

## **BenchmarkAdmin**

### 2019 Benchmarking Analysis for North Carolina Retirement Systems

CEM Benchmarking Inc.  
372 Bay Street, Suite 1000, Toronto, ON, M5H 2W9  
Tel: 416-369-0568 Fax: 416-369-0879  
[www.cembenchmarking.com](http://www.cembenchmarking.com)



# Contents

## 1 Executive Summary

## 2 Peer Characteristics

Custom peer group .....	2-2
Graphical summary of peer characteristics .....	2-3
Participant profiles .....	2-4
Graphical summary of all participant characteristics .....	2-6

## 3 Total Cost

Total pension administration cost by activity .....	3-2
Cost trends .....	3-4
Cost category trends .....	3-5
Reasons for differences in total costs .....	3-7
Cost per member type .....	3-14
Cost per weighted member .....	3-17
Cost as a % of total assets .....	3-18
Reconciliation to costs provided on the survey .....	3-19

## 4 Activity Costs

Calculation of your activity costs .....	4-2
Summary comparisons of activity costs by quartile breakdown .....	4-3
Fully attributed front-office costs .....	4-46

## 5 Staff Costs and Productivity

Total FTE .....	5-2
FTE by activity .....	5-3
Salaries and benefits per FTE by activity .....	5-6
Productivity .....	5-8

## 6 Transaction Volumes

Workload: Weighted transaction volume per member .....	6-2
Comparison of transaction volumes by activity .....	6-5
Online transactions .....	6-9
Online trends .....	6-10
Transaction trends .....	6-11

## 7 Service Levels

Total service score .....	7-2
Comparisons of activity service scores .....	7-3
Service trends .....	7-5
Biggest potential improvements to your total service score .....	7-7
Graphical comparison of key measures .....	7-9
Service scores by activity .....	7-11

## 8 Complexity

Total complexity .....	8-2
Trends in Complexity .....	8-3

## 9 IT and Major Projects

IT/IS costs .....	9-2
IT/IS cost trend .....	9-3
Major project costs .....	9-4
Major project cost trend .....	9-6
Key measures of CRM/IT capability .....	9-8
CRM/IT capability score .....	9-9

## 10 Appendices

Appendix A - Survey responses .....	10-2
Appendix B - Foreign currency conversion .....	10-49
Appendix C - Activity definitions .....	10-50
Appendix D - Defaults .....	10-60
Appendix E - Service, cost and survey question changes .....	10-61

## Key Takeaways:

### Cost

- Your total pension administration cost of \$23 per active member and annuitant was \$75 below the peer average of \$98 and among one of the lowest in CEM's global universe.
- Your costs were below median primarily because your lower costs per FTE and lower support costs per member.
- Your costs have remained steady between 2013 and 2019.

### Service

- Your total service score was 73. This was below the peer median of 78.
- Your service score increased from 69 to 73 between 2013 and 2019.

## 72 leading global pension systems participate in the benchmarking service.

### Participants

#### United States

Arizona SRS  
CalPERS  
CalSTRS  
Colorado PERA  
Delaware PERS  
Florida RS  
Idaho PERS  
Illinois MRF  
Indiana PRS  
Iowa PERS  
KPERS  
LACERA  
Maryland SRPS  
Michigan ORS  
Nevada PERS  
North Carolina RS  
NYC ERS  
NYC TRS  
NYSLRS  
Ohio PERS  
Oregon PERS  
Pennsylvania PSERS  
PSRS PEERS of Missouri

South Dakota RS  
STRS Ohio  
Texas MRS  
TRS Illinois  
TRS Louisiana  
TRS of Texas  
Utah RS  
Virginia RS  
Washington State DRS  
Wisconsin DETF

#### Canada

APS  
BC Pension Corporation  
Canadian Forces PP  
FPSPP  
LAPP  
OMERS  
Ontario Pension Board  
Ontario Teachers  
OPTrust  
RCMP  
SHEPP

#### The Netherlands\*

ABN Amro PF  
ABP  
bpfBOUW  
BPF Levensmiddelen  
BPL Pensioen  
Metaal en Techniek  
PF PWRI  
PF Vervoer  
PFZW  
Rabobank PF  
Shell PF

#### United Kingdom\*

Armed Forces PS  
BSA NHS Pensions  
BT Pension Scheme  
Lothian Pension  
Greater Manchester PF  
Local Pensions Partnership  
Merseyside PF  
Pension Protection Fund  
Principal Civil Service  
Railways Pension Scheme  
Royal Mail Pensions  
South Yorkshire PF  
Teachers' Pensions  
Tyne & Wear PF  
USS  
West Midlands Metro  
West Yorkshire PF

\* Systems in the UK and most systems in the Netherlands complete different benchmarking surveys and hence your analysis does not include their results.

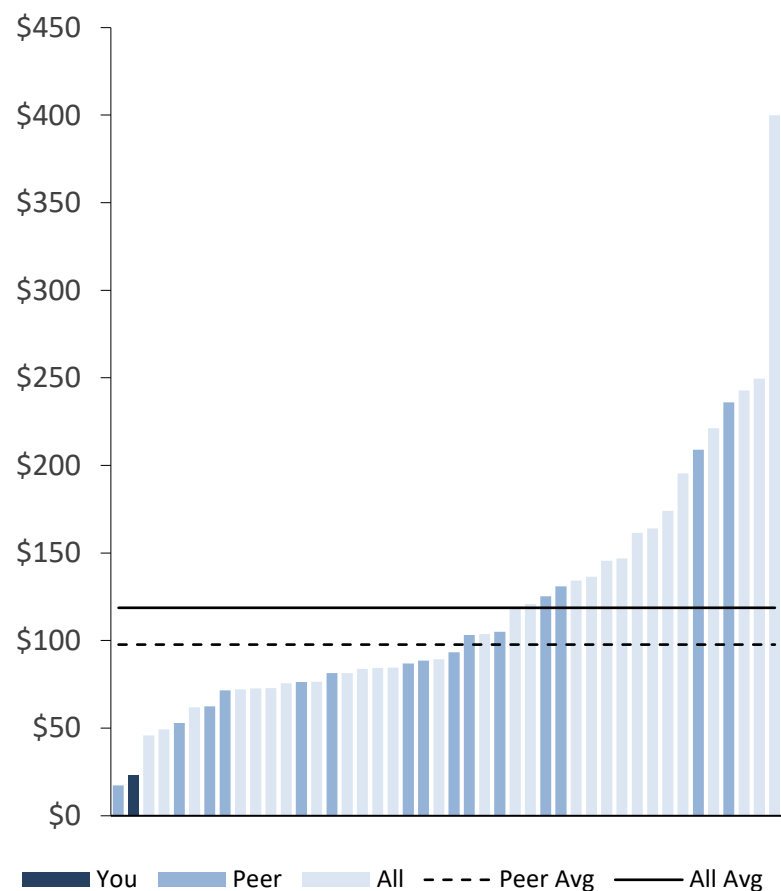
## The custom peer group for North Carolina RS consists of the following 16 peers:

Custom Peer Group for North Carolina RS			
Peers (sorted by size)	Membership (in 000's)		
	Active Members	Annuitants	Total
CalPERS	877	715	1,592
Florida RS	646	458	1,104
NYSLRS	534	482	1,015
<b>North Carolina RS</b>	<b>472</b>	<b>322</b>	<b>794</b>
CalSTRS	461	305	766
Virginia RS	346	215	561
Washington State DRS	330	194	524
Ohio PERS	304	215	519
Michigan ORS	190	280	470
Wisconsin DETF	258	209	467
STRS Ohio	210	160	370
Arizona SRS	208	155	363
Colorado PERA	242	121	362
Oregon PERS	177	152	329
Illinois MRF	178	136	314
Iowa PERS	172	124	296
Peer Median	281	212	495
Peer Average	350	265	615

Inactive members are not considered when selecting peers because they are excluded when determining cost per member. They are excluded because they are less costly to administer than either active members or annuitants.

**Your total pension administration cost of \$23 per active member and annuitant was \$75 below the peer average of \$98 and among one of the lowest in CEM's global universe.**

**Pension Administration Cost Per Active Member and Annuitant**



	\$000s	\$ per Active Member and Annuitant	
Category	You	You	Peer Avg
<u>Front office</u>			
Member Transactions	3,787	5	12
Member Communication	4,160	5	18
Collections & Data Maintenance	1,392	2	8
<u>Governance and support</u>			
Governance and Financial Control	2,151	3	7
Major Projects	0	0	7
Information Technology	4,675	6	26
Building	197	0	6
Legal	761	1	4
HR, Actuarial, Audit, Other	1,384	2	10
Total Pension Administration	18,507	23	98

Your total pension administration cost was \$18.5 million. This excludes the fully-attributed cost of administering healthcare, and optional and third-party administered benefits of \$0.4 million.

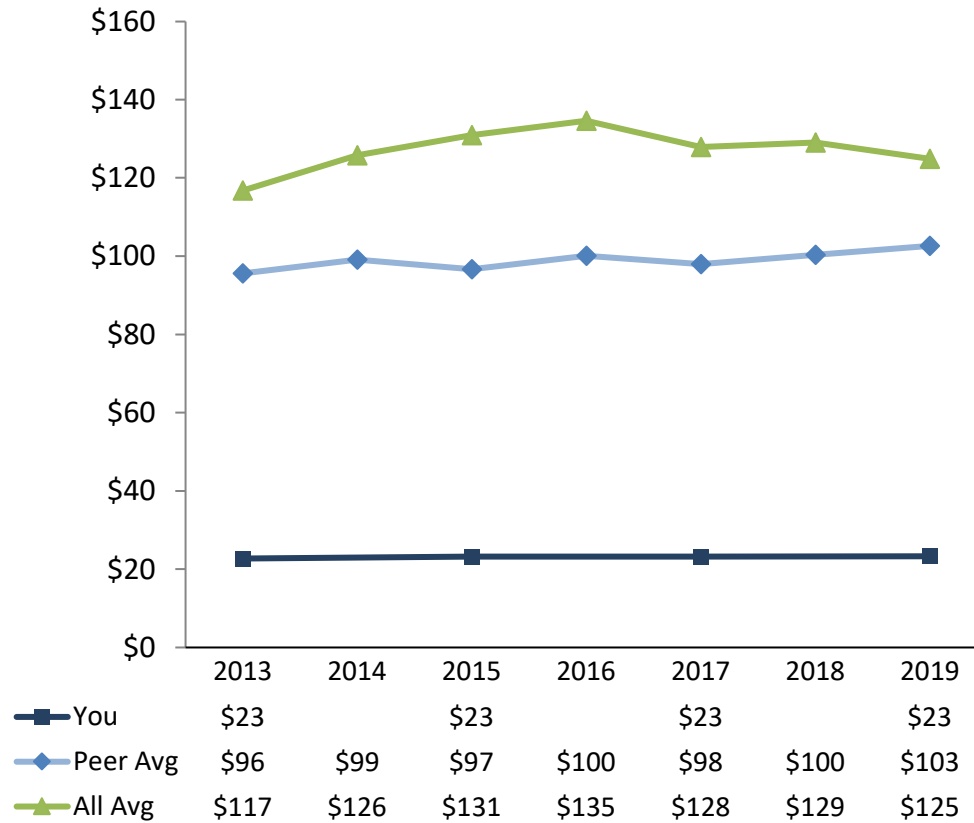
## Reasons why your cost per member was \$75 below the peer average:

Reason	You	Peer Avg	Impact \$ per active member and annuitant
1 Fewer front-office FTE per 10,000 members	2.1 FTE	3.5 FTE	-\$8
2 Lower third party costs per member in the front-office	\$1	\$6	-\$5
3 Lower costs per FTE			
Salaries and Benefits	\$56,568	\$93,144	
Building and Utilities	\$1,085	\$11,354	
HR	\$1,037	\$4,361	
IT Desktop, Networks, Telecom	<u>\$4,097</u>	<u>\$14,536</u>	
Total	\$62,786	\$123,396	-\$33
4 Lower support costs per member <sup>1</sup>			
Governance and Financial Control	\$3	\$6	
Major Projects	\$0	\$7	
IT Strategy, Database, Applications	\$5	\$16	
Actuarial, Legal, Audit, Other	<u>\$3</u>	<u>\$10</u>	
Total	\$10	\$39	-\$29
Total			-\$75

1. To avoid double counting, Governance and support costs are adjusted for differences in cost per FTE.

## Cost Trends

**Trend in Total Pension Administration Costs**



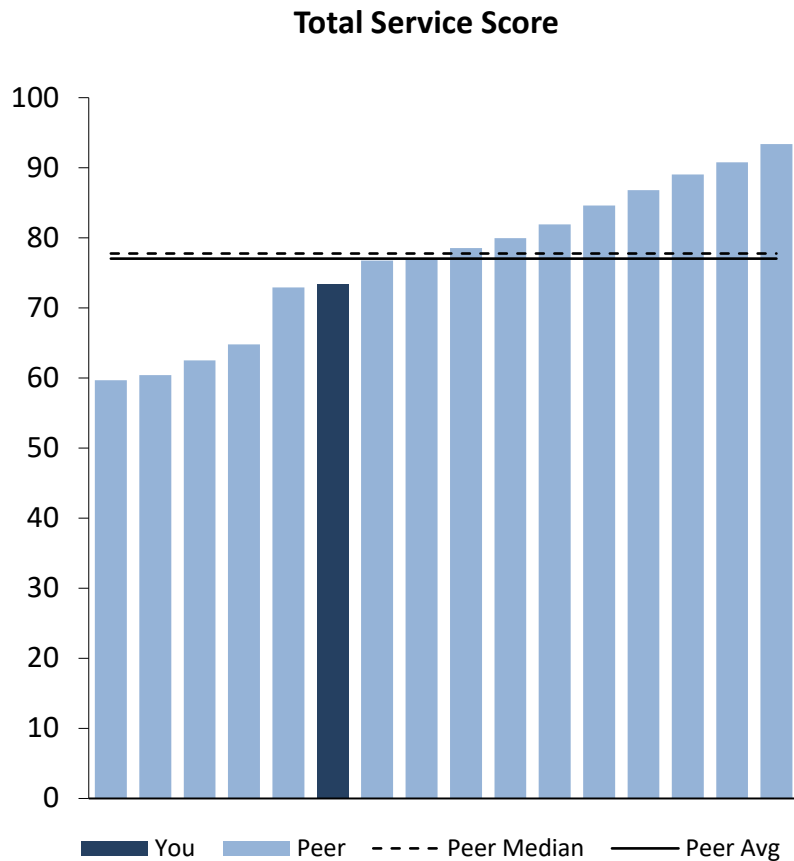
Between 2013 and 2019 your total pension administration cost per active member and annuitant was unchanged .

During the same period, the average cost of your peers with 7 consecutive years of data increased 1.2% per annum.

Trend analysis is based on systems that have provided 7 consecutive years of data (15 of your 16 peers and 36 of the 44 systems in the universe).



## Your total service score was 73. This was below the peer median of 78.



Service is defined from a member's perspective. Higher service means more channels, faster turnaround times, more availability, more choice, better content and higher quality.

Higher service is not necessarily cost-effective. For example, the ability to answer the telephone 24 hours a day is higher service, but not cost effective.

Service Scores by Activity			
Activity	Weight	You	Peer Median
1. Member Transactions			
a. Pension Payments	10.0%	100	100
b. Pension Inceptions	7.4%	81	89
c. Refunds & Transfers-out	1.3%	90	95
d. Purchases & Transfers-in	3.1%	95	90
e. Disability	3.8%	91	82
2. Member Communication			
a. Call Center	21.0%	53	63
c. 1-on-1 Counseling	7.4%	36	85
d. Member Presentations	6.5%	95	100
e. Written Pension Estimates	4.7%	81	84
f. Mass Communication			
• Website	21.3%	87	84
• News & targeted communication	2.8%	54	79
• Member statements	4.7%	77	85
3. Other			
Customer Experience Surveying	5.0%	36	35
Disaster Recovery	1.0%	56	87
Weighted Total Service Score	100%	73	78

## Examples of key service measures included in your Service Score:

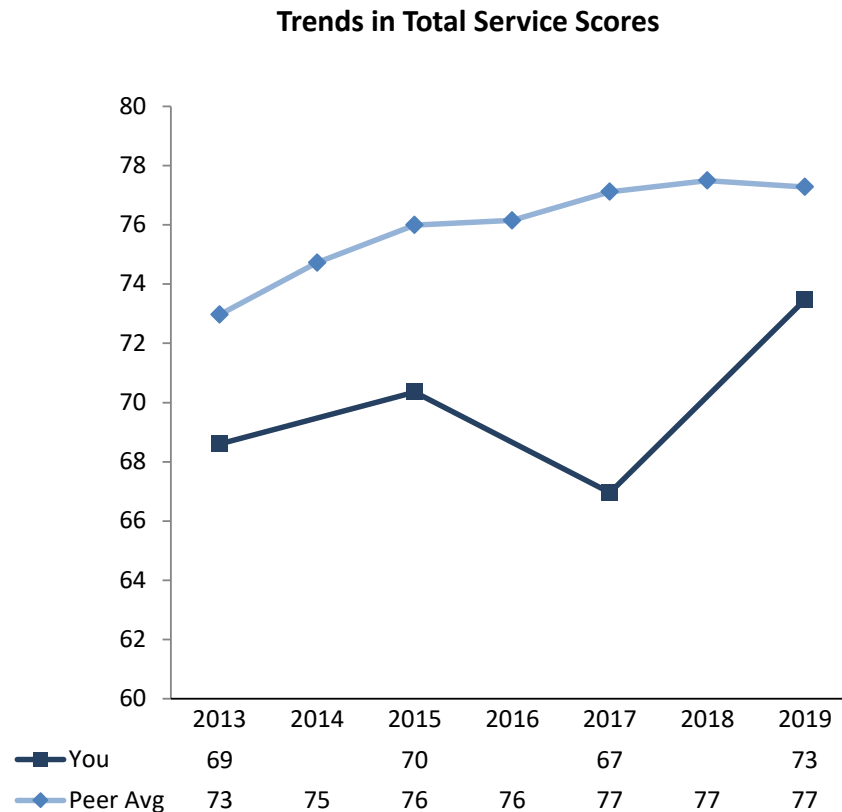
Select Key Service Metrics	You 2019	Peer Avg
<u>Member Contacts</u>		
• % of calls resulting in undesired outcomes (busy signals, messages, hang-ups)	12%	15%
• Average total wait time including time negotiating auto attendants, etc.	133 secs	239 secs
<u>Website</u>		
• Can members access their own data in a secure environment?	Yes	94% Yes
• Do you have an online calculator linked to member data?	Yes	81% Yes
• # of other website tools offered such as changing address information, registering for counseling sessions and/or workshops, viewing or printing tax receipts, etc.	15	15
<u>1-on-1 Counseling and Member Presentations</u>		
• % of your active membership that attended a 1-on-1 counseling session	0.6%	3.8%
• % of your active membership that attended a presentation	2.9%	5.5%
<u>Pension Inceptions</u>		
• What % of annuity pension inceptions are paid without an interruption of cash flow greater than 1 month between the final pay check and the first pension	82.6%	90.8%
<u>Member Statements</u>		
• How current is an active member's data in the statements that the member	5.0 mos	2.4 mos
• Do statements provide an estimate of the future pension entitlement?	Yes	75% Yes

## Where can you improve your total service score?

Potential improvements to your total service score	
Factor	Potential Improvement
11.6% of your incoming calls resulted in undesired outcomes (e.g., busy signals, messages, hang-ups). To achieve a perfect service score, members must experience no undesired call outcomes.	+ 2.0
On average, members calling your call center reach a knowledgeable person in 133 seconds. To achieve a perfect service score, members must reach a knowledgeable person on the phone in 60 seconds or less.	+ 1.5
17.4% of your service pension inceptions experienced a cashflow interruption greater than one month. To achieve a perfect service score 100% of your service pensions must be incepted without a cashflow interruption greater than one month.	+ 1.0

- CEM is not recommending these changes. Service improvement should be cost effective and important to your members.

