

Hypothetical Member Demographics

Based on the current active population, the hypothetical comparison calculations will include five (5) hypothetical members with varying hire and termination ages. Also, based on an analysis of current retiree data, we have included the average expected retirement (or DROP exit) age corresponding to each hire age, as shown below.

Average Hire Age	Average Expected Retirement Age	Assumed Starting Salary	Proportion
20	53	24,000	20.0%
25	58	24,000	25.0%
25	63	24,000	25.0%
30	63	24,000	15.0%
30	68	24,000	15.0%

Calculation Assumptions

Below is a partial list of the significant assumptions used for purposes of this analysis:

- Salary
  - New entrant rate – \$50,700 in 2029, \$58,100 in 2034
  - Final year of employment – Based on assumed salary increases
- Salary Increases – Table below (valuation assumption)

Service	Increase
<1	8.75%
1	8.25%
2	7.75%
3	7.25%
4	6.75%
5	6.25%
6	5.75%
7	5.25%
8-14	4.75%
15-20	4.25%
21+	3.75%

- DROP Participation Period – 3 years (valuation assumption)
- DROP Interest Crediting – 3.25% (valuation assumption)
- DROP Participation Rate – 70% (valuation assumption)
- Increase in Retirement Age due to DROP – 1 year
  - Also analyzed impact of increase in retirement age of two and three years

Basic Salary Calculation Details

In order to calculate the benefit value for the hypothetical members, we need to apply the salary assumptions stated above in order to populate the 5-year average final salary as well as the member contribution accrual (6.75% x salary for DROP participants). Below is a table that represents the values used for the calculations based on the assumptions stated above for a hypothetical member hired at age 20 with retirement age 53.

Year	Salary	5-Year Average	6.75% x Salary	6.75% x Salary Accrual
t (final year)	\$109,771	\$102,117	\$7,410	N/A
t-1	\$105,803	\$98,426	\$7,142	\$7,410
t-2	\$101,979	\$94,869	\$6,884	\$14,552
t-3	\$98,293	\$91,440	\$6,635	\$21,436
t-4	\$94,740	\$88,135	\$6,395	\$28,071
t-5	\$91,316	\$84,949	N/A	\$34,466
t-6	\$88,015	N/A	N/A	N/A
t-7	\$84,834	N/A	N/A	N/A
t-8	\$81,768	N/A	N/A	N/A
t-9	\$78,812	N/A	N/A	N/A

SECTION III. CALCULATION ILLUSTRATION

This section includes a sample illustration for one of the hypothetical members in order to demonstrate the calculation details/methodology that is applied for each of the retiree/DROP comparison calculations included in this analysis and summarized in the next section.

The sample illustration is based on the following details:

- Hire Age – 20
- First Eligibility – 50/30
- DROP – 3 Years
- Retirement Age (no DROP) – 52
- DROP Exit Age – 53

The three (3) tables immediately below show the calculations of the accrued benefits (in accordance with the System's current benefit formula) at retirement/DROP, as well as the calculation of the DROP lump-sum.

Regular Retirement Annuity		
Service	32	
Benefit Accrual	Per Year	Accrual
Part A	2.50%	0.3125
Part B	2.50%	0.1875
Part C	2.20%	0.2640
3-Year Avg. Salary	$102,025	
5-Year Avg. Salary	$98,426	
Accrued Benefit	$102,025 x 0.3125 +	
	$98,426 x 0.4515 =	
	$76,322	
Age 52 Payment Factor	15.0979	
Actuarial Present Value	$76,322 x 15.0979 =	
	$1,152,302	

DROP Retirement Annuity		
Service	30	
Benefit Accrual	Per Year	Cumulative
Part A	2.50%	0.3125
Part B	2.50%	0.1875
Part C	2.20%	0.2200
3-Year Avg. Salary	$94,783	
5-Year Avg. Salary	$91,440	
Accrued Benefit	$94,783 x 0.3125 +	
	$91,440 x 0.4075 =	
	$66,881	
Age 53 Payment Factor	14.9441	
Actuarial Present Value	$66,881 x 14.9441 =	
	$999,476	

DROP Retirement Lump Sum		
DROP Benefits	66,881 x 3 = 200,643	
6.75% x Salary Accrual	21,436	year = t-3
Interest	11,004	
DROP Account Balance	233,083	

The table below represents the estimate of the present value of additional contributions received by the system due to members delaying their retirement by participating in DROP.

Additional Year	DROP Salary	Replacement Salary	DROP Salary Contributions	Replacement Salary Contributions	Additional Net Contributions	Normal Cost	Discount Factor	Present Value
1	$109,771	$50,700	$27,717	$12,802	$14,915	$6,287	0.964486	$8,322

Finally, the table below summarizes the comparison of the present value of benefits for DROP/retirement and shows the net effect once the present value of additional contributions is reflected. A net increase indicates a cost to the system, while a net decrease indicates a savings to the system.

Results Summary				
	Annuity	Lump Sum	Discount Factor	Present Value
Regular Retirement	$76,322	N/A	1	$1,152,302
DROP Retirement	$66,881	233,083	0.930233	$1,146,567
			Increase in PV	-$5,735
			PV (Additional Contributions)	$8,322
			Net Increase/Decrease	-$14,057
			% Increase/Decrease	-1.22%

To further illustrate the calculation details, let's revisit the calculation steps shown on page 3, inserting the results from the sample illustration.