## Your service score increased from 69 to 73 between 2013 and 2019.



Trend analysis is based on systems that have provided 7 consecutive years of data (15 of your 16 peers).

Historic scores have been restated to reflect changes in methodology. Therefore, your historic service scores may differ from previous reports.

### Changes that had a positive impact:

- **Call center:** Your total wait time decreased from 421 to 133 seconds and your undesired call outcomes decreased from 23.5% to 11.6%.
- **Website:** You improved your website capabilities by adding the ability to submit a retirement application online, view status of online retirement application and register for presentations.
- **Written pension estimates:** Your turnaround time for providing estimates improved from 20 days to 3 days.

### Changes that had a negative impact:

- **Call center:** Your number of menu layers increased from 1 to 4.
- **Newsletters:** Your number of newsletter segments decreased from 3 to 2 and you no longer send out personalized letters to members about to become vested for disability benefits.

# 2

## Peer Characteristics

This section contains:

- Your custom peer group
- A comparison of the characteristics of all participants

## Your peer group consists of 16 peers.

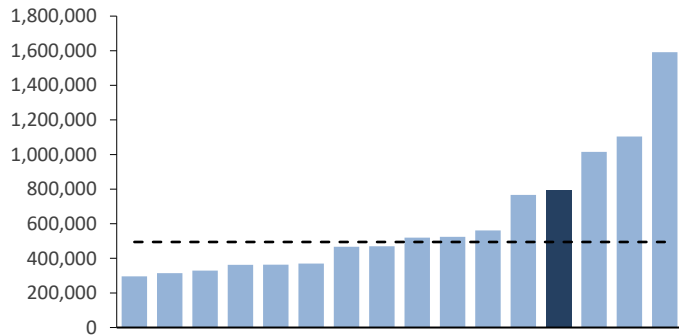
The most relevant comparisons are to systems similar to you in total membership and nationality. Your peer group consists of the following 16 systems:

Custom Peer Group for North Carolina RS			
	Active Members	Annuityants	Total
CalPERS	877,195	714,503	1,591,698
Florida RS	645,526	458,464	1,103,990
NYSERS	533,610	481,795	1,015,405
North Carolina RS	471,958	322,227	794,185
CalSTRS	461,145	305,194	766,339
Virginia RS	346,273	214,545	560,818
Washington State DRS	330,339	193,984	524,323
Ohio PERS	304,446	214,985	519,431
Michigan ORS	189,640	280,021	469,661
Wisconsin DETF	257,911	209,059	466,970
STRS Ohio	209,870	159,857	369,727
Arizona SRS	208,244	155,067	363,311
Colorado PERA	241,556	120,872	362,428
Oregon PERS	176,704	151,980	328,684
Illinois MRF	177,823	136,265	314,088
Iowa PERS	172,304	123,781	296,085
Peer Median	281,179	211,802	494,546
Peer Avg	350,284	265,162	615,446

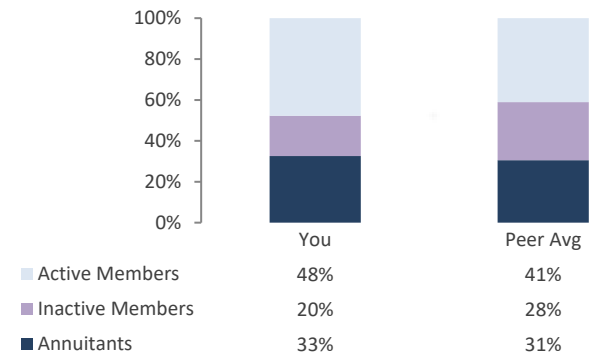
Inactive members are not considered when selecting peers because they are excluded when determining cost per member. They are excluded when determining cost per member because they are much less costly to administer than either active members or annuityants.

## Graphical summary of peer characteristics

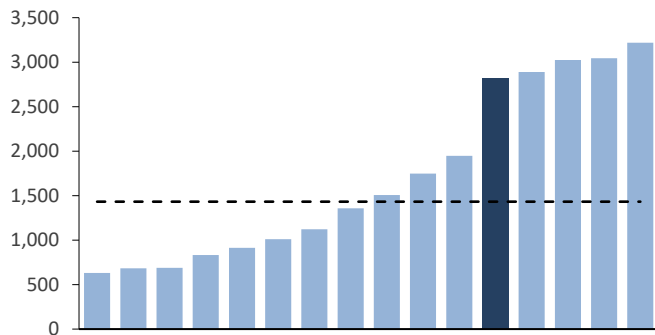
### Active Members and Annuitants



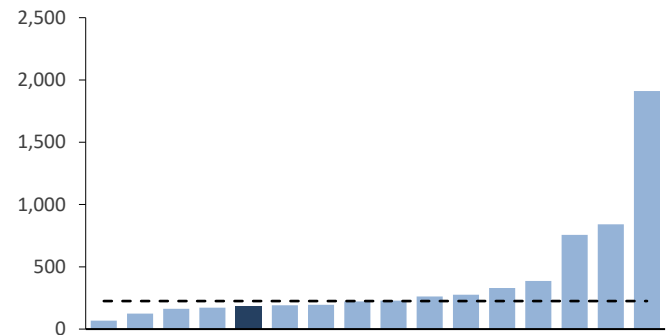
### Membership Mix



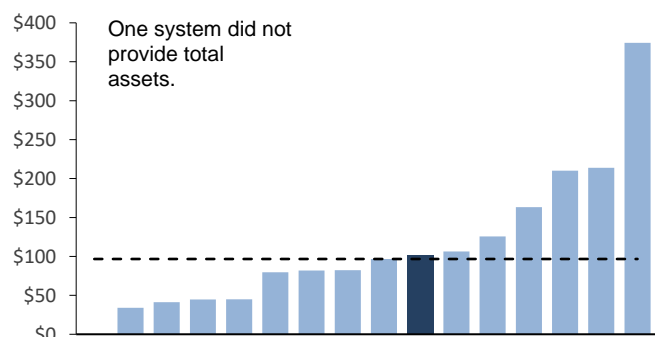
### Number of Employers



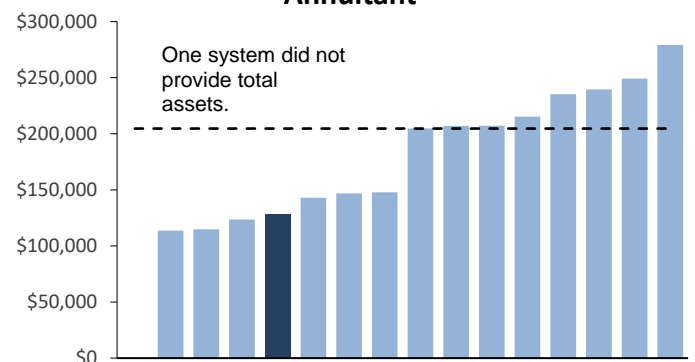
### Pension Administration FTE



### Total Assets in \$ billions



### Total Assets per Active Member and Annuitant



■ You ■ Peer - - - Peer Median

## Profiles of the 46 benchmarking participants (excluding UK systems)

Participant	Members by Type (000s)			Member Groups									Plan Types							
	Active Members	Annuitants	Inactive Members	City or County Only	State/ County Employees	Teachers	School	Police and/or Fire	Participating Local Employers	Other (judges etc)	Corporate	Industry	DB	Cash Balance	DB/ Cash Balance	DB/ Money Match	Drop	DC	Hybrid DB/ DC	Administer Retiree Healthcare
Canada																				
APS	220	112	52		X		X	X	X	X			X							
BC Pension Corporation	334	199	82		X	X	X	X	X	X	X	X	X		X					X
Canadian Forces Pension Plans	90	114	9							X			X							
FPSP	318	279	35		X								X							
LAPP	167	72	35		X		X	X	X				X							
OMERS	289	162	45				X	X	X	X	X		X							
Ontario Pension Board	45	38	6		X			X					X							
Ontario Teachers	184	145	64		X	X	X						X							
OPTrust	48	38	8		X							X	X							
RCMP	22	21	1		X			X					X							
SHEPP	37	19	3						X			X	X							
The Netherlands																				
ABP*																				
PFZW*																				



## Profiles of the 46 benchmarking participants

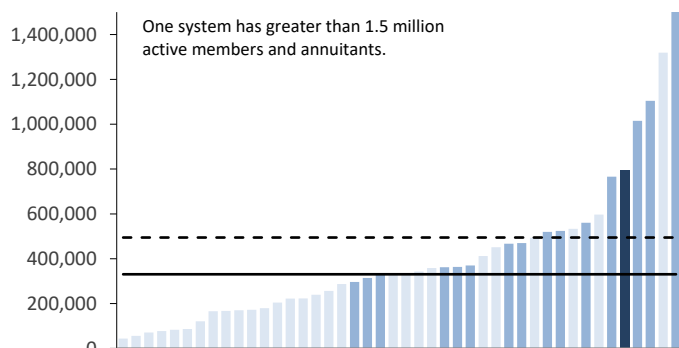
continued

Participant	Members by Type (000s)			Member Groups										Plan Types						
	Active Members	Annuity	Inactive Members	City or County Only	State/ County Employees	Teachers	School	Police and/or Fire	Participating Local Employers	Other (Judges etc)	Corporate	Industry	DB	Cash Balance	DB/ Cash Balance	DB/ Money Match	Drop	DC	Hybrid DB/ DC	Administer Retiree Healthcare
<b>United States</b>																				
Arizona SRS	208	155	239	X	X	X			X	X			X	X						X
CalPERS	877	715	419	X		X	X	X	X	X			X							X
CalSTRS	461	305	195	X	X	X							X		X					
Colorado PERA	242	121	259	X	X	X			X	X			X					X	X	X
Delaware PERS	46	32	19	X	X	X	X	X	X	X			X							
Florida RS	646	458	117	X	X	X	X	X	X	X			X				X	X		
Idaho PERS	73	48	40	X	X	X	X	X	X	X			X						X	
Illinois MRF	178	136	124			X	X	X					X							
Indiana PRS	252	160	2	X	X	X	X	X	X	X			X				X	X	X	
Iowa PERS	172	124	72	X	X	X	X	X	X	X			X							
KPERS	154	103	61	X	X	X	X	X	X	X			X	X			X			
LACERA	99	68	15	X				X		X			X							X
Maryland SRPS	193	165	50	X	X	X	X	X	X	X			X							
Michigan ORS	190	280	587	X	X	X	X			X			X					X	X	X
Nevada PERS	109	70	17	X	X	X	X			X			X							
North Carolina RS	472	322	195	X	X	X	X	X	X	X			X							
NYCERS	191	152	34	X			X	X		X			X							
NYC TRS	129	93	42	X		X	X						X						X	
NYSLRS	534	482	125	X		X	X	X	X	X			X							
Ohio PERS	304	215	654	X				X		X			X	X					X	X
Oregon PERS	177	152	71	X	X	X	X	X	X	X						X			X	X
Pennsylvania PSERS	256	237	158	X	X	X							X							X
PSRS PEERS of Missouri	128	95	55			X	X					X	X							
South Dakota RS	42	29	19	X	X	X	X	X	X	X			X							
STRS Ohio	210	160	155			X							X					X	X	X
Texas MRS	112	58	42	X				X	X							X				
TRS Illinois	163	124	136	X	X								X							
TRS Louisiana	92	81	28			X	X						X				X	X		
TRS of Texas	885	434	311	X	X	X							X							X
Utah RS	97	68	55	X	X	X	X	X	X	X			X					X	X	
Virginia RS	346	215	162	X	X	X	X	X	X	X			X						X	
Washington State DRS	330	194	286	X	X	X	X	X	X	X			X						X	
Wisconsin DETF	258	209	175	X	X	X	X	X	X	X			X							X

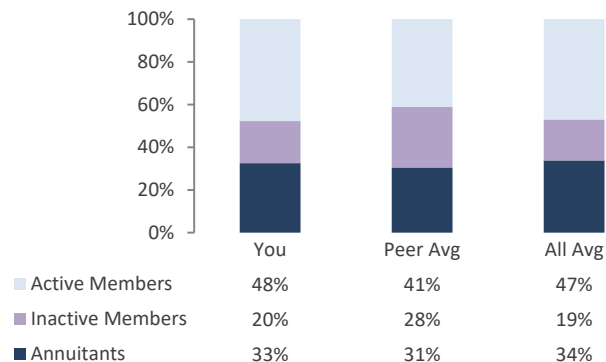
\* We have not yet received clean data from the 2 systems identified with an asterisk. Therefore, they have been excluded from this analysis.

# Graphical summary of all participant characteristics

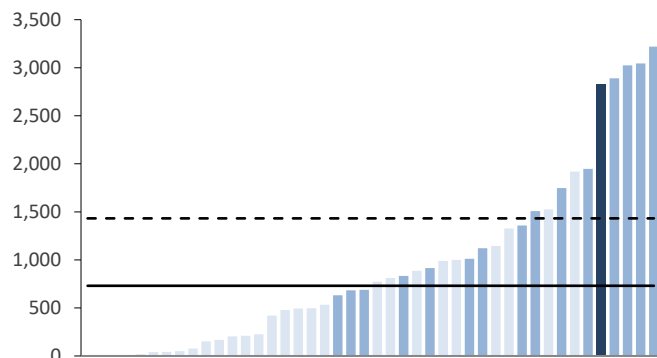
## Active Members and Annuitants



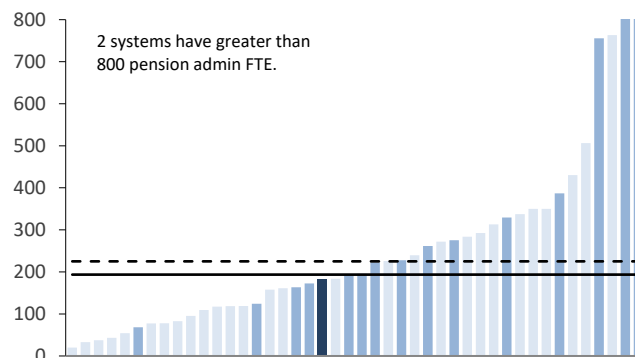
## Membership Mix



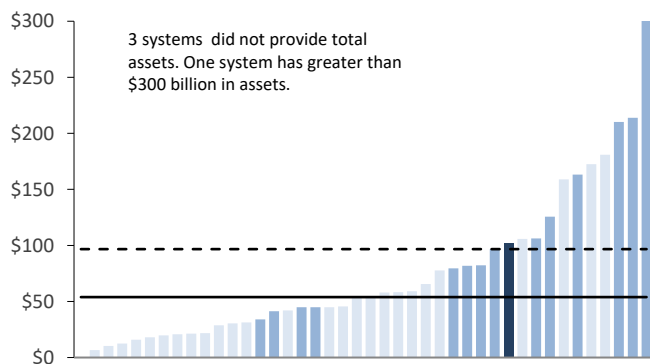
## Number of Employers



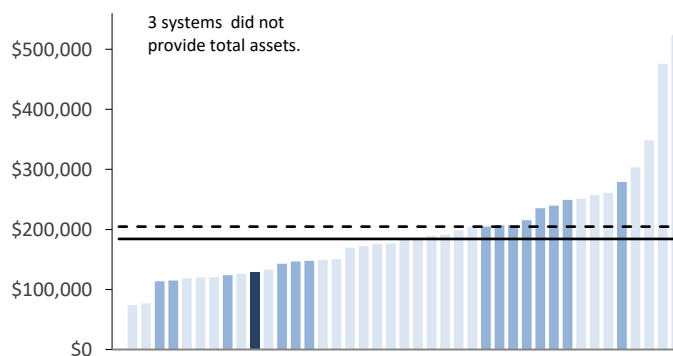
## Pension Administration FTE



## Total Assets in \$ billions



## Total Assets per Active Member and Annuitant



■ You ■ Peer ■ All

--- Peer Median — All Median

# 3

## Total Cost

This section:

- Compares your total cost per member.
- Quantifies the impact of FTE per member, costs per FTE, third party costs and back-office costs.
- Compares your costs per member type.

## Your total pension administration cost was \$18.5 million or \$23 per active member and annuitant.

Activity <sup>1</sup>	Cost \$000s	\$s per Active Member and Annuitant			% of Total Pension Administration Cost		
	You	You	Peer Avg	All Avg	You	Peer Avg	All Avg
<b>1. Member Transactions</b>							
a. Pension Payments	558	0.70	3.27	4.24	3.0%	3.3%	3.6%
b. Pension Inceptions	1,326	1.67	3.36	4.76	7.2%	3.4%	4.0%
c. Refunds, Withdrawals, and Transfers-out	849	1.07	1.63	2.78	4.6%	1.7%	2.3%
d. Purchases and Transfers-in	186	0.23	1.45	3.04	1.0%	1.5%	2.6%
e. Disability	<u>867</u>	<u>1.09</u>	<u>2.51</u>	<u>2.72</u>	<u>4.7%</u>	<u>2.6%</u>	<u>2.3%</u>
	3,787	4.77	12.22	17.55	20.5%	12.5%	14.8%
<b>2. Member Communication</b>							
a. Call Center	2,838	3.57	7.34	6.33	15.3%	7.5%	5.3%
b. Mail Room, Imaging	415	0.52	2.03	2.88	2.2%	2.1%	2.4%
c. 1-on-1 Counseling	229	0.29	2.18	2.30	1.2%	2.2%	1.9%
d. Member Presentations	244	0.31	1.69	1.44	1.3%	1.7%	1.2%
e. Written Pension Estimates	167	0.21	1.00	1.51	0.9%	1.0%	1.3%
f. Mass Communication	<u>267</u>	<u>0.34</u>	<u>3.27</u>	<u>3.92</u>	<u>1.4%</u>	<u>3.3%</u>	<u>3.3%</u>
	4,160	5.24	17.50	18.38	22.5%	17.9%	15.5%
<b>3. Collections and Data Maintenance</b>							
a. Data and Money from Employers	837	1.05	3.96	4.26	4.5%	4.1%	3.6%
b. Service to Employers	358	0.45	2.41	2.15	1.9%	2.5%	1.8%
c. Data Not from Employers	<u>198</u>	<u>0.25</u>	<u>1.16</u>	<u>1.53</u>	<u>1.1%</u>	<u>1.2%</u>	<u>1.3%</u>
	1,392	1.75	7.54	7.94	7.5%	7.7%	6.7%
<b>4. Governance and Financial Control</b>							
a. Financial Administration and Control	1,652	2.08	3.34	5.32	8.9%	3.4%	4.5%
b. Board, Strategy, Policy	225	0.28	2.46	4.23	1.2%	2.5%	3.6%
c. Government and Public Relations	<u>274</u>	<u>0.35</u>	<u>1.17</u>	<u>1.53</u>	<u>1.5%</u>	<u>1.2%</u>	<u>1.3%</u>
	2,151	2.71	6.97	11.08	11.6%	7.1%	9.3%
<b>5. Major Projects</b>							
a. Amortization of non-IT Major Projects	0	0.00	0.00	0.20	0.0%	0.0%	0.2%
b. Non-IT Major Projects (if you don't capitalize)	0	0.00	1.25	1.53	0.0%	1.3%	1.3%
c. Amortization of IT Major Projects	0	0.00	2.24	3.33	0.0%	2.3%	2.8%
d. IT Major Projects (if you don't capitalize)	<u>0</u>	<u>0.00</u>	<u>3.68</u>	<u>4.80</u>	<u>0.0%</u>	<u>3.8%</u>	<u>4.0%</u>
	0	0.00	7.17	9.86	0.0%	7.3%	8.3%
<b>6. Information Technology</b>							
a. IT Strategy, Database Management and Applications	3,931	4.95	18.58	19.36	21.2%	19.0%	16.3%
b. IT Desktop, Networks, Telecom	<u>744</u>	<u>0.94</u>	<u>7.80</u>	<u>8.61</u>	<u>4.0%</u>	<u>8.0%</u>	<u>7.3%</u>
	4,675	5.89	26.38	27.97	25.3%	27.0%	23.5%
<b>7. Support Services and Other</b>							
a. Building and Utilities	197	0.25	6.09	8.35	1.1%	6.2%	7.0%
b. Human Resources	188	0.24	2.34	3.65	1.0%	2.4%	3.1%
c. Actuarial	341	0.43	1.94	2.10	1.8%	2.0%	1.8%
d. Legal and Rule Interpretation	761	0.96	3.59	4.96	4.1%	3.7%	4.2%
e. Internal and External Audit	439	0.55	1.80	2.91	2.4%	1.8%	2.4%
f. Pay-as-you-go Benefits for Retired Staff	0	0.00	0.83	0.71	0.0%	0.9%	0.6%
g. Other Support Services	<u>415</u>	<u>0.52</u>	<u>3.31</u>	<u>3.37</u>	<u>2.2%</u>	<u>3.4%</u>	<u>2.8%</u>
	2,342	2.95	19.92	26.04	12.7%	20.4%	21.9%
<b>Total Pension Administration <sup>2</sup></b>	18,507	23.30	97.69	118.82	100.0%	100.0%	100.0%

1. Refer to the appendix C for detailed activity definitions.

2. The fully-attributed costs of activities 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits are excluded from pension administration costs to ensure comparability. Refer to the last page of this section to see how the above costs reconcile to the administration costs provided on your survey.

## Quartile comparisons of the components of total cost

The table below shows activity costs on a 'per member' basis (e.g. call center cost per member). In section 4, the same costs are compared on a 'per unit of activity volume' basis (e.g. call center cost per call).

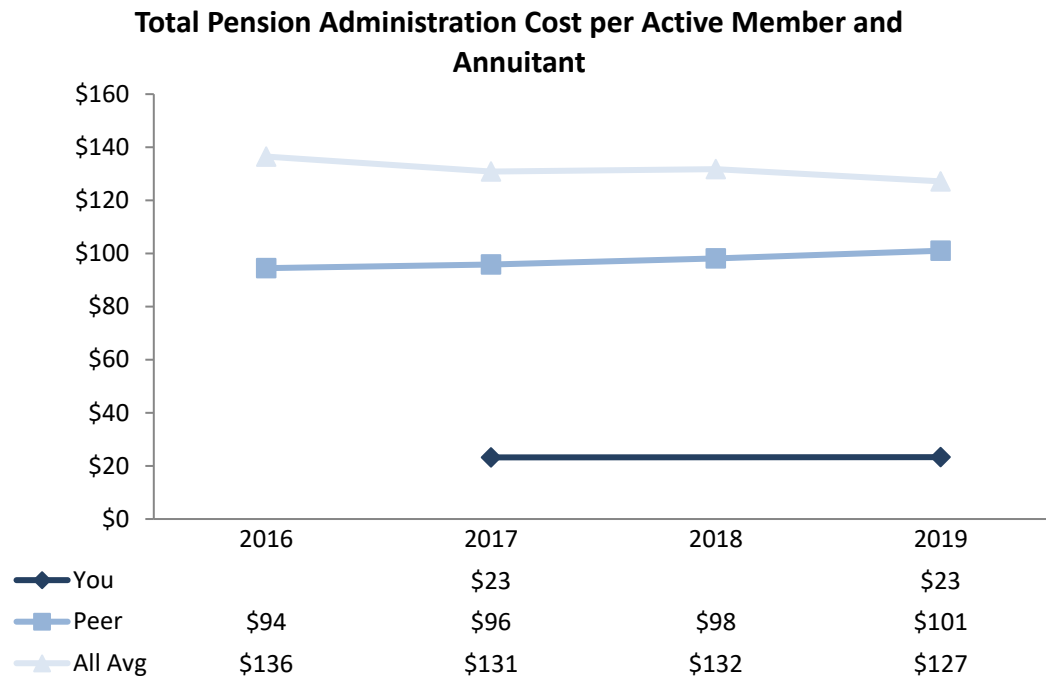
Activity <sup>1</sup>	\$ Cost per Active Member and Annuitant												
	You	Avg	Max	Peer				All Participants					
				Q3	Med	Q1	Min	Avg	Max	Q3	Med	Q1	Min
<b>1. Member Transactions</b>													
a. Pension Payments	0.70	3.27	9.62	3.86	2.45	1.65	0.68	4.24	14.69	5.38	3.60	1.71	0.49
b. Pension Inceptions	1.67	3.36	9.71	3.48	2.41	1.61	1.07	4.76	19.33	6.32	3.18	2.27	1.07
c. Refunds, Withdrawals, and Transfers-out	1.07	1.63	4.42	1.98	1.36	0.58	0.20	2.78	12.96	3.97	1.73	1.03	0.20
d. Purchases and Transfers-in	0.23	1.45	5.44	2.00	1.04	0.31	0.18	3.04	14.62	3.89	1.24	0.66	0.00
e. Disability	<u>1.09</u>	<u>2.51</u>	6.73	4.08	2.36	0.82	0.32	<u>2.72</u>	56.54	2.33	0.56	0.23	0.00
	4.77	12.22	31.09	14.76	8.66	5.83	3.09	17.55	96.84	21.35	11.63	7.04	3.09
<b>2. Member Communication</b>													
a. Call Center	3.57	7.34	21.06	9.52	6.49	4.47	1.95	6.33	22.53	7.17	5.22	3.73	0.00
b. Mail Room, Imaging	0.52	2.03	5.21	3.04	1.32	0.97	0.52	2.88	24.62	3.65	1.44	0.78	0.31
c. 1-on-1 Counseling	0.29	2.18	6.66	2.61	1.56	0.95	0.09	2.30	7.92	3.09	1.56	0.45	0.00
d. Member Presentations	0.31	1.69	6.04	2.50	0.87	0.60	0.06	1.44	7.38	1.89	0.97	0.60	0.00
e. Written Pension Estimates	0.21	1.00	2.83	1.23	0.82	0.54	0.00	1.51	4.99	2.08	1.11	0.56	0.00
f. Mass Communication	<u>0.34</u>	<u>3.27</u>	7.01	4.73	3.03	2.40	0.17	<u>3.92</u>	20.22	4.94	2.88	1.92	0.00
	5.24	17.50	42.26	22.30	17.87	10.07	5.03	18.38	80.49	22.30	16.44	11.18	5.03
<b>3. Collections and Data Maintenance</b>													
a. Data and Money from Employers	1.05	3.96	16.53	4.82	2.34	1.38	0.53	4.26	16.53	6.13	3.03	1.83	0.00
b. Service to Employers	0.45	2.41	9.27	3.16	1.62	1.15	0.37	2.15	9.27	3.08	1.74	1.15	0.00
c. Data Not from Employers	<u>0.25</u>	<u>1.16</u>	2.58	1.79	1.05	0.62	0.02	<u>1.53</u>	7.14	2.01	1.19	0.40	0.00
	1.75	7.54	20.51	9.64	6.32	3.27	0.93	7.94	20.51	10.35	6.99	4.16	0.01
<b>4. Governance and Financial Control</b>													
a. Financial Administration and Control	2.08	3.34	9.93	3.85	2.91	2.06	0.56	5.32	21.55	6.40	4.27	2.35	0.50
b. Board, Strategy, Policy	0.28	2.46	6.94	3.27	2.19	0.65	0.13	4.23	18.52	6.08	3.02	1.39	0.13
c. Government and Public Relations	<u>0.35</u>	<u>1.17</u>	4.00	1.59	0.60	0.20	0.10	<u>1.53</u>	7.37	2.21	1.00	0.44	0.10
	2.71	6.97	19.16	8.21	5.86	3.70	1.12	11.08	31.93	16.95	9.22	4.95	1.12
<b>5. Major Projects</b>													
a. Amortization of non-IT Major Projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	5.54	0.00	0.00	0.00	0.00
b. Non-IT Major Projects (if you don't capitalize)	0.00	1.25	6.83	0.97	0.00	0.00	0.00	1.53	15.05	1.52	0.00	0.00	0.00
c. Amortization of IT Major Projects	0.00	2.24	11.25	4.32	0.00	0.00	0.00	3.33	26.34	5.22	0.05	0.00	0.00
d. IT Major Projects (if you don't capitalize)	<u>0.00</u>	<u>3.68</u>	11.49	6.92	1.43	0.00	0.00	<u>4.80</u>	59.99	5.99	1.50	0.00	0.00
	0.00	7.17	18.32	10.27	6.92	3.26	0.00	9.86	69.79	11.60	6.91	1.69	0.00
<b>6. Information Technology</b>													
a. IT Strategy, Database, Applications (excl. major projects)	4.95	18.58	46.61	26.20	12.51	7.28	3.59	19.36	57.38	26.42	17.08	11.26	0.17
b. IT Desktop, Networks, Telecom	<u>0.94</u>	<u>7.80</u>	12.81	11.30	9.04	4.48	0.94	<u>8.61</u>	31.06	11.17	7.45	4.71	0.00
	5.89	26.38	53.82	36.10	22.06	17.22	4.54	27.97	69.69	36.10	23.93	17.22	3.85
<b>7. Support Services and Other</b>													
a. Building and Utilities	0.25	6.09	22.07	6.87	3.91	2.47	0.25	8.35	33.34	11.17	5.29	2.61	0.25
b. Human Resources	0.24	2.34	8.02	2.62	2.09	0.60	0.12	3.65	20.51	4.61	2.28	0.81	0.12
c. Actuarial	0.43	1.94	6.87	2.11	1.37	0.76	0.43	2.10	6.87	2.66	1.56	0.80	0.00
d. Legal and Rule Interpretation	0.96	3.59	9.87	5.54	2.47	1.67	0.75	4.96	35.47	5.73	3.37	2.26	0.75
e. Internal and External Audit	0.55	1.80	4.35	2.49	1.50	1.00	0.26	2.91	27.64	3.14	2.04	1.49	0.26
f. Pay-as-you-go Benefits for Retired Staff	0.00	0.83	11.63	0.07	0.00	0.00	0.00	0.71	11.63	0.07	0.00	0.00	0.00
g. Other Support Services	<u>0.52</u>	<u>3.31</u>	15.91	4.65	2.10	0.52	0.00	<u>3.37</u>	15.91	4.55	2.35	0.81	0.00
	2.95	19.92	64.73	22.50	15.60	10.80	2.60	26.04	117.57	30.61	21.40	11.96	2.60
<b>Total Pension Administration<sup>2</sup></b>	23.30	97.69	235.94	110.01	87.69	69.30	17.32	118.82	399.92	145.91	91.25	74.88	17.32

1. Refer to the appendix C for detailed activity definitions.

2. Only averages will add to totals. The Max/ Q3/ Med/ Q1/ Min activity costs will not add to their respective totals and subtotals because, for example, the system with the median cost (i.e., the middle value) will not be the same for all activities and totals.

## Cost trends

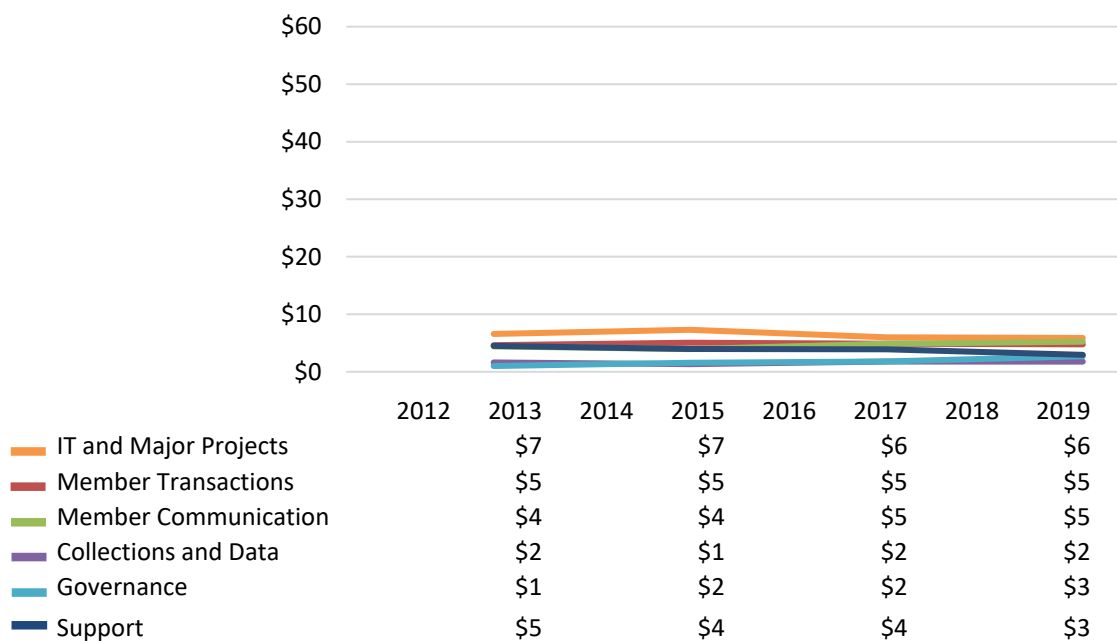
The total pension administration costs of your peers that have participated for 4 consecutive years have grown at a compound annual rate of 2.3% between 2016 and 2019. Your growth rate for the same period is unavailable.



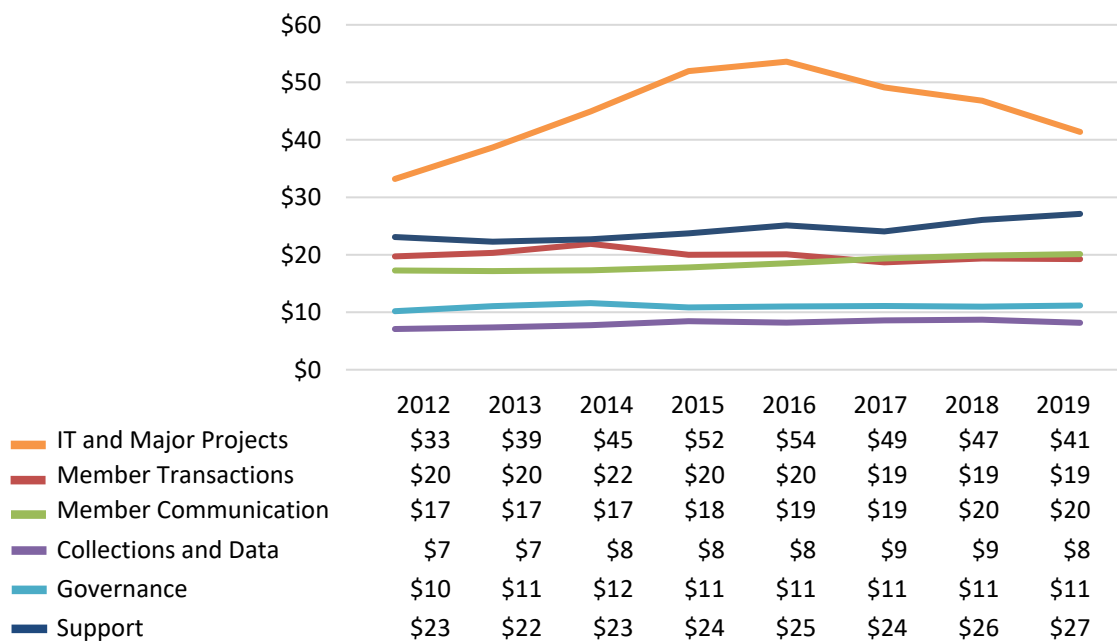
1. Trend analysis is based on systems that have participated for 4-consecutive years (13 peers and 33 World systems). This ensures that trends are not caused by changes in the composition of the participants.
2. All foreign currency amounts have been converted to USDs using Purchasing Power Parity figures as per the OECD (see Appendix B). The same exchange rate was used for both the current and prior years. The benefit of using the same exchange rate for prior years is that changes in costs reflect fluctuations in your peers' costs and not fluctuations in foreign exchange.