- Step 1
    - Calculate the actuarial present value of benefits of Annuity X at service retirement age (no DROP)
    - **$1,152,302** (from regular retirement annuity table)
- Step 2(a)
    - Calculate the actuarial present value of benefits of {Annuity Y + Lump-Sum Z} at DROP exit age, discounted to Step 1 retirement age
    - $999,476 (from DROP retirement annuity table) + $233,083 (from DROP retirement lump-sum table) = $1,232,559 x 0.930233 (from results summary table) = **$1,146,567**
- Step 2(b)
    - Determine additional contributions received by system between retirement age (no DROP) and DROP exit age, less Normal Cost
    - **$8,322** (from additional years table on bottom of page 5)
- Step 3
    - Compare Step 1 to {Step 2(a) minus Step 2(b)}
    - Step 1 = $1,152,302
    - Step 2(a) minus Step 2(b) = $1,146,567 - $8,322 = $1,138,245
    - Net Increase/Decrease = $1,138,245 - $1,152,302= **-$14,057**
    - % Increase/Decrease = -$14,057/$1,152,302 = **-1.22%**

As you can see, the net impact of electing DROP versus regular service retirement for this hypothetical member based on the parameters specified was a decrease in present value of $14,057, or 1.22% of the actuarial present value of benefits.

As previously mentioned, we performed these same calculation steps repeatedly for various hypothetical members with differing hire and exit ages. In the next section, we have provided several tables of results for each of the hypothetical members analyzed.

SECTION IV. CALCULATION RESULTS SUMMARY

Below is a summary of the hypothetical retiree/DROP comparison calculations for each of the hypothetical members listed on page 3. When reviewing the results, please keep in mind that the difference in present value indicates the increase (or decrease, if negative) in costs due to DROP when compared to regular service retirement.

Hire Age	Retirement Age	DROP Exit Age	Difference in Present Value	Net Difference in Present Value (With additional contributions)
20	53	53	1.29%	1.29%
20	52	53	-0.50%	-1.22%
20	51	53	-2.12%	-3.38%
20	50	53	-3.59%	-5.18%
25	58	58	2.63%	2.63%
25	57	58	0.48%	-0.29%
25	56	58	-1.47%	-2.80%
25	55	58	-3.24%	-4.93%
25	63	63	5.19%	5.19%
25	62	63	2.21%	1.41%
25	61	63	-0.53%	-1.93%
25	60	63	-3.04%	-4.86%
30	63	63	4.54%	4.54%
30	62	63	1.90%	1.06%
30	61	63	-0.50%	-1.95%
30	60	63	-2.68%	-4.50%
30	68	68	7.93%	7.93%
30	67	68	4.23%	3.33%
30	66	68	0.85%	-0.72%
30	65	68	-2.24%	-4.25%

As can be seen above, if the retirement age and DROP exit age are the same, the value of the DROP benefits is larger than regular service retirement (between 1.29% to 7.93%). This means that if implementing DROP had no impact on retirement behavior, the DROP plan would add cost to the system. Keep in mind that actual experience has shown that members have delayed their retirement, on average, approximately 1 year since the implementation of DROP.

Reviewing the results for each hire age when the retirement age is one year prior to the DROP exit age, you can see that the net difference in present value (accounting for the additional contributions received by the system during that one year) is between -1.22% to 3.33%. Again, please note that these results are based on various assumptions, and actual retirement/DROP experience could significantly impact the results.

Based on the proportion assumed for each respective hire age (page 3) and the calculation assumptions used (page 4), the expected net difference in present value when comparing DROP versus regular service retirement is approximately an increase of 0.49%. If the existence of DROP was assumed to delay retirement by two years, the expected net difference in present value would be approximately a decrease of 1.58%. If the existence of DROP was assumed to delay retirement by three years, the expected net difference in present value would be approximately a decrease of 3.36%.

Generally, valuation results that are within 2% of the actuarial present value of benefits are deemed to be within acceptable thresholds and do not represent a material impact on the overall costs to the system. Since the average retirement age has increased by 1-2 years since the implementation of DROP, it would be reasonable to conclude that the existence of DROP is cost neutral to the CRS and does not negatively impact the CRS Funded Ratio.

SECTION V. ADDITIONAL CONSIDERATIONS

While the emphasis of this analysis has focused on the hypothetical calculation comparisons under a certain set of assumptions to this point, it is important to consider the interrelationships that exist throughout the retirement system associated with providing DROP to its members.

Below is a non-exhaustive list of additional items that must be considered when evaluating whether DROP has a financial impact on the retirement system.

- *Interest Crediting* – The DROP account is credited with interest quarterly at a rate equal to the 10-year U.S. Treasury Note Business Day Series, as publish by the United States Federal Reserve, with a maximum rate of 5.00%. Any member participating in DROP for less than two years will forfeit all earned interest. It is currently assumed that the system will achieve a 7.50% return on DROP assets each year, allowing the system to benefit from interest arbitrage. The gains or losses associated with the DROP interest crediting will depend on actual investment performance for the system.

- *Impact on OPEB Liability* – It is likely that the existence of DROP will result in a decrease to the OPEB liability of the system. Members in DROP are considered 'active' from an OPEB perspective and since members are working longer to utilize DROP, this means the overall OPEB liability will likely be less than it would have if DROP did not exist.

- *Impact on Administrative Expenses* – Typically, implementing new benefit features such as DROP into the system comes with an increase in the administrative expenses of the system. The increase in expenses associated with the ongoing maintenance of the DROP plan is not expected to have a material financial impact on the system but should be considered.

- *Adverse Selection* – Whenever members are given a choice (for example, to DROP or retire), it is important to consider that adverse selection is likely to occur periodically on an individual basis. For example, a member may not elect to enter DROP if they are in line for a promotion or are expecting a significant increase in pay. As mentioned many times throughout this report, actual plan experience deviating from expectations could have an impact on the actuarial measurements. It will be important to continue to monitor plan experience through actuarial experience studies to ensure the assumptions used are our best estimate of future experience. Please also note that a change in the assumptions (for example, salary increases) may have a significant impact on the results.

SECTION VI. CONCLUSIONS AND RECOMMENDATIONS

Pursuant to Paragraph 21 of the Operative Settlement Terms of the Collaborative Settlement Agreement between the City of Cincinnati, City employees, City retirees, and the American Federation of State and Municipal Employees (AFSCME), we have completed a special actuarial analysis which includes an examination of the financial impact, if any, on the retirement system of offering the DROP to members.

As presented throughout our analysis, there are several variables that must be considered and assumptions that must be made when determining if a DROP plan has a financial impact on a retirement system. One of the key considerations discussed and an integral part of this analysis is the assumption that implementing DROP will (and has) have an impact on retirement behavior. Specifically, members are working longer due to the existence of DROP than they were prior to the implementation of DROP.

In Section IV, we illustrated that absent a change in retirement behavior, DROP provides a more valuable benefit to members than regular service retirement. This means that if DROP was implemented and members were retiring at the same age as before, DROP would have a negative financial impact on the retirement system. We further illustrated that if members are working longer than they were previously, the value of DROP compared to regular service retirement is neutralized when the retirement age increases between 1-2 (or more) years. Actual plan experience has indicated that members are working 1-2 years longer than they were prior to DROP implementation.

There are several components that must be considered when examining the financial impact of DROP on the retirement system, as discussed in Section V. It is important to keep in mind that adverse selection will occur, and certain individuals will benefit financially from the existence of DROP. The impact on OPEB liability is difficult to value, but it should serve as an offsetting factor when considering the total retirement system liability.

Negative financial Cost neutral does not carry a specific definition and is a subjective term that may differ between various stakeholders, including actuaries. It is also difficult to quantify what cost neurtal represents when considering all interrelationships that exist in the normal operation of the system.

Based on all of the relevant information discussed throughout this report, we believe that the existence of DROP in its current form is cost neutral to the System and does not negatively impact the CRS Funded Ratio. We recommend that the Board continue to monitor actual retirement and DROP participation experience through periodic actuarial experience studies. A change in plan experience may significantly impact the results of this analysis and the analysis should be revisited in conjunction with a change to pertinent actuarial assumptions.

The findings presented in this report are specific to CRS. Foster & Foster may produce different findings or arrive at different conclusions in other situations or even in cases involving similar plans. As such, it is important to keep in mind that the use of this information for purposes other than those expressed here may not be appropriate.

115 Trust Funding Policy

On December 2, 2022, Billy Weber, Assistant City Manager, made the following request of the CRS Board via email. The request is consistent with the Cincinnati Municipal Code, 203-93 (c) which states that "The City, with input and recommendations from the Board shall establish a funding policy for health care in accordance with the provisions of the Collaborative Settlement Agreement." The referenced policy has been provided to the Board and is attached.

> "I am writing on the behalf of the City Manager's Office to formally request Cincinnati Retirement System Board input on the attached proposed Health Funding Policy, pursuant to CMC 203-93(c) and the Collaborative Settlement Agreement. We look forward to continued discussion to resolve this outstanding item."

Board 115 Trust Fund Policy Input and Recommendations

The CRS Board, in fulfilling its fiduciary obligation, must provide a response to the City's proposed funding policy draft. The following motion is submitted to the CRS Board Benefits Committee for consideration and approval.

MOTION: The Healthcare 115 Trust Funding Policy shall include the following provisions:

1. The Healthcare 115 Trust shall achieve full funding of at least 100% at the end of the term of the Collaborative Settlement Agreement (CSA) to provide the healthcare benefits for CRS eligible members (and their eligible spouses and children) covered by the Collaborative Settlement Agreement.
2. The City shall contribute the annual Actuarially Determined Contribution (ADC) into the Healthcare 115 Trust that is necessary to achieve full funding of at least 100% at the end of the term of the CSA.
3. If the funding ratio (defined as the AVA divided by AL) is at or below 95% in any calendar year, the City shall, within one (1) calendar year from the date that the annual Actuarial Valuation report is submitted to the CRS Board of Trustees, or eighteen (18) months after the end of the Actuarial Valuation calendar year being evaluated (whichever is earlier), contribute to the 115 Trust the funding amount necessary to achieve at least 100% funding at the end of the CSA term, based on the annual Actuarial Valuation.
4. At the end of the CSA term if there is a fund balance in the Healthcare 115 Trust, the balance shall be used to provide healthcare benefits for eligible members (and their eligible spouses and children) during their lifetimes.