## Cost category trends

**Cost per Member - You**

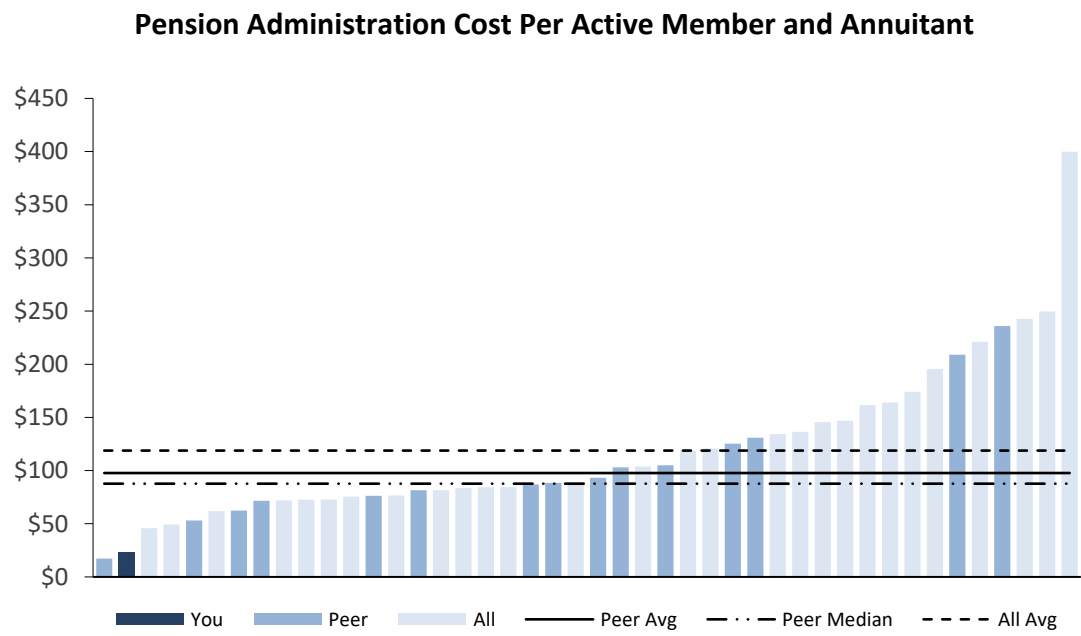


**Cost per Member - All Avg**



Trend analysis is based on 33 systems that provided 7 consecutive years of data.

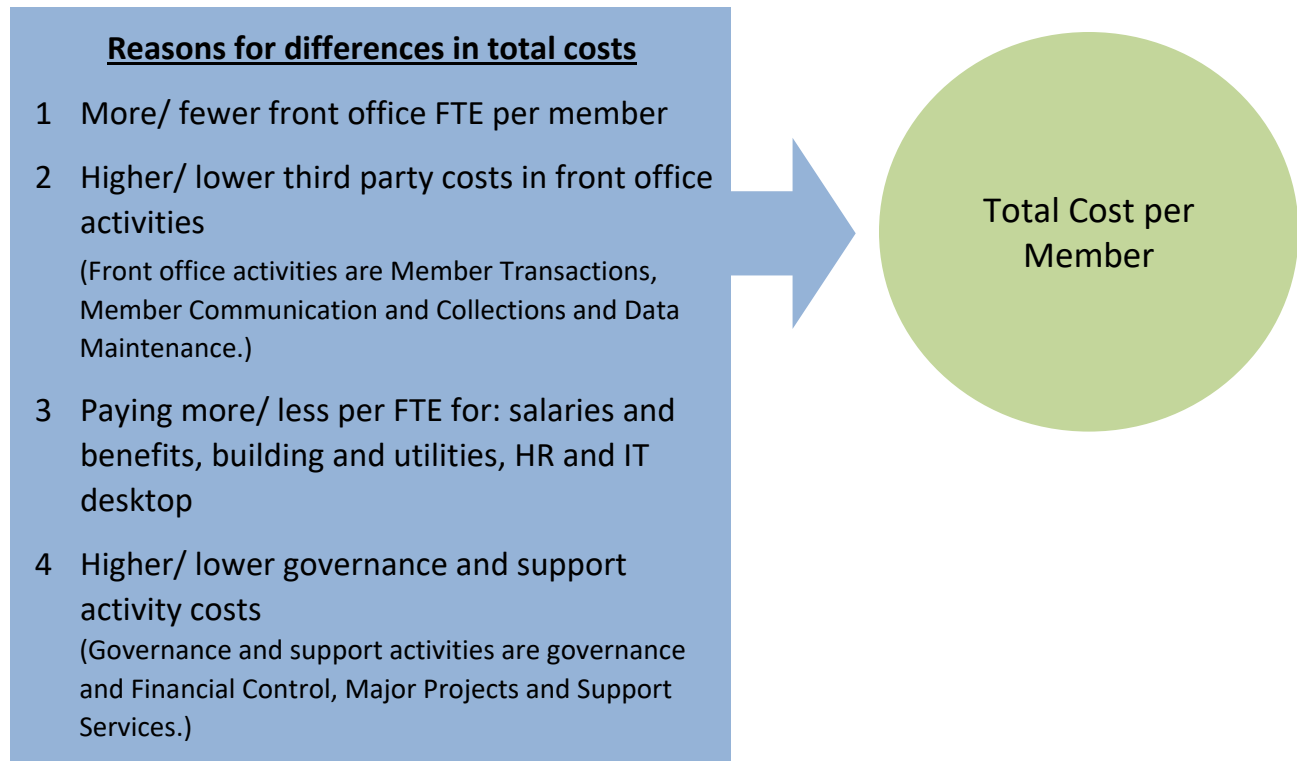
**Your total pension administration cost was \$23 per active member and annuitant. This was \$75 below the peer average of \$98 (and \$65 below the peer median of \$88).**



Pension administration cost excludes the fully-attributed costs of activities 1f. Healthcare Administration, and 1g. Optional and Third Party Administered Benefits.



## CEM uses the following cost model to explain differences in total costs:



In this section, CEM quantifies the amount by which differences in each of the 4 reasons identified above cause your total pension administration cost to differ from the peer average.

### Average versus Median

In the other sections of this report, CEM compares your performance to the median (i.e., the middle value or 50th percentile). This is because medians are less sensitive to outlier data than averages. An example of an outlier is a single peer with unusually high costs. In this section, we compare and reconcile your total costs to the peer average because:

- There are interactions between the reasons for differences in total cost that would be lost if we used medians.
- It is necessary if we want the reasons to add to 100%. The sum of median parts does not add up to the median total.

## Reasons why your total cost per member was \$75 below the peer average.

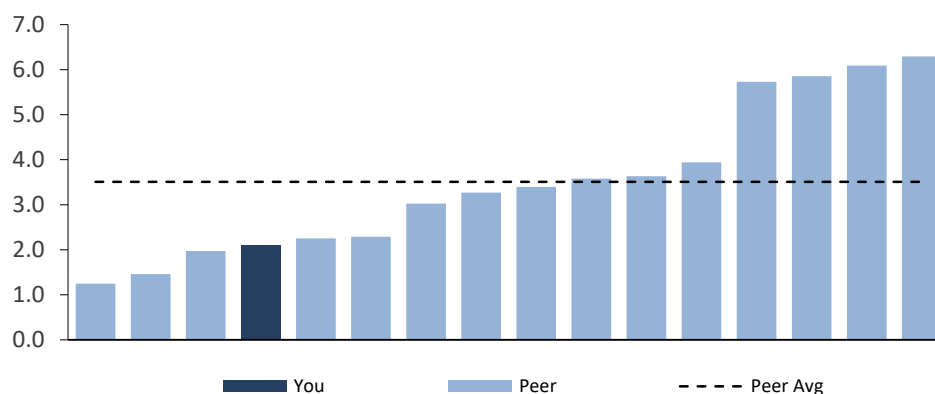
Reason	You	Peer Avg	Impact \$s per active member and annuitant
1 Fewer front office FTE per 10,000 members	2.1	3.5	-\$8
2 Lower third party costs per member in the front office	\$1	\$6	-\$5
3 Lower costs per FTE			
Front office Salaries and Benefits	\$52,978	\$90,324	
Governance and support Salaries and Benefits	<u>\$97,591</u>	<u>\$128,230</u>	
Blended Average	\$56,568	\$93,144	
Building and Utilities	\$1,085	\$11,354	
HR	\$1,037	\$4,361	
IT Desktop, Networks, Telecom	<u>\$4,097</u>	<u>\$14,536</u>	
Total	\$62,786	\$123,396	-\$33
4 Lower support costs per member <sup>1</sup>			
Governance and Financial Control	\$3	\$6	
Major Projects	\$0	\$7	
IT Strategy, Database, Applications	\$5	\$16	
Actuarial, Legal, Audit, Other	<u>\$3</u>	<u>\$10</u>	
Total	\$10	\$39	-\$29
Total			-\$75

1. To avoid double counting, peers' governance and support costs are adjusted for differences in cost per FTE.

## Reason 1: You had fewer front office FTE per member.

Your 2.1 front office FTE per 10,000 members was 40% below the peer average of 3.5. Front office activities are activities that come in contact with clients or employers, such as paying pensions, member calls and presentations. It excludes Governance and support activities such as Governance and Financial Control, Major Projects and Support Services. Your lower front office FTE per member decreased your total cost per member by \$8 relative to the peer average.

**Front office FTE per 10,000 Active Members and Annuitants**



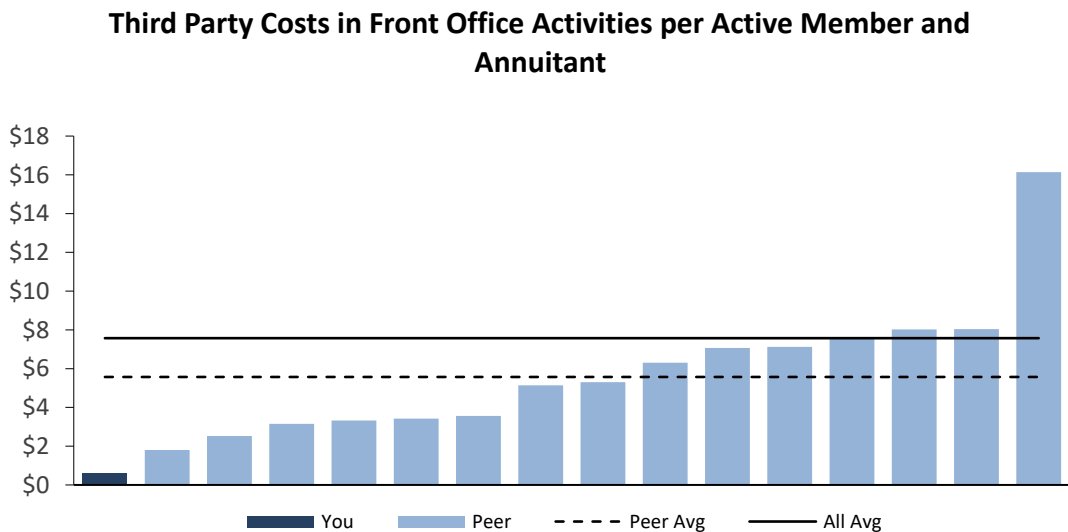
Your front-office FTE per 10,000 members is a function of two components: volume per 1,000 active members and annuitants (workloads) and activity volume per FTE (productivity).

One reason you had fewer FTE per member is that you had higher productivity in the front office.

		Volume per 1,000 Active Members and Annuitants			Activity Volume per FTE		
Activity	Volume Description	You	Peer Avg	+/-	You	Peer Avg	+/-
Member Transactions							
Pension Payments	Annuitants	406	429	-23	42,964	28,152	14,811
New Payee Inceptions	New Inceptions	22	24	-2	684	912	-227
Refunds & Transfers-out	Refunds	23	21	3	1,188	2,038	-850
Purchases and Transfers-in	Purchases	3.2	5.2	-2.0	827	440	387
Disability Applications	Disability Applications	3.0	1.8	1.2	154	196	-42
Member Communication							
Calls and Emails	Calls and Emails	449	559	-110	6,572	7,830	-1,259
Incoming Mail	Incoming Mail	359	394	-34	40,772	30,264	10,508
Members Counseled 1-on-1	Members Counseled	4	21	-18	735	1,232	-497
Member Presentations	Member Presentations	0.4	1.5	-1.1	76	117	-41
Written Estimates	Written Estimates	4	24	-20	1,175	7,995	-6,820
Collections & Data Maintenance							
Data & Money from Employers	Active Members	594	571	23	31,889	28,106	3,783
Service to Employers	Active Members	594	571	23	78,660	44,053	34,607
Data Not from Employers	All Members	1,246	1,460	-214	282,662	569,740	-287,078
Weighted Total		29.6	33.1	-3.5	140,740	96,382	44,358

Reason 2: You had lower third party costs in the front office activities.

Your third party costs in the front office activities were \$1 per member which was 89% below the peer average of \$6. Your lower third party costs decreased your total cost per member by \$5 relative to peers.



Differences in third party and other miscellaneous costs in the front-office activities reflect differences in:

- Use of consultants
- Departmental travel and education

### Reason 3: You had overall lower salaries and benefits, building and utilities, HR and IT desktop costs per FTE.

Cost per FTE		
Costs that vary per FTE	You	FTE-Weighted Peer Avg
Salaries and Benefits		
Front Office	\$52,978	\$90,324
Governance and support	<u>\$97,591</u>	<u>\$128,230</u>
Blended Average	\$56,568	\$91,593
Pay-as-you-go Benefits for Retired Staff	\$0	\$1,551
Building and Utilities	\$1,085	\$11,354
Human Resources	\$1,037	\$4,361
IT Desktop, Networks, Telecom	\$4,097	\$14,536
Total	\$62,786	\$123,396

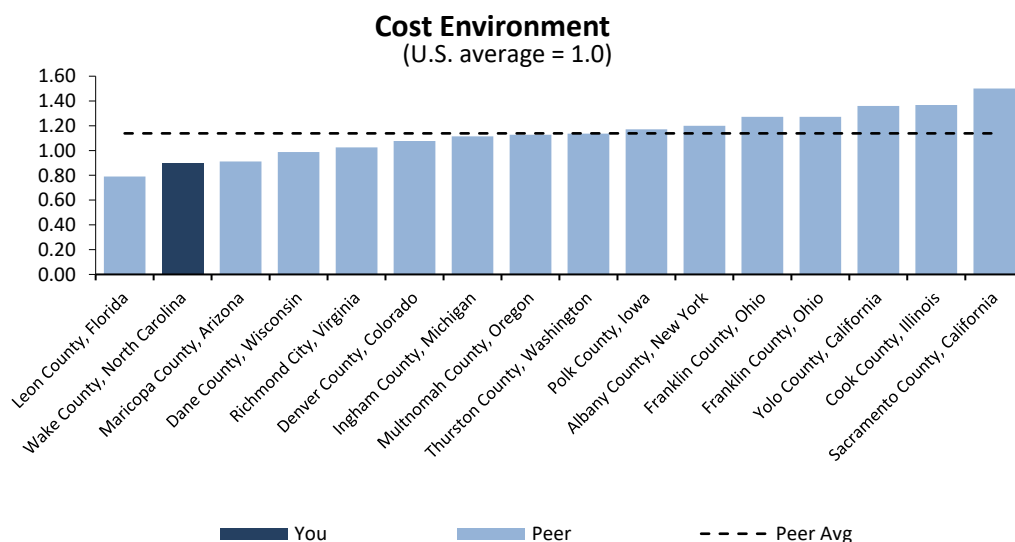
Your cost per FTE for salaries and benefits, building and utilities, human resources and IT desktop of \$62,786 was 49% below the FTE-weighted peer average of \$123,396. Your lower costs per FTE decreased your total cost per member by \$33 relative to the peer average.

The cost model uses the FTE-weighted average because 'Cost per FTE' differences matter more for peers with more FTEs. The FTE-weighted average can be substantially different from the simple average.

Differences in what you pay per FTE reflect differences in:

- Square footage of office space per FTE.
- Organization structure, strategy and history.
- Using consultants for functions associated with high salaries. This will reduce your salary cost per FTE, but increase your third party cost.

Often a key reason for differences in 'cost per FTE' is cost environment. According to the Bureau of Labor Statistics (<http://www.bls.gov/>), labor costs in your area were 21% below the peer average.



## Reason 4: You paid less for governance and support activities.

Your adjusted<sup>1</sup> cost per active member and annuitant of \$10 for governance and support activities was below the peer average of \$39. Paying less for Governance and support activities decreased your total cost per member by \$29 relative to the peer average.

Governance and support activities	Cost per Active Member and Annuitant		Adjusted <sup>1</sup> Cost per Active Member and Annuitant	
	You	Peer Avg	You	Peer Avg
Governance and Financial Control	\$3	\$7	\$3	\$6
Major Projects	\$0	\$7	\$0	\$7
IT Strategy, Database, Applications (excl. major	\$5	\$19	\$5	\$16
Actuarial, Legal, Audit, Other Support Services	\$2	\$11	\$3	\$10
Support Services that Vary per FTE	\$0	\$6		
Total	\$10	\$50	\$10	\$39

1. To avoid double counting, governance and support costs are adjusted for cost per FTE (including salary, building, IT desktop, and HR costs).

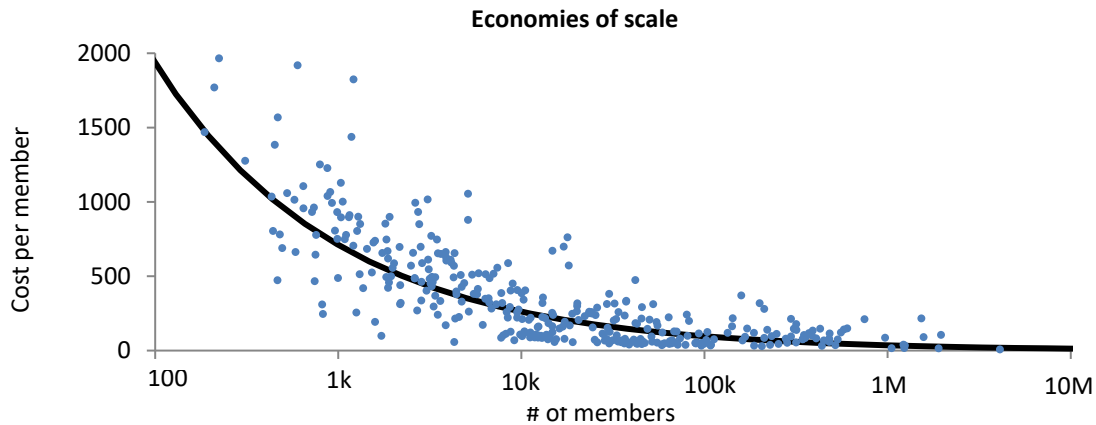
Differences in the adjusted cost per member for non-administration activities reflects differences in:

- How much you do. For example, some systems invest more in disaster recovery.
- IT capability
- IT investment cycle
- Plan complexity

Refer to section '4 - Activity Costs' for detailed analysis and comparison of the sub-activities within each of the non-administration activities to gain insight into where you are doing and paying more and/or less.

## Impact of economies of scale

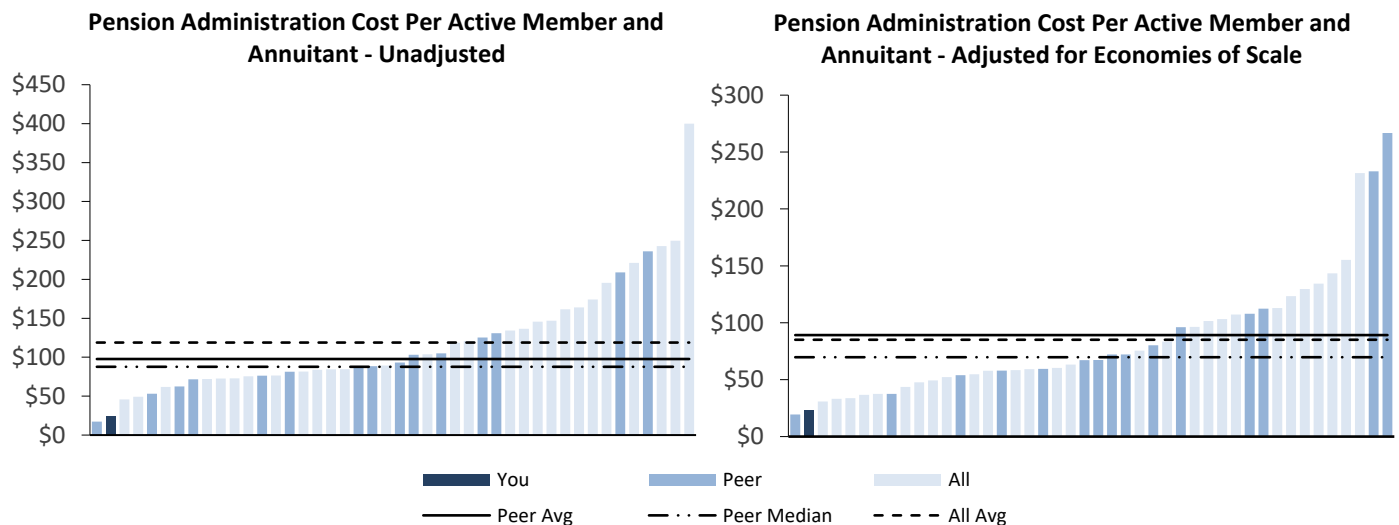
Your peer group is comprised of funds as close to your size as possible because size matters. According to CEM research using cost and membership data from 370 global pension plans, approximately 70% of differences in cost per member can be explained by differences in size.



The following table outlines your implied cost per member based on changes in your membership:

How Changes in Membership Impact Your Cost			
% Change in Members	Implied # of Members	Predicted Cost per Member	Increase/-Decrease
-75%	198,546	\$38	\$15
-50%	397,093	\$30	\$6
-25%	595,639	\$26	\$2
0%	794,185	\$23	\$0
25%	992,731	\$22	-\$2
50%	1,191,278	\$20	-\$3
75%	1,389,824	\$19	-\$4

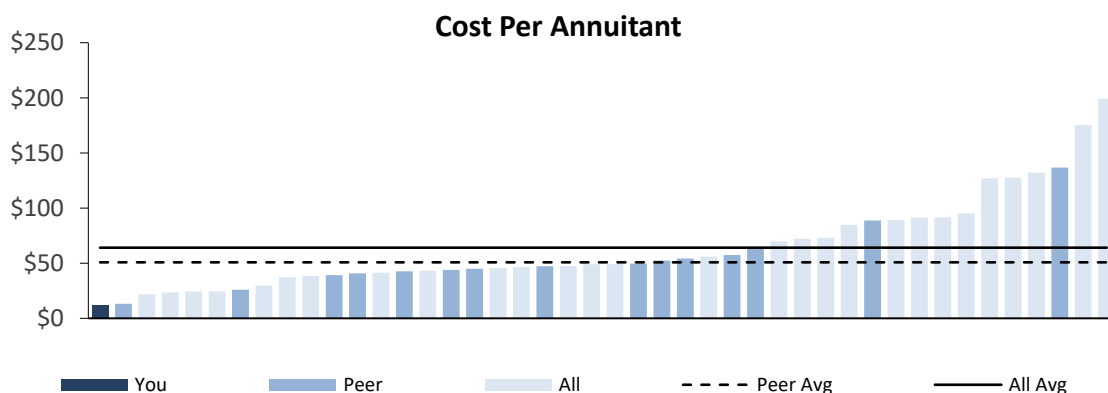
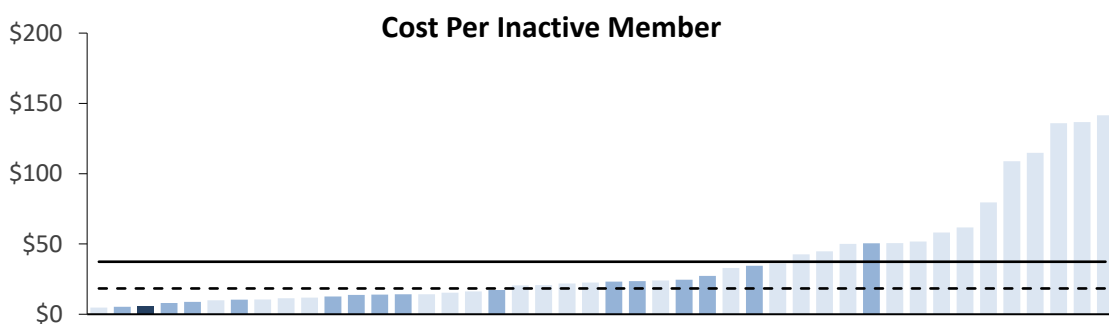
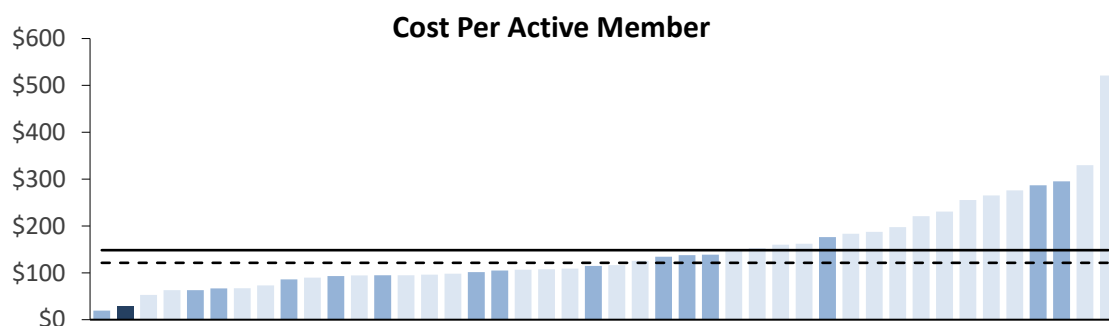
After adjusting your peers' costs for their scale advantage/disadvantage relative to your system, the peer average cost decreased from \$98 per member to \$89 per member.



## Cost per member type

An alternative way of analyzing cost performance is by member type. Comparisons of your pension administration cost per active, inactive and annuitant member to your peers and all participants are shown below. The methodology for determining these costs is shown on the following two pages.

Pension Administration Cost per Member by Type									
Member Type	You	Average	Peer			Average	All		
			Max	Median	Min		Max	Median	Min
Active Member	\$29	\$121	\$295	\$103	\$19	\$148	\$521	\$115	\$19
Inactive Member	\$6	\$18	\$51	\$14	\$5	\$37	\$142	\$23	\$5
Annuitant	\$12	\$51	\$137	\$46	\$12	\$64	\$199	\$49	\$12





## Calculation of your cost per member type

The table below shows how your activity costs were attributed to each member type. The attribution methodology is described on the following page.

Activity	Calculation of Your Cost by Member Type						
	Your Costs in \$000s <sup>1</sup>	\$000s attributed to:			% attributed to:		
		Active	Inactive	Annuitant	Active	Inactive	Annuitant
<b>1. Member Transactions</b>							
a. Pension Payments	558	0	0	558	0.0%	0.0%	100.0%
b. Pension Inceptions	1,326	1,176	111	39	88.7%	8.4%	2.9%
c. Refunds, Withdrawals, and Transfers-out	849	534	315	0	62.9%	37.1%	0.0%
d. Purchases and Transfers-in	186	186	0	0	100.0%	0.0%	0.0%
e. Disability	867	867	0	0	100.0%	0.0%	0.0%
<b>2. Member Communication</b>							
a. Call Center	2,838	1,646	68	1,124	58.0%	2.4%	39.6%
b. Mail Room, Imaging	415	241	10	164	58.0%	2.4%	39.6%
c. 1-on-1 Counseling	229	225	3	0	98.5%	1.3%	0.2%
d. Member Presentations	244	240	3	0	98.5%	1.3%	0.2%
e. Written Pension Estimates	167	157	11	0	93.7%	6.3%	0.0%
f. Mass Communication	267	214	9	44	80.2%	3.3%	16.4%
<b>3. Collections and Data Maintenance</b>							
a. Data and Money from Employers	837	837	0	0	100.0%	0.0%	0.0%
b. Service to Employers	358	358	0	0	100.0%	0.0%	0.0%
c. Data Not from Employers	198	121	29	48	61.0%	14.7%	24.3%
<b>4. Governance and Financial Control</b>							
a. Financial Administration and Control	1,652	1,203	99	350	72.8%	6.0%	21.2%
b. Board, Strategy, Policy	225	164	13	48	72.8%	6.0%	21.2%
c. Government and Public Relations	274	200	16	58	72.8%	6.0%	21.2%
<b>5. Major Projects</b>							
a. Amortization of non-IT Major Projects	0	0	0	0	72.8%	6.0%	21.2%
b. Non-IT Major Projects (if you don't capitalize)	0	0	0	0	72.8%	6.0%	21.2%
c. Amortization of IT Major Projects	0	0	0	0	72.8%	6.0%	21.2%
d. IT Major Projects (if you don't capitalize)	0	0	0	0	72.8%	6.0%	21.2%
<b>6. Information Technology</b>							
a. IT Strategy, Database, Applications (excl. major projects)	3,931	2,863	235	833	72.8%	6.0%	21.2%
b. IT Desktop, Networks, Telecom	744	542	45	158	72.8%	6.0%	21.2%
<b>7. Support Services and Other</b>							
a. Building and Utilities	197	144	12	42	72.8%	6.0%	21.2%
b. Human Resources	188	137	11	40	72.8%	6.0%	21.2%
c. Actuarial	341	248	20	72	72.8%	6.0%	21.2%
d. Legal and Rule Interpretation	761	554	46	161	72.8%	6.0%	21.2%
e. Internal and External Audit	439	320	26	93	72.8%	6.0%	21.2%
f. Pay-as-you-go Benefits for Retired Staff	0	0	0	0	72.8%	6.0%	21.2%
g. Other Support Services	415	302	25	88	72.8%	6.0%	21.2%
<b>Total Pension Administration Cost (A)</b>	18,507	13,479	1,109	3,920	72.8%	6.0%	21.2%
<b># of members by type (B)</b>		471,958	195,131	322,227			
<b>Cost per Member Type (A ÷ B)</b>		\$29	\$6	\$12			

1. The fully-attributed costs of activities 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits are excluded from pension administration costs to ensure comparability. Refer to the last page of this section to see how the above costs reconcile to the administration costs provided on your survey.

## Methodology for attributing activity costs to each member type

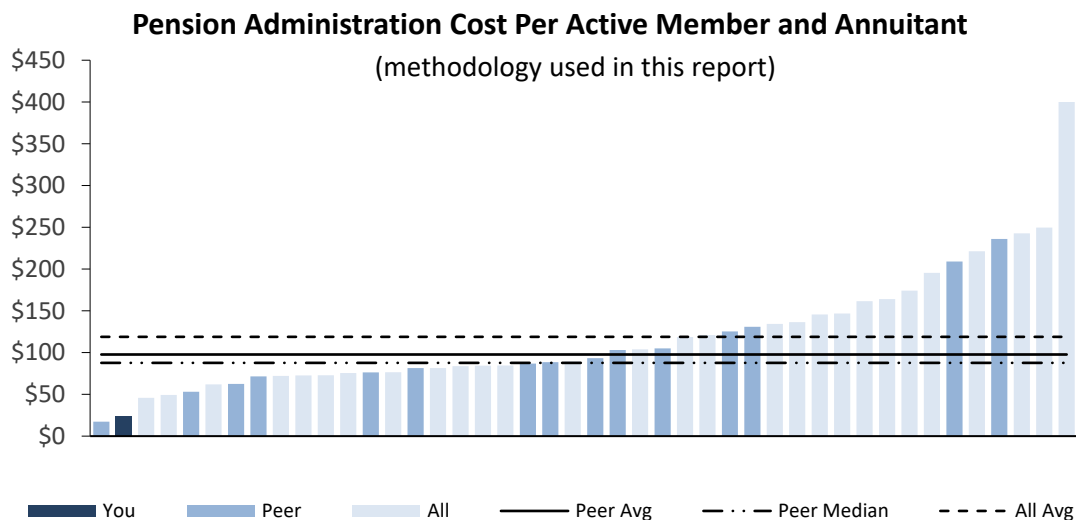
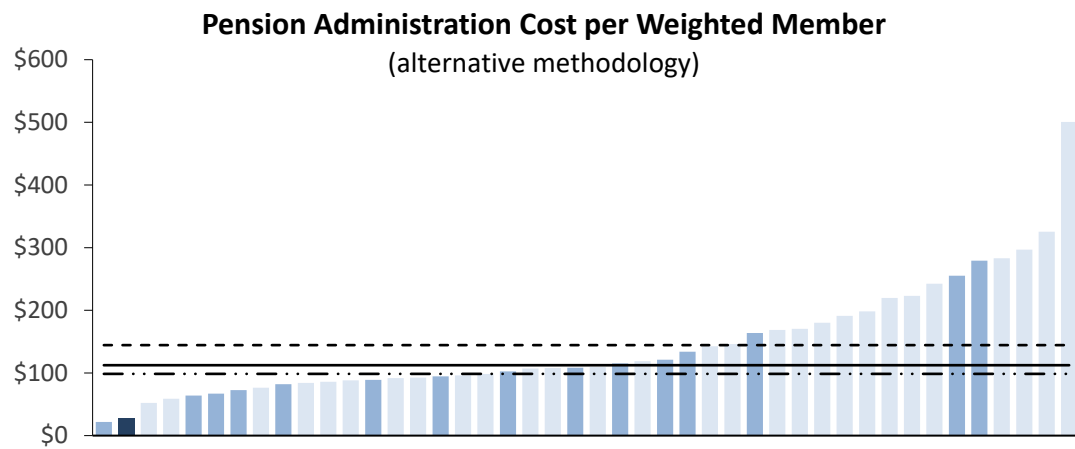
Activity	Attribution Method
1a. Pension Payments	100% annuitants
1b. Pension Inceptions	Pro rata based on weighted inceptions: <ul style="list-style-type: none"> <li>• service retirements of active members weighted 100%</li> <li>• new inceptions annuitants weighted 50% + changes in gross caused by annuitants circumstances weighted 25%</li> <li>• retirements of inactive members weighted 70%</li> </ul>
1c. Refunds, Withdrawals, and Transfers-out	Pro rata based on: <ul style="list-style-type: none"> <li>• active members weighted 70%</li> <li>• inactive members weighted 100%</li> </ul>
1d. Purchases and Transfers-in	100% active members
1e. Disability	100% active members
2a. Call Center	Pro rata based on weighted membership: <ul style="list-style-type: none"> <li>• active members weighted 100%</li> <li>• annuitants weighted 100%</li> <li>• inactive members weighted 10%</li> </ul>
2b. Mail Room, Imaging	per 2a above
2c. 1-on-1 Counseling	Pro rata between actives, inactives and annuitants based on: <ul style="list-style-type: none"> <li>• service retirements of active members weighted 100%</li> <li>• retirements of inactive members weighted 10%</li> <li>• survivor inceptions of annuitants weighted 5%</li> </ul>
2d. Member Presentations	per 2c above
2e. Written Pension Estimates	Pro rata between active and inactive members based on: <ul style="list-style-type: none"> <li>• service retirements of active members weighted 100%</li> <li>• retirements of inactive members weighted 50%</li> </ul>
2f. Mass Communication	Pro rata based on weighted membership: <ul style="list-style-type: none"> <li>• active members weighted 100%</li> <li>• annuitants weighted up to 30% (20% for website, etc + 10% if you send them newsletters)</li> <li>• inactive members weighted up to 30% (10% for website, etc + 10% if you send them member statements annually + 10% if you send them newsletters)</li> </ul>
3a. Data and Money from Employers	100% active members
3b. Service to Employers	100% active members
3c. Data Not from Employers	Pro rata based on weighted membership: <ul style="list-style-type: none"> <li>• active members weighted up to 100% (33% because of divorce + 33% if you maintain their addresses + 33% if you collect contributions directly from members)</li> <li>• annuitants weighted up to 58% (25% because of divorce + 33% for maintaining their addresses)</li> <li>• inactive members weighted up to 58% (25% because of divorce + 33% if you maintain their addresses)</li> </ul>
4a. Financial Administration and Control	Pro rata based on ratio of the sum of attributions to activities 1 to 3 for actives, annuitants and inactives using rules above.
4b. Board, Strategy, Policy	per 4a above
4c. Government and Public Relations	per 4a above
5a. Amortization of non-IT Major Projects	per 4a above
5b. Non-IT Major Projects (if you don't capitalize)	per 4a above
5c. Amortization of IT Major Projects	per 4a above
5d. IT Major Projects (if you don't capitalize)	per 4a above
6a. IT Strategy, Database and Applications (excl. major projects)	per 4a above
5b. IT Desktop, Networks, Telecom	per 4a above
7a. Building and Utilities	per 4a above
7b. Human Resources	per 4a above
7c. Actuarial	per 4a above
7d. Legal and Rule Interpretation	per 4a above
7e. Internal and External Audit	per 4a above
7f. Pay-as-you-go Benefits for Retired Staff	per 4a above
7g. Other Support Services	per 4a above

## Cost per weighted member

In this report active members and annuitants is the divisor used when determining cost per member. But as the analysis on the previous three pages demonstrates, active members are more costly to administer than annuitants, and the cost to administer inactive members is greater than zero. Thus, using active members and annuitants as the divisor can bias results. It unfairly makes systems look higher cost if they have substantially higher than average proportions of inactive members and/or substantially lower than average proportions of annuitants.

Another way to compare total costs is on a per 'weighted member' basis where the weightings reflect the fact that costs vary by type of member. Your pension administration cost per weighted member was \$27.80. This was below the peer average of \$112.36. Members are weighted as follows: active members at 100%, inactive members at 25% and annuitants at 45%.