The approved motion provisions shall be sent to the City Manager from the CRS Board in letter format, signed by the Board Chair, with copies to the Mayor and Councilmembers. The letter shall include an introduction that references the goal of the CSA to fund the trust at actuarially appropriate levels to provide healthcare benefits.

City of Cincinnati
Cincinnati Retirement System
115 Trust and Other Post Employment Benefits (OPEB) Funding Policy

Background

In 2015, the City of Cincinnati entered into a settlement agreement (Collaborative Settlement Agreement or "CSA") to resolve pending litigation related to changes in the retirement benefits provided by the City, including healthcare benefits (also known as "Other Post Employment Benefits" or OPEB). The CSA required that the City continue to provide retiree healthcare benefits for certain City retirees through the expiration of the CSA in 2045. The CSA specified varying eligibility and cost participation by retirees. CSA paras. 23-24. The City implemented these provisions though amendments to CMC 203-42 through 203-44, and by creating a separate trust fund for the purposes of contributing to, investing and funding the health benefits of these certain retirees of the City ("115 Trust Fund"). CMC 203-122.

CSA para. 25 required the City to develop a funding policy for the 115 Trust Fund "that will satisfy all consent decree requirements including but not limited to the City's obligation to fully fund the 115 Trust at actuarially appropriate levels for the term of this Agreement." CSA, para 26; CMC 203-93(c). Accordingly, this funding policy is intended to implement the CSA and CMC and ensure that the 115 Trust is funded at actuarially appropriate levels at least through December 31, 2045.

Since the effective date of the CSA, the 115 Trust has either been very close to full funding or overfunded. As such, the City has not made any employer contributions to the 115 Trust, aside from the initial deposit of $220mm earmarked for retiree healthcare. Medical costs, however, have been historically volatile. With the advent of increased inflation as well as capital market volatility, it is prudent to adopt a healthcare funding policy at this time.

Actuarial Evaluation: Valuation, Experience Study and Audit

Consistent with the City ordinances that require the regular application of sound actuarial analysis to the administration of pension and OPEB benefits, this policy requires that an actuarial valuation of CRS OPEB benefits and the 115 Trust will continue to be conducted annually. CMC 203-91. Additionally, an actuarial experience analysis will be conducted at least once every five years. Admin. Code. XV sec. 9. Finally, an actuarial audit, with full replication of data and results, will be conducted once every 10 years by an actuary who had no role in the conduct of any actuarial valuation or experience study during the 10-year period previous to the audit.

The annual actuarial valuation will compute the normal cost and any past service cost associated with the 115 Trust. The normal cost is the annual amount that should be contributed by the employer to the system to fund the projected accrual of healthcare benefits over the year, assuming that all actuarial assumptions are accurate. The past service cost is the amount needed make up for variances in the actual experience of the system versus the actuarial assumptions. Together, the normal cost and the past service cost, if any, equal the actuarially determined employer contribution (ADEC).

Actuarial Assumptions

Notwithstanding the provisions of the CSA and CMC, for purposes of calculating the ADEC for the 115 Trust Fund, and conservatively managing the 115 Trust, the following actuarial assumptions and methods will be used:

Assumed Investment Earnings Rate:	7.50%
Amortization period of any unfunded liability:	30 years
Amortization method:	Level dollar
Value of 115 Trust Assets:	Actuarial value

Funding Triggers

Upon a determination by the actuary that the 115 Trust is funded at a level of 90% or less, the City will begin to contribute the normal cost of the OPEB benefits in the fiscal year that begins two years following the date of the OPEB valuation. Example: if the CY2024 OPEB valuation reflects that the 115 Trust is 89% funded, the City will contribute the OPEB normal cost rate in the FY2026 budget. The normal cost the City will contribute will be capped at 2% of pensionable CRS member payroll.

Upon a determination by the actuary that the 115 Trust is funded at a level of 80% or less, the City will consider an additional contribution to defray the OPEB unfunded liability in the fiscal year that begins at two years following the date of the OPEB valuation.

Any contribution of normal cost or additional contribution to defray any unfunded liability will be contingent on the CRS pension funded ratio being at least 85%.

The City may cease contributions to the 115 Trust following two consecutive years of funding levels at or above 100%, as certified by the actuary in the annual valuations, subject to re-starting contributions under the provisions of the previous two paragraphs.

Appropriation Required

The City will seek to implement this funding policy in good faith, but recognizes that annual budgeting always involves complex balancing of a large spectrum of budget needs with limited available revenues.

Effective Date

This funding policy takes effect upon the date of adoption by the City Manager, with consent from the Mayor and City Council of the City of Cincinnati.

Sunset

Acceptable and appropriate actuarial assumptions, methods and practices vary over time, as do economic conditions and investment markets. Any funding policy should be regularly evaluated and updated to determine its suitability for the times. Accordingly, this funding policy sunsets ten years after its effective date. The City of Cincinnati will endeavor to re-approve, update or replace this funding policy prior to its expiration.

July 5, 2023

To: Mayor and Members of City Council

From: Cincinnati Retirement System Board of Trustees

Copy: Sheryl Long, City Manager

Subject: Cincinnati Retirement System CY2022 Annual Report

This report is from the Cincinnati Retirement System (CRS) Board of Trustees (Board) and provides the City Council with the state of the CRS Pension Trust and Healthcare Trust. This summary report, together with the CRS Financial Report, is intended to provide a comprehensive summary of the status of the Cincinnati Retirement System, in compliance with the CRS Board's reporting requirements as set out in the City's Administrative Code and Board Rules. The report is as of December 31, 2022. For additional information, please see the City's Annual Comprehensive Financial Report, Actuarial Valuations, and Investment Results on the CRS website.