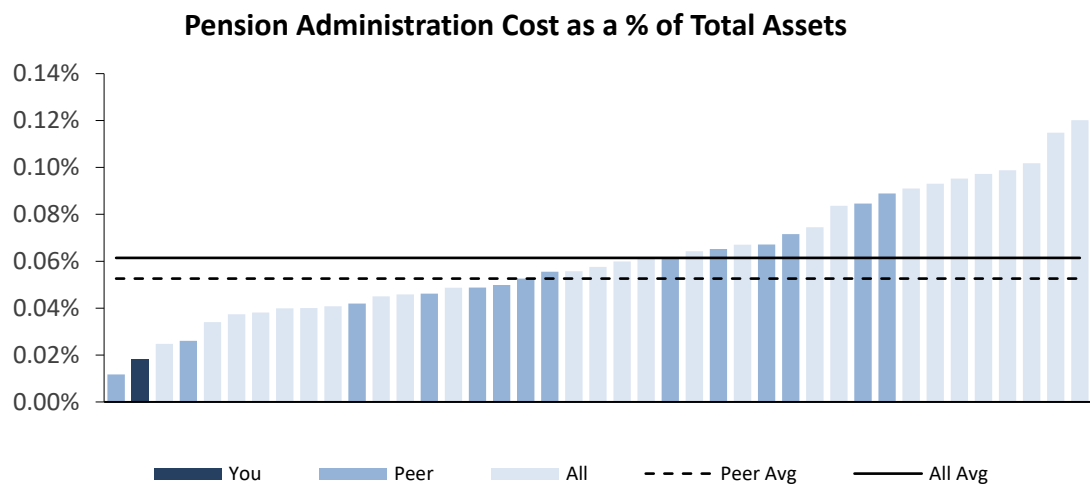
Relative rankings under both methodologies are shown in the graphs below.



# Cost as a % of total assets

An alternative way to compare total costs is as a percent of total pension assets. This ratio is particularly useful when trying to understand how pension administration costs compare to investment costs within the same system because investment costs tend to be quoted as a percentage of assets. This ratio is less useful when comparing between systems, as is done in the graph below, because the divisor, total assets, depends on plan rules (more generous plans will have more assets) and funded status.

Your pension's administration costs represented 0.02% of total assets (or 2 basis points). This was below the peer average of 0.05%.



## Reconciliation to costs provided on the survey

The fully-attributed costs of activities 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits are excluded from pension administration costs to ensure comparability. Your direct costs per the survey for activities 4, 6 and 7 have been reduced by attributions to activities 1F and 1G that add up to \$176 thousand.

Activity	Your Costs in \$000s			Total	\$s per Active Member and Annuitant
	Salaries & Benefits	Third Party & Other	Attributions <sup>1</sup> to 1f & 1g		
<b>1. Member Transactions</b>					
a. Pension Payments	406	153		558	0.70
b. Pension Inceptions	1,307	19		1,326	1.67
c. Refunds, Withdrawals, and Transfers-out	818	32		849	1.07
d. Purchases and Transfers-in	166	20		186	0.23
e. Disability	847	20		867	1.09
f. Healthcare Administration	140	20	143	303	0.38
g. Optional and Third Party Administered Benefits	57	20	33	109	0.14
<b>2. Member Communication</b>					
a. Call Center	2,818	20		2,838	3.57
b. Mail Room, Imaging	360	56		415	0.52
c. 1-on-1 Counseling	209	20		229	0.29
d. Member Presentations	213	31		244	0.31
e. Written Pension Estimates	148	20		167	0.21
f. Mass Communication	229	38		267	0.34
<b>3. Collections and Data Maintenance</b>					
a. Data and Money from Employers	817	20		837	1.05
b. Service to Employers	338	20		358	0.45
c. Data Not from Employers	178	20		198	0.25
<b>4. Governance and Financial Control</b>					
a. Financial Administration and Control	165	1,518	-32	1,652	2.08
b. Board, Strategy, Policy	207	22	-4	225	0.28
c. Government and Public Relations	233	47	-5	274	0.35
<b>5. Major Projects</b>					
a. Amortization of non-IT Major Projects		0	0	0	0.00
b. Non-IT Major Projects (if you don't capitalize)	0	0	0	0	0.00
c. Amortization of IT Major Projects		0	0	0	0.00
d. IT Major Projects (if you don't capitalize)	0	0	0	0	0.00
<b>6. Information Technology</b>					
a. IT Strategy, Database, Applications (excl. major projects)	297	3,709	-75	3,931	4.95
b. IT Desktop, Networks, Telecom	58	701	-14	744	0.94
<b>7. Support Services and Other</b>					
a. Building and Utilities	0	201	-4	197	0.25
b. Human Resources	0	192	-4	188	0.24
c. Actuarial	55	293	-7	341	0.43
d. Legal and Rule Interpretation	205	571	-15	761	0.96
e. Internal and External Audit	75	373	-8	439	0.55
f. Pay-as-you-go Benefits for Retired Staff	0		0	0	0.00
g. Other Support Services	218	204	-8	415	0.52
<b>Total Administration</b>	<b>10,561</b>	<b>8,358</b>	<b>0</b>	<b>18,919</b>	<b>23.82</b>
less:					
f. Healthcare Administration	-140	-20	-143	-303	-0.38
g. Optional and Third Party Administered Benefits	-57	-20	-33	-109	-0.14
<b>Total Pension Administration</b>				<b>18,507</b>	<b>23.30</b>

1. Attributions of 4. Governance, 5. Major Projects, 6. IT, and 7. Support Services and Other are pro rata based on direct FTE.

# 4

## Activity Costs

This section compares:

- Direct costs by activity, before any attributions
- Factors that impact the direct costs of each activity such as salaries per direct FTE, transaction volumes per direct FTE, economies of scale, membership mix, and additional work per unit of activity volume.
- Fully-attributed costs by activity

## Calculation of your activity costs

Calculation of Your Direct Activity Costs				
Activity <sup>1</sup>	Cost <sup>2</sup> in \$000s (A)		Activity Volume (B)	\$s per Unit (A / B)
<b>1. Member Transactions</b>				
a. Pension Payments	558	322,227	annuitants	1.73
b. Pension Inceptions	1,326	17,309	new payee inceptions	76.62
c. Refunds, Withdrawals, and Transfers-out	849	18,420	refunds, withdrawals, and transfers-out	46.11
d. Purchases and Transfers-in	186	2,564	purchases and transfers-in	72.58
e. Disability	867	2,404	disability applications	360.48
<b>2. Member Communication</b>				
a. Call Center	2,838	356,833	calls and emails	7.95
b. Mail Room, Imaging	415	285,402	incoming mail	1.46
c. 1-on-1 Counseling	229	2,939	members counseled 1-on-1	77.88
d. Member Presentations	244	303	member presentations	804.62
e. Written Pension Estimates	167	3,173	written estimates	52.73
f. Mass Communication	267	794,185	active members and annuitants	0.34
<b>3. Collections and Data Maintenance</b>				
a. Data and Money from Employers	837	471,958	active members	1.77
b. Service to Employers	358	471,958	active members	0.76
c. Data Not from Employers	198	989,316	actives, inactives, annuitants	0.20
<b>4. Governance and Financial Control <sup>4</sup></b>				
a. Financial Administration and Control	1,652	794,185	active members and annuitants	2.08
b. Board, Strategy, Policy	225	794,185	active members and annuitants	0.28
c. Government and Public Relations	274	794,185	active members and annuitants	0.35
<b>5. Major Projects</b>				
a. Amortization of non-IT Major Projects	0	794,185	active members and annuitants	0.00
b. Non-IT Major Projects (if you don't capitalize)	0	794,185	active members and annuitants	0.00
c. Amortization of IT Major Projects	0	794,185	active members and annuitants	0.00
d. IT Major Projects (if you don't capitalize)	0	794,185	active members and annuitants	0.00
<b>6. Information Technology <sup>4</sup></b>				
a. IT Strategy, Database, Applications (excl. major projects)	3,931	794,185	active members and annuitants	4.95
b. IT Desktop, Networks, Telecom	744	183	pension admin FTE	4,072.46
<b>7. Support Services and Other <sup>4</sup></b>				
a. Building and Utilities	197	183	pension admin FTE	1,078.90
b. Human Resources	188	183	pension admin FTE	1,030.60
c. Actuarial	341	794,185	active members and annuitants	0.43
d. Legal and Rule Interpretation	761	794,185	active members and annuitants	0.96
e. Internal and External Audit	439	794,185	active members and annuitants	0.55
f. Pay-as-you-go Benefits for Retired Staff	0	183	pension admin FTE	0.00
g. Other Support Services	415	794,185	active members and annuitants	0.52
<b>Total Pension Administration <sup>3</sup></b>	<b>18,507</b>	<b>794,185</b>	<b>active members and annuitants</b>	<b>23.30</b>

1. Refer to Appendix C for activity definitions.

2. Cost is 'direct cost' as per your survey. It is the sum of:

- a) Salaries and benefits of all staff that directly perform the activity, plus related support and management staff that are in the same department. For example, the call center includes call and email customer service agents, trainers, analysts and managers.
- b) Third-party and other non-staff, non-third-party-fee costs that can be directly attributed to the activities but that are not already included in the other activities listed. These other costs may include office supplies, travel, subscriptions, training, conferences.

3. The fully attributed costs of activities 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits are excluded from total pension administration costs to ensure comparability.

4. Your direct costs for activities 4, 6, and 7 have been reduced by attributions to 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits that add up to \$176k. Refer to the last page of this section for details.

## Summary comparisons of activity costs by quartile breakdown

Comparisons of Direct Activity Costs <sup>1</sup>														
Activity	Cost per:	Peer							All Participant					
		You	Avg	Max	Q3	Med	Q1	Min	Avg	Max	Q3	Med	Q1	Min
<b>1. Member Transactions</b>														
a. Pension Payments	annuitant	1.73	7.78	24.15	9.53	6.30	3.98	1.15	10.04	36.06	12.30	8.14	4.27	1.15
b. Pension Inceptions	new payee inception	76.62	144.31	462.96	153.58	95.49	75.49	43.00	218.07	1,078.49	268.24	130.32	95.37	43.00
c. Refunds, Withdrawals, and Transfers-out	withdrawal & transfer-out	46.11	112.52	689.36	135.92	49.44	35.57	16.00	269.34	2,468.20	224.51	104.47	42.69	5.57
d. Purchases and Transfers-in	purchase & transfer-in	72.58	491.66	1,503.72	598.70	288.30	142.22	65.70	827.76	18,875.00	525.81	192.34	117.28	0.00
e. Disability	disability application	360.48	2,074.87	4,712.11	3,194.30	2,043.44	532.10	312.07	2,035.92	15,000.16	2,743.47	1,291.75	569.46	156.56
<b>2. Member Communication</b>														
a. Call Center	call & email	7.95	13.13	39.65	14.13	11.76	8.37	5.21	10.43	39.65	13.00	8.78	6.08	0.00
b. Mail Room, Imaging	incoming mail	1.46	5.75	13.44	8.15	5.18	2.57	1.46	9.38	49.38	12.76	6.53	2.81	0.83
c. 1-on-1 Counseling	member counseled 1-on-1	77.88	108.59	368.11	133.28	86.93	58.97	26.67	85.02	369.87	96.93	65.18	38.92	1.43
d. Member Presentations	member presentation	804.62	1,437.27	3,091.65	1,895.22	1,447.57	821.12	203.62	1,297.28	3,091.65	1,811.45	1,177.06	678.39	109.83
e. Written Pension Estimates	written estimate	52.73	64.95	156.99	92.66	48.26	27.20	0.02	83.45	378.34	92.66	45.35	31.56	0.00
f. Mass Communication	active member & annuitant	0.34	3.27	7.01	4.73	3.03	2.40	0.17	3.92	20.22	4.94	2.88	1.92	0.00
<b>3. Collections and Data Maintenance</b>														
a. Data and Money from Employers	active member	1.77	6.97	27.48	8.60	3.72	2.38	0.91	7.67	27.48	10.77	5.57	3.18	0.91
b. Service to Employers	active member	0.76	4.29	16.82	5.61	2.86	1.99	0.64	3.87	16.82	5.39	3.44	2.05	0.01
c. Data Not from Employers	active, inactive & annuitant	0.20	0.81	1.59	1.44	0.65	0.35	0.02	1.28	6.85	1.59	0.89	0.34	0.00
<b>4. Governance and Financial Control</b>														
a. Financial Administration and Control	active member & annuitant	2.08	3.34	9.93	3.85	2.91	2.06	0.56	5.32	21.55	6.40	4.27	2.35	0.50
b. Board, Strategy, Policy	active member & annuitant	0.28	2.46	6.94	3.27	2.19	0.65	0.13	4.23	18.52	6.08	3.02	1.39	0.13
c. Government and Public Relations	active member & annuitant	0.35	1.17	4.00	1.59	0.60	0.20	0.10	1.53	7.37	2.21	1.00	0.44	0.10
<b>5. Major Projects</b>														
a. Amortization of non-IT Major Projects	active member & annuitant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	5.54	0.00	0.00	0.00	0.00
b. Non-IT Major Projects (if you don't capitalize)	active member & annuitant	0.00	1.25	6.83	0.97	0.00	0.00	0.00	1.53	15.05	1.52	0.00	0.00	0.00
c. Amortization of IT Major Projects	active member & annuitant	0.00	2.24	11.25	4.32	0.00	0.00	0.00	3.33	26.34	5.22	0.05	0.00	0.00
d. IT Major Projects (if you don't capitalize)	active member & annuitant	0.00	3.68	11.49	6.92	1.43	0.00	0.00	4.80	59.99	5.99	1.50	0.00	0.00
<b>6. Information Technology</b>														
a. IT Strategy, Database Management and Applications (excl. major projects)	active member & annuitant	4.95	18.58	46.61	26.20	12.51	7.28	3.59	19.36	57.38	26.42	17.08	11.26	0.17
b. IT Desktop, Networks, Telecom	pension admin fte	4,072	13,654	30,946	17,580	11,250	8,691	4,072	12,524	33,893	15,956	10,977	8,512	0
<b>7. Support Services and Other</b>														
a. Building and Utilities	pension admin fte	1,079	9,274	18,372	11,703	8,582	6,731	1,079	10,182	21,177	13,564	10,115	6,731	1,079
b. Human Resources	pension admin fte	1,031	3,330	7,223	4,110	3,068	2,199	795	4,265	14,287	5,651	3,311	2,266	795
c. Actuarial	active member & annuitant	0.43	1.94	6.87	2.11	1.37	0.76	0.43	2.10	6.87	2.66	1.56	0.80	0.00
d. Legal and Rule Interpretation	active member & annuitant	0.96	3.59	9.87	5.54	2.47	1.67	0.75	4.96	35.47	5.73	3.37	2.26	0.75
e. Internal and External Audit	active member & annuitant	0.55	1.80	4.35	2.49	1.50	1.00	0.26	2.91	27.64	3.14	2.04	1.49	0.26
f. Pay-as-you-go Benefits for Retired Staff	pension admin fte	0.00	830.18	10,592.59	201.02	0.00	0.00	0.00	1,062.53	14,100.86	201.02	0.00	0.00	0.00
g. Other Support Services	active member & annuitant	0.52	3.31	15.91	4.65	2.10	0.52	0.00	3.37	15.91	4.55	2.35	0.81	0.00
<b>Total Pension Administration<sup>2</sup></b>	active member & annuitant	23.30	97.69	235.94	110.01	87.69	69.30	17.32	118.82	399.92	145.91	91.25	74.88	17.32

1. In this section we compare your costs to the peer median (i.e., the middle value or 50th percentile) because outlier data often skews averages in the direction of outlier values. Maximum and minimum values usually reflect unusual circumstances and are often associated with very low volumes.

2. The fully attributed costs of activities 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits are excluded from total pension administration costs to ensure comparability.