The CRS is governed by the Collaborative Settlement Agreement (CSA). Under the CSA, the CRS Pension Trust is to be 100% funded by 2045. Under the CSA, the Healthcare Trust is to be 100% funded through 2045.

Given the current and projected funding positions of the Pension Trust, we recommend that the City Council continue to take action to increase the funding of the Pension Trust. In addition, we recommend that the City Manager continue to work with class counsel to finalize a funding policy for the Healthcare Trust. The City's municipal code requires that the City obtain input and recommendations from the CRS Board for the funding policy.

Background

The purposes of the CRS Pension Trust and Healthcare Trust are to provide promised retirement benefits and healthcare benefits to eligible retired city employees. CRS is a defined benefit plan that was established in 1931. The Collaborative Settlement Agreement (CSA) was approved in 2015 to settle litigation and provide a comprehensive strategy to stabilize CRS while securing sustainable and competitive retirement benefits for both current and future retirees.

As of December 31, 2022, there were 2,875 full-time active members (which includes 157 members in the DROP plan who are still working), 4,148 pensioners receiving pension payments, and 4,762 pensioners and spouses receiving healthcare benefits. The CRS Board serves as an independent fiduciary on behalf of active and retired members of the retirement system. The Board retains Marquette Associates, an independent investment consulting firm, and Cheiron, a pension and healthcare actuarial consulting firm, both of which specialize in public sector retirement plans. Marquette and the Board have developed and follow a disciplined investment policy that can be found on the CRS website. Cheiron calculates the actuarial value of assets and liabilities and projects the funded status of the Trusts in future years based on professional actuarial standards and practices.

The assumed investment rate of return and discount rate for calculating liabilities is 7.5% per year as prescribed in the CSA. The annualized capital market rates of return for the past 5 and 10 years as of December 31, 2022, were 5.43% and 7.32%, respectively. CRS investment performance is at or above the median of peer public defined benefit retirement plans.

The table below highlights the actuarial value of assets, liabilities, and funded ratios as of 12/31/22:

	Assets	Liabilities	Funded Ratio
Pension			
Actuarial Value	$ 1,811,291,262	$ 2,614,702,553	69.3%
Market Value	$ 1,703,876,000	$ 2,614,702,553	65.2%
Health			
Actuarial Value	$ 532,169,108	$ 363,450,123	146.4%
Market Value	$ 500,041,000	$ 363,450,123	137.6%

Pension Trust

A goal of the CSA is to establish a projected 100% funding ratio in 30 years (i.e., by 12/31/2045). The assumptions used in finalizing the CSA projected that the Pension Trust would be fully funded in 30 years if all of the assumptions played out exactly. The status of the annual contributions and distributions is described below:

- The active employees contribute 9% of covered payroll to the Pension Trust as required by the CSA.
- The City contributes the minimum rate per the CSA of 16.25% of full-time covered payroll to the Pension Trust. (The General Fund represents 35% of covered payroll and other non-general funds represent 65% of covered payroll.).
- In CY2022, the City contributed a payment of $2.76 million as result of the continued payments toward the cost of the 2020 Early Retirement Incentive Plan (ERIP). There are now 13 annual payments remaining. Cheiron estimates that payment at 1.33% of payroll for this additional benefit, bringing the City's contribution rate for CY2022 to 17.58%.
- In CY2022, the City also contributed a lump sum payment of $2.0 million dollars from the General Fund fiscal year-end surplus. Cheiron estimates that payment at 0.96% of payroll for this additional benefit, bringing the City's contribution rate for CY2022 to 18.54%.
- The Actuarially Determined Contribution (ADC) for the Pension Trust, as calculated by the actuary, is the annual employer contribution amount required to bring the Pension to a fully funded status in 30 years. **The ADC for FY2022 was 33.46% of covered payroll (as set by the CY2021 actuarial valuation). The actual contribution of 18.54% means the City contributed 55.4% of the actuarial recommendation.**
- Benefit payments and expenses have significantly exceeded employer and employee contributions for over a decade placing CRS in the bottom quartile among other public pension funds with negative cashflows. This means that CRS continues to liquidate a relatively large amount of assets to pay for benefits and expenses. This also means that CRS is much more dependent on investment returns than most public pension plans.