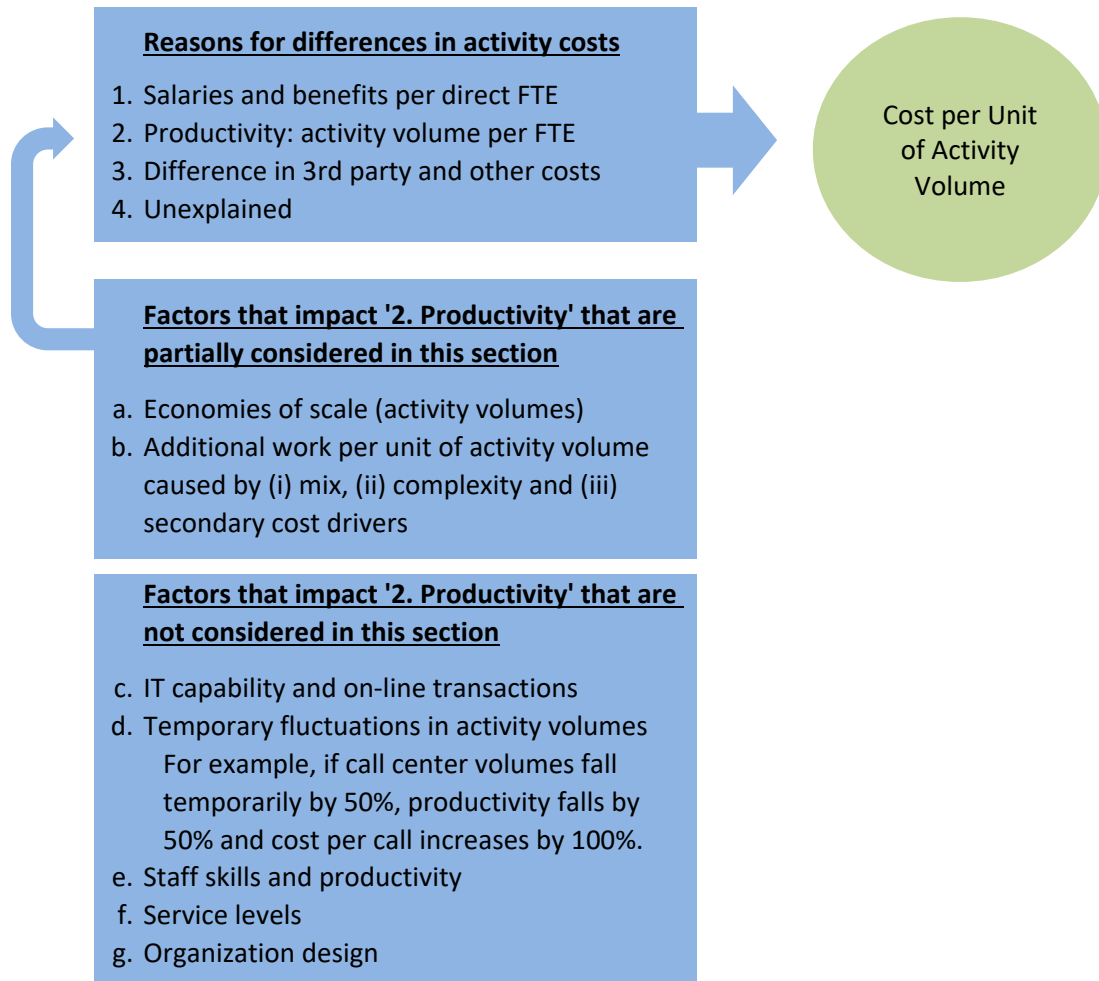


## Activity cost history

Comparisons of Direct Activity Costs <sup>1</sup>													
Activity	Cost per:	You				Peer Average				All Participant Average			
		2019	2018	2017	2016	2019	2018	2017	2016	2019	2018	2017	2016
<b>1. Member Transactions</b>													
a. Pension Payments	annuitant	1.73		2.09		8.37	8.79	8.40	8.62	11.04	10.95	10.12	11.87
b. Pension Inceptions	new payee inception	76.62		67.07		148.94	153.75	152.65	187.68	218.48	202.31	210.27	211.94
c. Refunds, Withdrawals, and Transfers-out	withdrawal & transfer-out	46.11		42.19		115.21	111.81	93.03	100.59	328.17	320.14	293.58	281.51
d. Purchases and Transfers-in	purchase & transfer-in	72.58		124.51		501.71	409.07	369.39	298.19	423.88	422.05	367.56	370.83
e. Disability	disability application	360.48		328.44		2,256.12	2,123.38	1,918.16	1,913.40	2,219.56	2,248.09	2,461.51	2,263.06
<b>2. Member Communication</b>													
a. Call Center	call & email	7.95		6.87		13.62	13.29	13.00	12.04	11.44	11.07	10.77	9.80
b. Mail Room, Imaging	incoming mail	1.46		1.77		6.54	7.02	5.94	7.39	9.74	11.78	10.04	13.11
c. 1-on-1 Counseling	member counseled 1-on-1	77.88		147.21		118.96	119.51	106.38	134.15	90.83	92.97	89.95	113.31
d. Member Presentations	member presentation	804.62		1,126.27		1,395.77	1,387.22	1,448.91	2,037.80	1,225.86	1,227.00	1,461.39	1,453.94
e. Written Pension Estimates	written estimate	52.73		33.91		67.25	74.43	79.51	79.17	101.15	97.06	95.67	126.00
f. Mass Communication	active member & annuitant	0.34		0.25		3.62	3.56	3.32	3.28	4.38	4.23	4.00	4.22
<b>3. Collections and Data Maintenance</b>													
a. Data and Money from Employers	active member	1.77		1.83		7.51	7.59	6.97	6.77	7.71	8.22	8.83	8.36
b. Service to Employers	active member	0.76		0.58		3.88	3.82	3.71	3.26	3.83	4.16	3.66	3.65
c. Data Not from Employers	active, inactive & annuitant	0.20		0.24		0.93	0.86	0.84	0.79	1.51	1.49	1.34	1.17
<b>4. Governance and Financial Control</b>													
a. Financial Administration and Control	active member & annuitant	2.08		1.23		3.15	3.08	3.05	2.86	5.30	4.96	5.05	5.15
b. Board, Strategy, Policy	active member & annuitant	0.28		0.26		2.44	2.36	2.24	1.94	4.23	4.31	4.41	4.08
c. Government and Public Relations	active member & annuitant	0.35		0.30		1.22	1.24	1.30	1.32	1.63	1.71	1.63	1.76
<b>5. Major Projects</b>													
a. Amortization of non-IT Major Projects	active member & annuitant	0.00		0.00		0.00	0.01	0.01	0.00	0.22	0.17	0.09	0.05
b. Non-IT Major Projects (if you don't capitalize)	active member & annuitant	0.00		0.00		1.54	1.28	1.24	1.40	1.63	1.81	1.25	1.42
c. Amortization of IT Major Projects	active member & annuitant	0.00		0.00		2.28	1.93	2.54	2.31	3.83	10.27	10.49	11.71
d. IT Major Projects (if you don't capitalize)	active member & annuitant	0.00		0.00		4.41	4.70	4.96	4.80	5.19	5.40	8.92	12.65
<b>6. Information Technology</b>													
a. IT Strategy, Database, Applications (excl. major projects)	active member & annuitant	4.95		4.98		18.63	16.88	15.72	15.78	20.74	19.96	19.20	19.14
b. IT Desktop, Networks, Telecom	pension admin fte	4,072		4,264		15,536	13,938	13,476	12,591	14,047	13,466	12,994	11,691
<b>7. Support Services and Other</b>													
a. Building and Utilities	pension admin fte	1,079		4,863		9,398	9,525	9,827	9,209	10,390	10,105	10,080	9,390
b. Human Resources	pension admin fte	1,031		1,062		3,444	3,203	3,215	2,883	4,436	4,162	3,562	3,617
c. Actuarial	active member & annuitant	0.43		0.86		1.85	1.79	1.55	1.38	1.95	1.94	2.01	2.09
d. Legal and Rule Interpretation	active member & annuitant	0.96		0.94		3.53	3.36	3.33	3.26	5.26	4.94	4.75	4.83
e. Internal and External Audit	active member & annuitant	0.55		0.29		1.95	1.86	1.78	1.79	3.20	3.26	2.56	2.69
f. Pay-as-you-go Benefits for Retired Staff	pension admin fte	0.00		0.00		1,021.76	953.01	891.14	828.17	866.42	875.77	618.06	603.93
g. Other Support Services	active member & annuitant	0.52		0.43		2.81	2.91	3.54	3.25	3.42	3.42	3.08	4.50
<b>Total Pension Administration<sup>2</sup></b>	active member & annuitant	23.30		23.21		101.04	98.16	95.85	94.48	127.15	131.76	130.86	136.49

1. Trend analysis is based on systems that have participated for 4-consecutive years (13 peers and 33 World systems). This ensures that trends are not caused by changes in the composition of the participants.
2. The fully attributed costs of activities 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits are excluded from total pension administration costs to ensure comparability.

## CEM uses the following model to help explain differences in activity costs



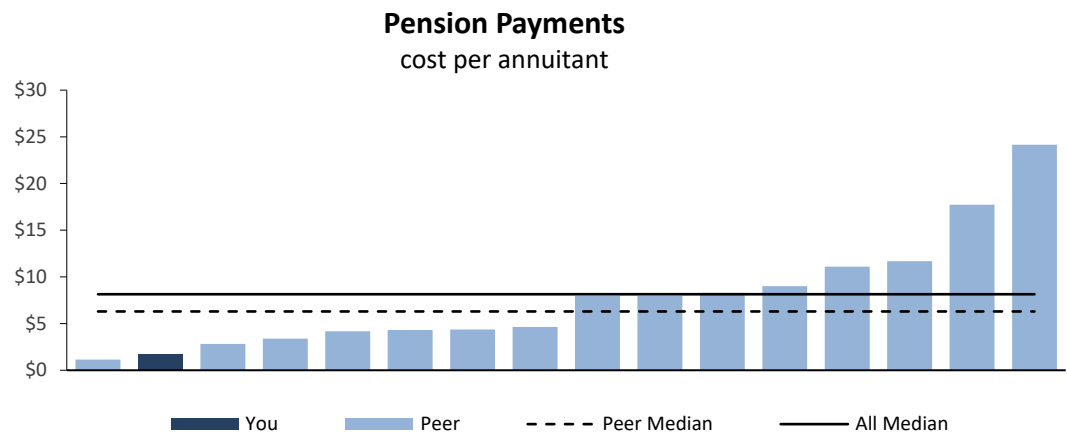
In this section, CEM quantifies the amount by which differences in the four reasons identified in the top box above impact your costs by calculating how your costs would change if you had the peer median salaries/ productivity/ third party and other costs. This methodology results in an unexplained amount, which is sometimes quite large, because:

- Peer salaries, productivity, and third party and other costs are not uniformly distributed. Often there are extreme outliers, especially for systems with relatively low volumes. Thus if you have outlier data for an activity, or several of your peers have extreme data, the unexplained amount may be large.
- Interaction between the three reasons is not quantified. For example, peers with higher productivity may also pay higher salaries. This offsetting impact between higher salaries and higher productivity is not quantified.

All comparisons are to the peer median (i.e., the middle value or 50th percentile). The median is used instead of the average because outlier data often skews averages in the direction of outlier values. Skewing is particularly acute with activity costs because participants with a low volume in an activity sometimes have very high costs per unit.

# 1A Pension Payments

Your pension payments cost per annuitant was \$1.73. This was \$4.57 below the peer median of \$6.30. The biggest reason why was that you had lower third party costs per annuitant.



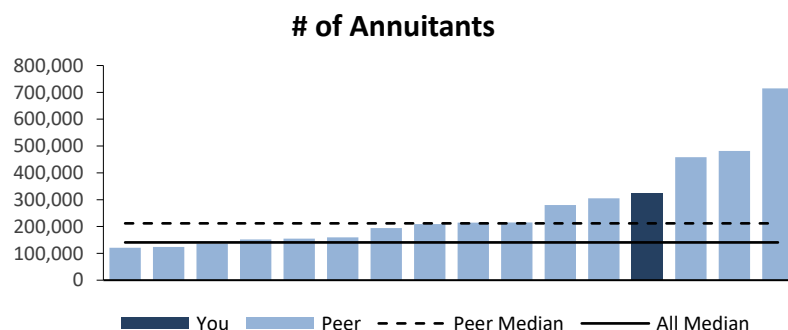
Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$54,067	\$89,985	-\$0.84
More annuitants per direct FTE (productivity)	42,964	20,466	-\$1.38
Lower third party costs per annuitant	\$0.47	\$1.87	-\$1.40
Unexplained <sup>1</sup>			-\$0.95
Cost per annuitant	\$1.73	\$6.30	-\$4.57

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 1A Pension Payments - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale advantage. Your 322,227 annuitants was 52% higher than the peer median of 211,802.

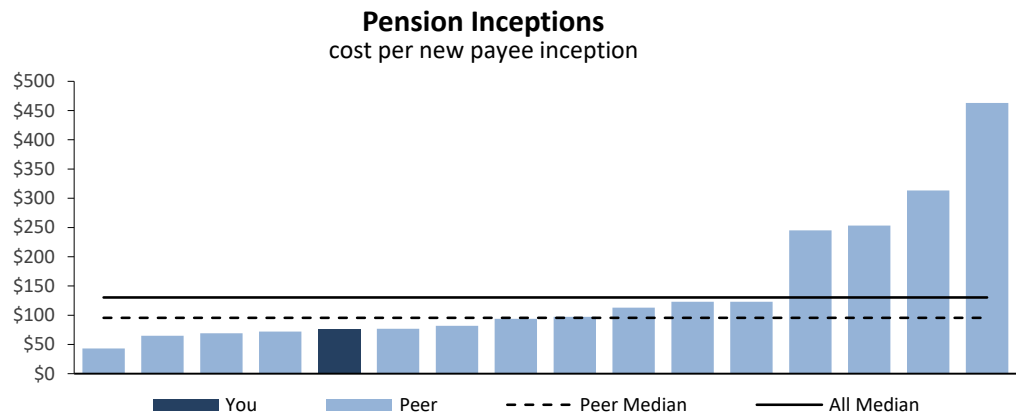


### 2. Additional pension payments work per annuitant

Causes of additional work	You	Peer Avg	Cost Impact
Percentage of pensioners paid by check (as opposed to Electronic Funds Transfer)	2%	3%	decreasing
Number of times per year you sent payment advices with your EFT payments detailing the gross payment and deductions	6.0	6.5	decreasing

# 1B Pension Inceptions

Your pension inceptions cost per new payee inception was \$76.62. This was \$18.87 below the peer median of \$95.49. The biggest reason why was that you had lower salaries and benefits per direct FTE.



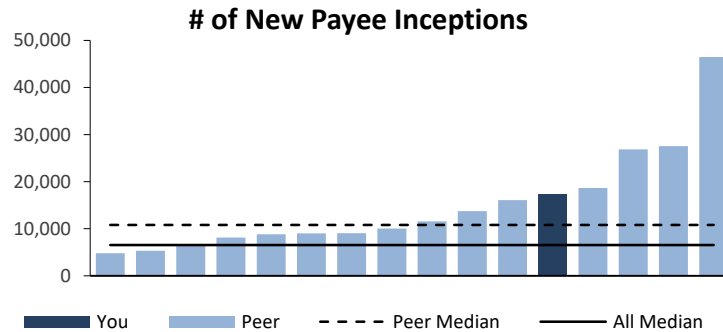
Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per New Payee Inception
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$51,652	\$90,837	-\$57.28
Fewer new payee inceptions per direct FTE (productivity)	684	797	\$10.68
Lower third party costs per new payee inception	\$1.12	\$2.78	-\$1.66
Unexplained <sup>1</sup>			\$29.39
Cost per new payee inception	\$76.62	\$95.49	-\$18.87

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 1B Pension Inceptions - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale advantage. Your 17,309 new payee inceptions was 60% higher than the peer median of 10,807.



### 2. Mix of activity volume

Inceptions to survivors tend to be less work than inceptions to active members because there are usually no payment option choices for survivors.

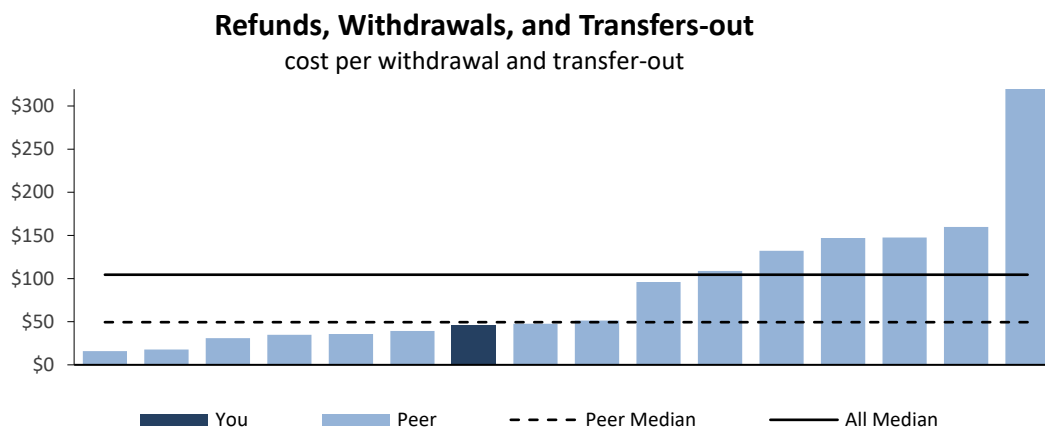
Activity Volume: % by Type	You	Peer Avg	Cost Impact
Annuity inceptions: service retirement (actives)	84%	69%	
Annuity inceptions: service retirement (inactives)	11%	18%	
Annuity inceptions: disability retirement (actives)	3%	3%	
Annuity inceptions: survivor, partner, ex-partner, dependent	3%	10%	increasing
Total new payee inceptions	100%	100%	

### 3. Additional work per new payee inception

Causes of additional work	You	Peer Avg	Cost Impact
Proportion of inceptions to retiring active members based on estimates	15%	70%	decreasing
Formal appeals (non-disability) of inceptions as a % of new payee inceptions	0.00%	0.19%	decreasing
Changes in gross amount of annuity pensions paid as a result of changes in an individual annuitant's personal circumstances, as a % of new payee inceptions. (This work is included in the cost of inceptions, but not the volume).	6%	11%	decreasing
Joint account reciprocity with other systems	No	44%Yes	decreasing
Total complexity score (out of 100)	42	42	neutral

## 1C Refunds, Withdrawals, and Transfers-out

Your refunds, withdrawals, and transfers-out cost per withdrawal and transfer-out was \$46.11. This was \$3.33 below the peer median of \$49.44. The biggest reason why was that you had lower salaries and benefits per direct FTE.



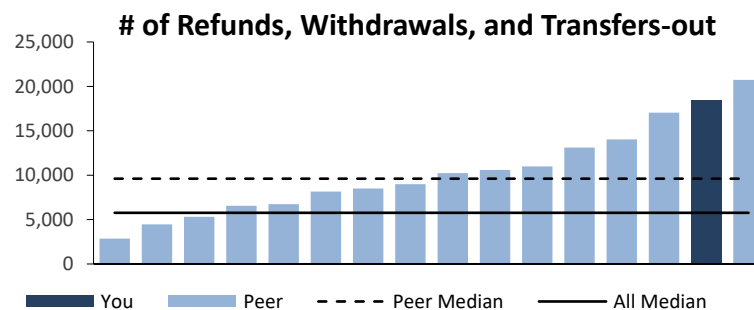
Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Withdrawal and Transfer-out
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$52,755	\$87,036	-\$28.85
Fewer refunds, withdrawals, and transfers-out per direct FTE	1,188	1,830	\$15.56
Lower third party costs per withdrawal and transfer-out	\$1.72	\$1.77	-\$0.05
Unexplained <sup>1</sup>			\$10.01
Cost per withdrawal and transfer-out	\$46.11	\$49.44	-\$3.33

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 1C Refunds, Withdrawals, and Transfers-out - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale advantage. Your 18,420 refunds, withdrawals, and transfers-out was 92% higher than the peer median of 9,608.



### 2. Mix of activity volume

Transfers-out tend to be more work than a withdrawal because they require co-ordination with another pension system and its rules.

Activity Volume: % by Type	You	Peer Avg	Cost Impact
Full refunds/ withdrawals/ commuted value/ lump sums	89%	97%	
Transfers-out	11%	3%	increasing
Total refunds, withdrawals, and transfers-out	100%	100%	

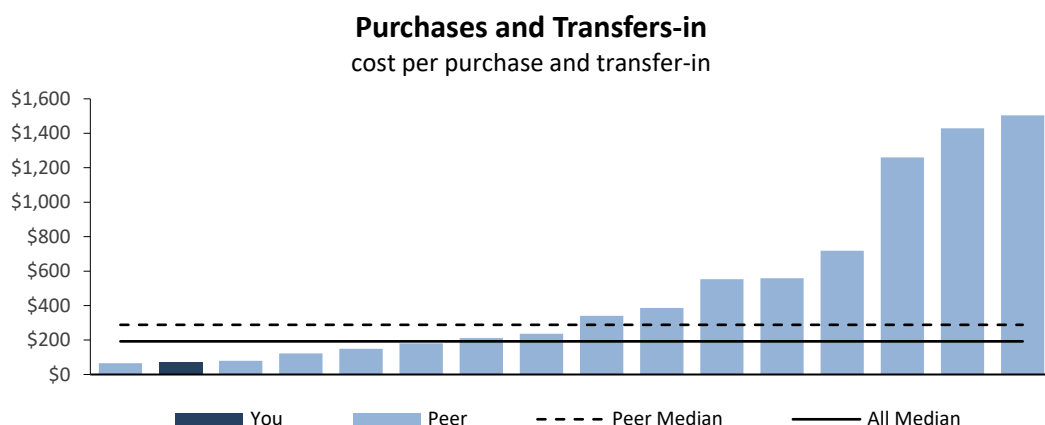
### 3. Additional work per withdrawal and transfer-out

Causes of additional work	You	Peer Avg	Cost Impact
Written estimates for refunds, withdrawals, and transfers-out as a % of refunds, withdrawals, and transfers-out	1%	69%	decreasing
Do you pay a one-time death payment when a member, retiree or the retiree's beneficiary dies (separate from the survivor pension)?	Yes	56%Yes	increasing



## 1D Purchases and Transfers-in

Your purchases and transfers-in cost per purchase and transfer-in was \$72.58. This was \$215.72 below the peer median of \$288.30.