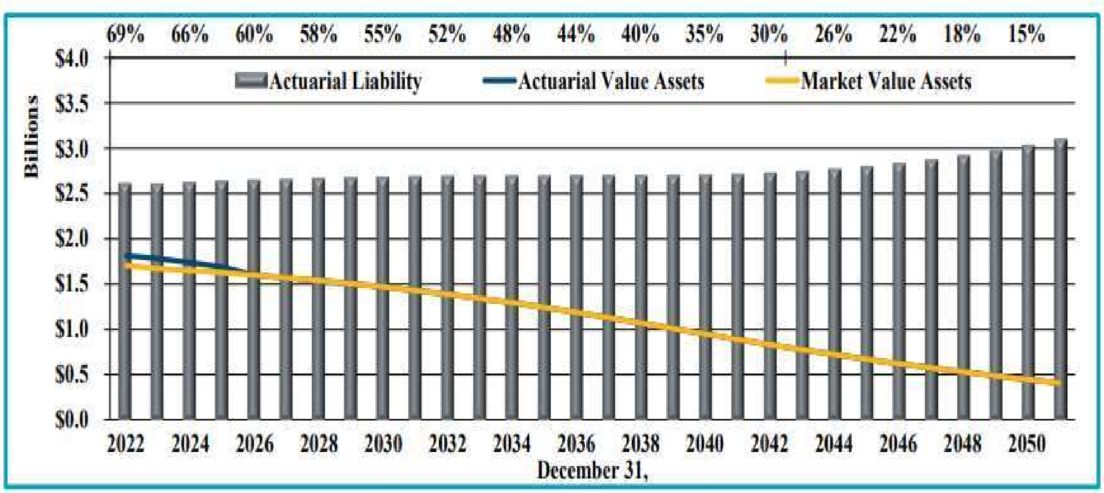
The following events occurred after the CSA was finalized:

- Ordinance 336, which reflects changes made in finalizing the CSA that increased liabilities, was approved by City Council in 2016.
- Revisions to actuarial assumptions (e.g., longer life span of retirees) occurred as recommended by the actuary and approved by the CRS Board.
- Annualized 5-year investment returns (2018 – 2022) were 5.43% as of December 31, 2022 vs. the assumed 7.5%. However, CRS is especially sensitive to the timing of capital market swings because it continues to liquidate assets to pay benefits when the capital market drops. This requires more time and a significantly higher rate of return for the remaining assets to recover from capital market volatility.
- The City offered the ERIP in 2020 that provided two (2) additional years of service to eligible participants resulting in earlier retirements, additional benefits, and an increase in liabilities.
- The Deferred Retirement Option Plan (DROP) established in the CSA is required to be cost neutral.

The actuary's latest revised funding progress for the Pension Trust, which includes the impact of the DROP and the ERIP, projects the funded ratio on an Actuarial Value of Assets basis is projected to decrease over the next 30 years and will not reach 100% by 2045 in accordance with the CSA.

The graph below reflects the City's minimum required contributions of 16.25% of covered payroll for 30 years. It also includes the recommended budget's $2.7 million contribution per year for the next 15 years to pay for the ERIP liabilities and assumes the CSA benchmark return of 7.5% investment return for all future years. The funding ratio declines precipitously over 30 years to near-insolvency.

Pension Trust

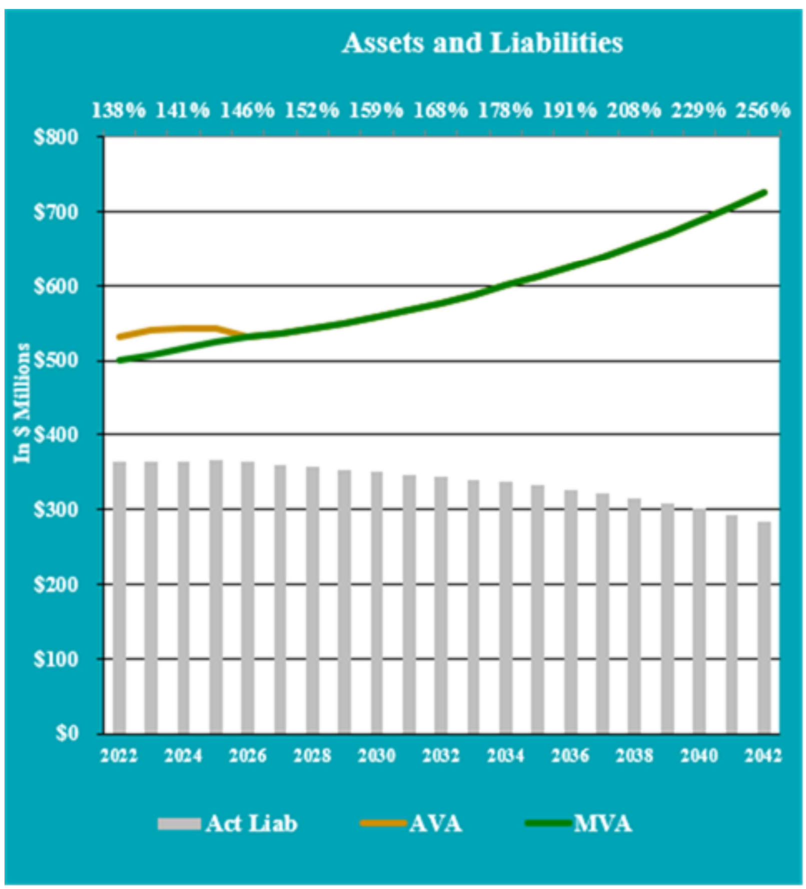


Healthcare Trust

At the time of the CSA signing, the Healthcare Trust was fully funded, and the City was required per the CSA to develop and present a proper funding policy to fully fund the healthcare trust at actuarially appropriate levels. The funding policy would keep the Trust fully funded over the lifetimes of current and future retirees and their beneficiaries covered by the CSA. Implementation of a full funding policy will ensure that the Healthcare Trust remains fully funded to provide promised benefits. The Healthcare Trust is irrevocable, and its assets must be used exclusively for healthcare benefits for CRS retirees and their beneficiaries. The City has yet to adopt a Healthcare Trust funding policy as required by the CSA and there have been no City contributions to the Trust since the CSA was signed.

In the graph below, the bars represent liabilities, and the lines represent the actuarial value of assets (AVA) and the market value of assets (MVA) assets. The graph shows that the Healthcare Trust is fully funded in 2022 and beyond. This is based on current assumptions being fully met. A funding policy would safeguard the trust for retirees and their beneficiaries in the future should the assumptions not be achieved.

Healthcare Trust



Investment Performance

While the simple conclusion may be to achieve higher returns or "invest our way out of this," CRS' investment performance has been solid relative to what the capital markets have provided. The 7.5% annualized return assumption remains a high hurdle as well as optimistic given persistent capital market volatility and the outlook of many investment consultants. The median investment return assumption of U.S. public retirement systems has steadily decreased over the past several years and is currently 7.0%. CRS will be challenged to achieve the 7.5% rate of return with an acceptable level of risk going forward, especially given the high negative cash flow.

The following chart reflects the annual rates of return and 10-year compound return. CRS has achieved the 7.5% CSA assumption. The poor capital market performance in 2022 has resulted in a five-year compound return that is less than the 7.5% CSA assumption.

Annual CRS Rates of Investment Return		
Plan Year	Investment Return Assumption	Market Return
2013	7.50%	16.99%
2014	7.50%	6.46%
2015	7.50%	-0.11%
2016	7.50%	9.24%
2017	7.50%	14.51%
2018	7.50%	-3.93%
2019	7.50%	16.40%
2020	7.50%	8.03%
2021	7.50%	18.06%
2022	7.50%	-8.68%
10-Year compound Average		**7.32%**
5-Year Compound Average		**5.43%**

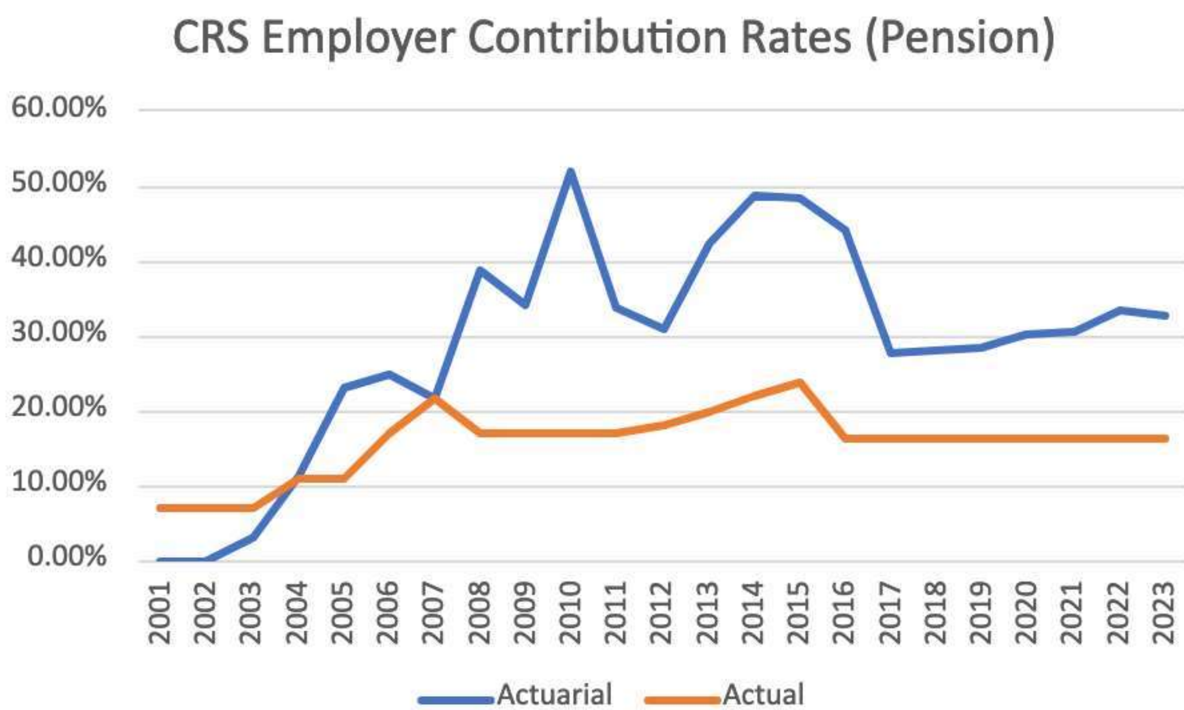
The Board's Investment Policy provides for a well-diversified portfolio across asset class, sector, investment managers and securities. The chart below is designed to achieve the 7.5% return over time with an acceptable level of risk.

<u>CRS Asset Allocation</u>

Fixed Income	25.5%
Domestic Equity	28.5%
Non-US Equity	18.0%
Real Estate	7.5%
Infrastructure	10.0%
Volatility Risk Prem	2.5%
Private Equity	8.0%
Total	100.0%

Employer Contributions

In a defined benefit retirement plan such as CRS, the employer is responsible for providing benefits (as opposed to a defined contribution plan) and the employer generally accepts the financial risk. The Actuarially Determined Contribution (ADC) is the actuary recommended employer contribution to achieve full funding in 30 years. The chart below reflects the Pension Trust ADC and the City employer contribution for the last 20 years. By not contributing to the ADC the unfunded liability increases over time meaning that the actuarial liability exceeds the value of assets.



Conclusion

The CRS Pension Trust and Healthcare Trust are undoubtedly challenged in providing promised retirement benefits. When the Collaborative Settlement Agreement was implemented, the Pension Trust and Healthcare Trust were projected to be fully funded in 30 years by 2045. For the Pension Trust this is no longer the case.

At the close of 2022, the Pension Trust experienced major capital market losses. The Actuarial Value of Assets decreased $20.66 million from the prior year close, the annual investment return was a -8.68% and the funding ratio on an AVA bases dropped 2.3%. Funding vigilance therefore remains a priority for the Board. The future of the Health Care Trust is also uncertain due to the lack of a funding policy as required by the CSA.

The following are possible solutions:

1. Continued increases to City contributions to the Pension Trust above the minimum required amount of 16.25%, as provided for in the CSA. The Board has formally recommended an increase in rates by 1.5% each year until the actuarial projections reflect anticipated full funding by 2045. The Board also recommends that the City adopt the multi-year incremental increase funding methodology to achieve full funding by 2045, update the methodology annually, and budget accordingly. The Board acknowledges and appreciates the 0.75% increase in the contribution rate and the use of variable General Fund carryover to reduce unfunded pension obligations. Nonetheless, a more stable and predictable path to full funding is necessary. Failure to increase the City's annual contribution rate will result in the CRS Pension Funded Ratio steadily decreasing until it reaches 28.5% in 2045; alternatively, incremental increases in the rate are required to achieve 100% funding by 2045 based on the most recent projection:

Incremental Increase Plan

Schedule of Funded Ratios	Earnings Assumption = 7.5%			
	Flat E'r Rate of 17%		Increase E'r Rate by 1.5%	
	E'r Contr Rate	Funded Ratio	E'r Contr Rate	Funded Ratio
12/31/2022	16.25%	69.3%	16.25%	69.3%
12/31/2023	17.00%	68.2%	17.00%	68.2%
12/31/2024	17.00%	66.2%	17.00%	66.2%
12/31/2025	17.00%	64.1%	18.50%	64.2%
12/31/2026	17.00%	60.5%	20.00%	60.8%
12/31/2027	17.00%	59.3%	21.50%	60.0%
12/31/2028	17.00%	58.1%	23.00%	59.4%
12/31/2029	17.00%	56.8%	24.50%	58.9%
12/31/2030	17.00%	55.4%	26.00%	58.6%
12/31/2031	17.00%	54.0%	27.50%	58.5%
12/31/2032	17.00%	52.5%	29.00%	58.6%
12/31/2033	17.00%	50.9%	30.50%	59.0%
12/31/2034	17.00%	49.3%	32.00%	59.7%
12/31/2035	17.00%	47.6%	33.50%	60.8%
12/31/2036	17.00%	45.8%	35.00%	62.2%
12/31/2037	17.00%	43.8%	36.50%	64.1%
12/31/2038	17.00%	41.9%	38.00%	66.5%
12/31/2039	17.00%	39.9%	39.50%	69.5%
12/31/2040	17.00%	37.8%	41.00%	73.1%
12/31/2041	17.00%	35.8%	42.50%	77.4%
12/31/2042	17.00%	33.9%	44.00%	82.5%
12/31/2043	17.00%	32.0%	45.50%	88.5%
12/31/2044	17.00%	30.2%	47.00%	95.3%
12/31/2045	17.00%	28.5%	48.50%	103.0%
Cheiron Projection, May 2023				

2. Increase investment performance by increasing risk. There are several strategies affecting increased investment return. These include using different investment managers, making a riskier asset allocation, and attempting to lower fees. There is little we can do regarding these factors because we believe we have the appropriate managers, the appropriate asset allocation, and fees are already on the low end. Regarding asset allocation, the only way to increase expected returns in the future is to lower the fixed income allocation and add more to equities or other "riskier" assets. Investment performance has been solid over time and the risk level of the portfolio is already aggressive relative to our peers. The Board and the investment consultant believe that taking any more risk would be imprudent. Conversely, taking less risk would decrease our chances of achieving the 7.5% target.
3. Reduce benefits. While unpopular and considered the last resort, reducing benefits would require re-opening the CSA for a prolonged negotiation.
4. As the City has done before, explore issuing judgment bonds to reduce the unfunded actuarial liability. As of 12/31/2022, the unfunded actuarial liability for the Pension Trust was $803.4mm.

Recommendation

At this time, we recommend the following:

1. That City Council adopt a plan to continue increasing the Pension Trust employer contribution incrementally on an annual basis to o assure full funding in 2045 (see table, page 8)
2. That the Incremental Annual Increase Plan be updated every two years in anticipation of the City's fiscal year biennial budget.
3. That the City Council approve and appropriate the Pension Trust employer contribution in accordance with each updated Incremental Annual Increase Plan.
4. That the City Manager continue to negotiate the Health Funding Policy with class counsels, consider the input and recommendations from the CRS Board, and that the City Council approve the funding policy for the Healthcare Trust to ensure that the promises to CRS members will be met well into the future. The Healthcare Trust was well funded as of the December 31, 2022, valuation and does not now require an ADC amount but may in the future.
5. That the City comply with the CSA to assure that the DROP program is cost neutral to the CRS Pension Trust and does not negatively impact the CRS Funding Ratio.

Immediate action is requested. Further delays will result in higher contributions in future years.