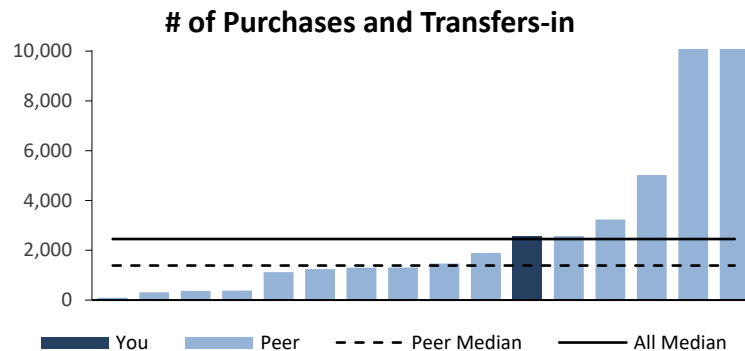
Reasons why your cost was below median	Comparison		Impact <sup>1</sup>
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$53,677	\$92,218	-\$46.60
More purchases and transfers-in per direct FTE (productivity)	827	324	-\$100.62
Lower third party costs per purchase and transfer-in	\$7.68	\$8.36	-\$0.68
Unexplained <sup>1</sup>			-\$67.83
Cost per purchase and transfer-in	\$72.58	\$288.30	-\$215.72

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

# 1D Purchases and Transfers-in - Factors that impact productivity

## 1. Economies of scale

You had an economy of scale advantage. Your 2,564 purchases and transfers-in was 85% higher than the peer median of 1,386.



## 2. Mix of activity volume

Individual transfers-in tend to be more work than a service credit purchase because they require co-ordination with another pension system and its rules.

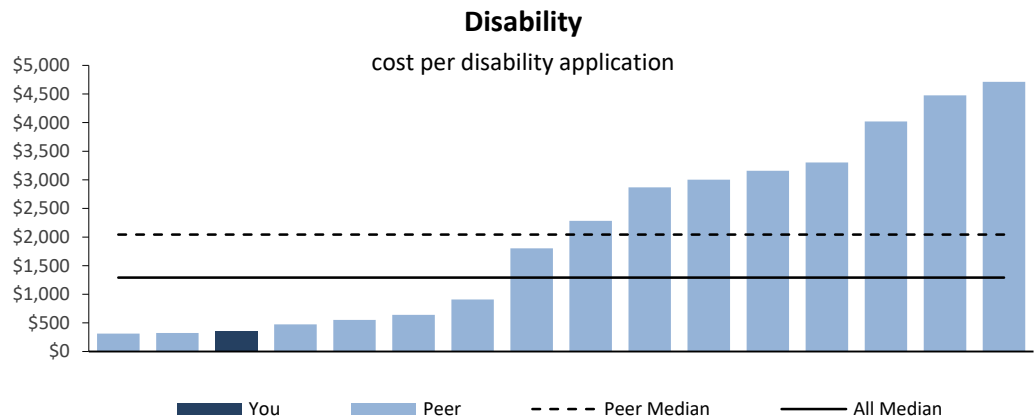
Activity Volume: % by Type	You	Peer Avg	Cost Impact
Service credit purchases	100%	90%	
Upgrades to improve pensionable salary	0%	2%	
Upgrades to a new retirement formula	0%	1%	
Individual transfers-in from external defined benefit systems	0%	7%	decreasing
Total purchases and transfers-in	100%	100%	

## 3. Additional work per purchase and transfer-in

Causes of additional work	You	Peer Avg	Cost Impact
Written estimates for purchases and transfers-in as a % of purchases and transfers-in	207%	299%	decreasing
Installment payments permitted	No	75%Yes	decreasing

# 1E Disability

Your disability cost per disability application was \$360.48. This was \$1,682.96 below the peer median of \$2,043.44.



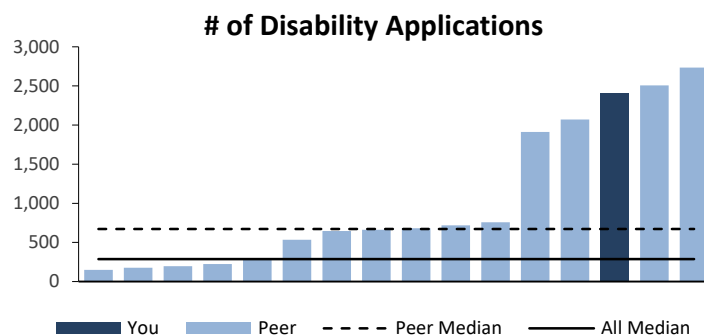
Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Disability Application
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$54,282	\$90,599	-\$235.67
More disability applications per direct FTE (productivity)	154	114	-\$125.90
Lower third party costs per disability application	\$8.24	\$530.86	-\$522.63
Unexplained <sup>1</sup>			-\$798.77
Cost per disability application	\$360.48	\$2,043.44	-\$1,682.96

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 1E Disability - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale advantage. Your 2,404 disability applications was 258% higher than the peer median of 672.



### 2. Mix of activity volume

Processing long-term disability applications tends to be more work than short-term disability applications.

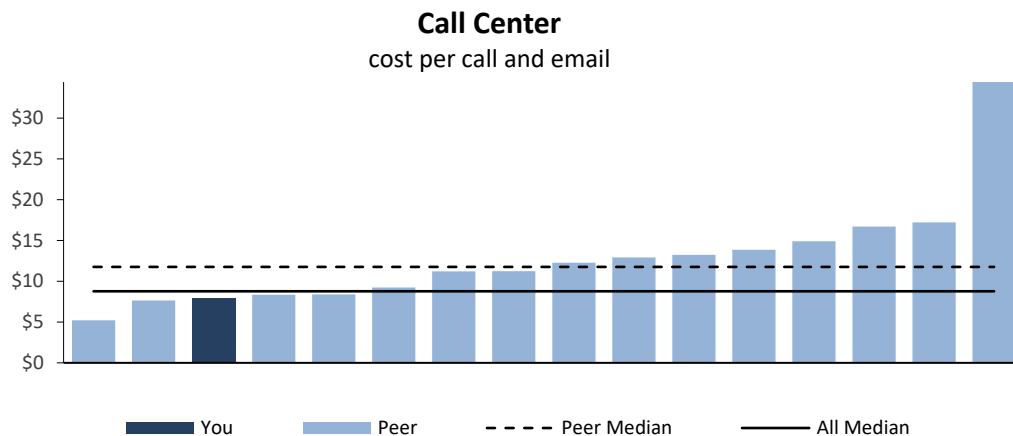
Activity Volume: % by Type	You	Peer Avg	Cost Impact
Applications for short-term disability	0%	10%	
Applications for disability pensions/ long-term disability/ disability lump sums	100%	90%	increasing
Total disability applications	100%	100%	

### 3. Additional work per disability application

Causes of additional work	You	Peer Avg	Cost Impact
Independent decision process (versus following the ruling of an employer or social security, etc)	Yes	100%Yes	neutral
Recertifications as a % of disability applications	29%	144%	decreasing
Recertifications as a % of disability recipients	7%	15%	decreasing
Medical exams paid for by you as a % of disability applications	0%	27%	decreasing
New member health reviews as a % of disability applications	0%	7%	decreasing
Disability decision appeals as a % of disability applications	0%	6%	decreasing
Occupational disability as a % of disability applications	0%	12%	decreasing
Disability complexity score (out of 100)	71	70	increasing

## 2A Call Center

Your call center cost per call and email was \$7.95. This was \$3.81 below the peer median of \$11.76. The biggest reason why was that you had lower salaries and benefits per direct FTE.



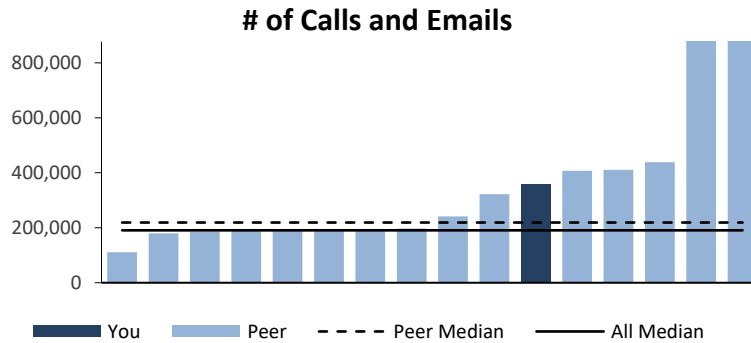
Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Call and Email
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$51,901	\$79,606	-\$4.22
More calls and emails per direct FTE (productivity)	6,572	6,571	\$0.00
Lower third party costs per call and email	\$0.06	\$0.32	-\$0.26
Unexplained <sup>1</sup>			\$0.67
Cost per call and email	\$7.95	\$11.76	-\$3.81

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 2A Call Center - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale advantage. Your 356,833 calls and emails was 63% higher than the peer median of 219,070.

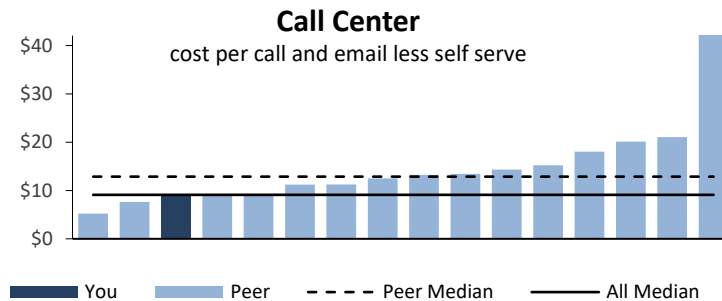


### 2. Mix of activity volume

Calls satisfied by self-serve options are close to zero cost, thus a lower proportion of self-serve calls result in an increased cost per call.

Activity Volume: % by Type	You	Peer Avg	Cost Impact
Incoming calls that reach service representatives	77%	81%	
Outgoing calls from service representatives	7%	3%	
Calls satisfied by self-serve options	9%	8%	decreasing
Email queries from members	7%	8%	
Total calls and emails	100%	100%	

If self-serve calls were excluded from volumes, your cost per active member and annuitant would have increased to \$8.75. This would have been below the peer median cost of \$12.87.



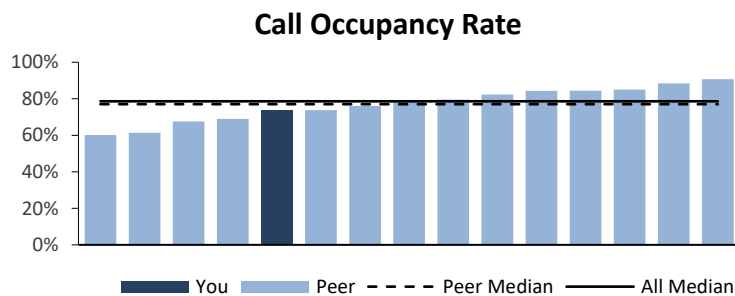
## 2A Call Center - Factors that impact productivity

### continued

#### 3. Additional work per call and email

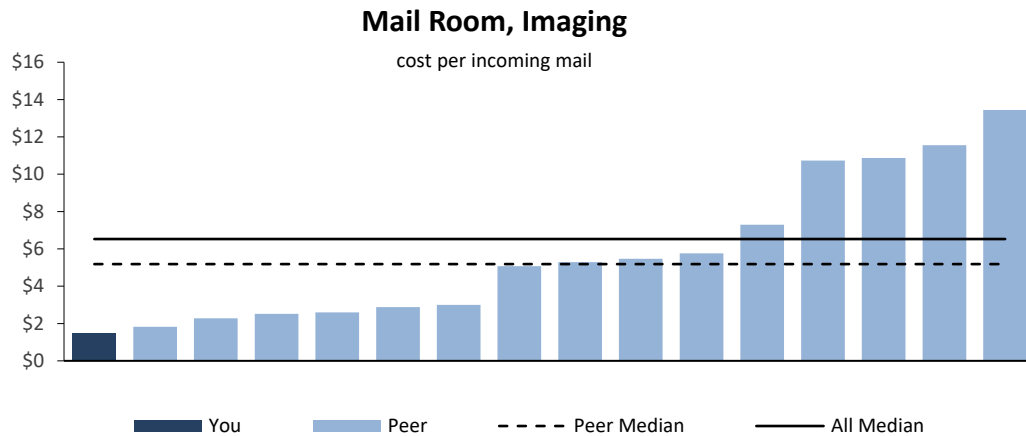
Causes of additional work	You	Peer Avg	Cost Impact
Average talk time of a member call (in seconds)	331	325	increasing
Average after call work time (in seconds)	87	92	decreasing
Do you regularly review staff responses to member calls?	Yes	94%Yes	increasing

Occupancy rate is frequently used to measure productivity in a call center. A high occupancy rate implies an efficient use of staff, and low occupancy, the opposite. However, if occupancy is too high, your staff may be overworked, leading to undesired call-handling behavior and high staff turnover rate. Call centers handling larger volumes of calls will also be more efficient than smaller ones because of economies of scale.



## 2B Mail Room, Imaging

Your mail room, imaging cost per incoming mail was \$1.46. This was \$3.72 below the peer median of \$5.18. The biggest reason why was that you completed more incoming mail per direct FTE (productivity).



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Incoming Mail
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$51,386	\$82,121	-\$0.75
More incoming mail per direct FTE (productivity)	40,772	22,335	-\$1.04
Lower third party costs per incoming mail	\$0.20	\$1.21	-\$1.02
Unexplained <sup>1</sup>			-\$0.91
Cost per incoming mail	\$1.46	\$5.18	-\$3.72

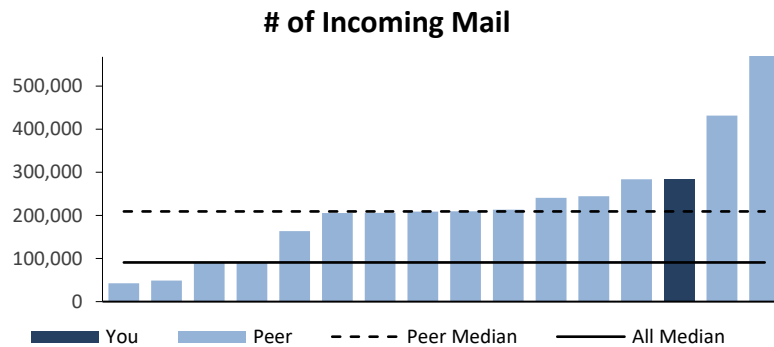
1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).



## 2B Mail Room, Imaging - Factors that impact productivity

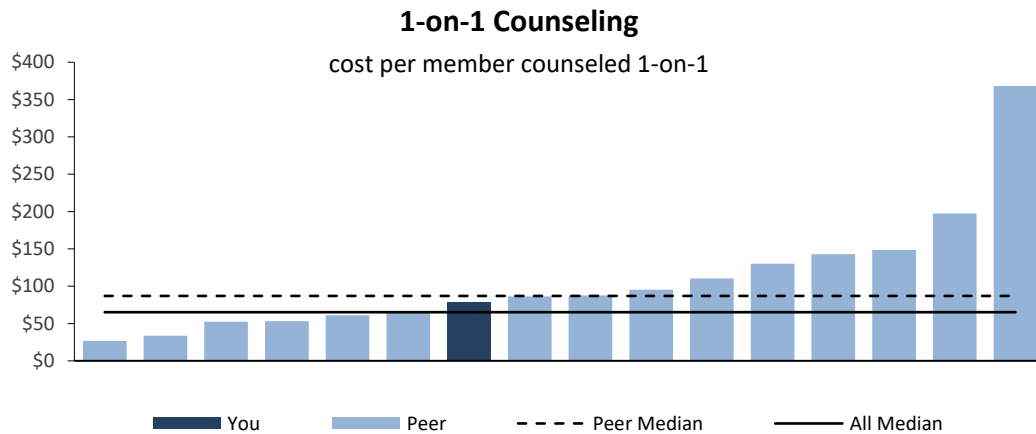
### 1. Economies of scale

You had an economy of scale advantage. Your 285,402 incoming mail was 36% higher than the peer median of 209,242.



## 2C 1-on-1 Counseling

Your 1-on-1 counseling cost per member counseled 1-on-1 was \$77.88. This was \$9.05 below the peer median of \$86.93.



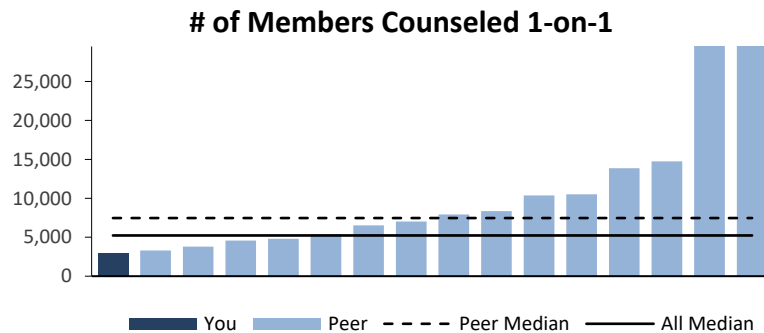
Reasons why your cost was below median	Comparison		Impact <sup>1</sup>
	You	Peer Median	\$s per Member Counseled 1-on-1
Lower salaries and benefits per direct FTE	\$52,300	\$87,560	-\$47.99
Fewer members counseled 1-on-1 per direct FTE (productivity)	735	865	\$10.68
Higher third party costs per member counseled 1-on-1	\$6.70	\$3.15	\$3.55
Unexplained <sup>1</sup>			\$24.70
Cost per member counseled 1-on-1	\$77.88	\$86.93	-\$9.05

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 2C 1-on-1 Counseling - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale disadvantage. Your 2,939 members counseled 1-on-1 was 61% lower than the peer median of 7,464.



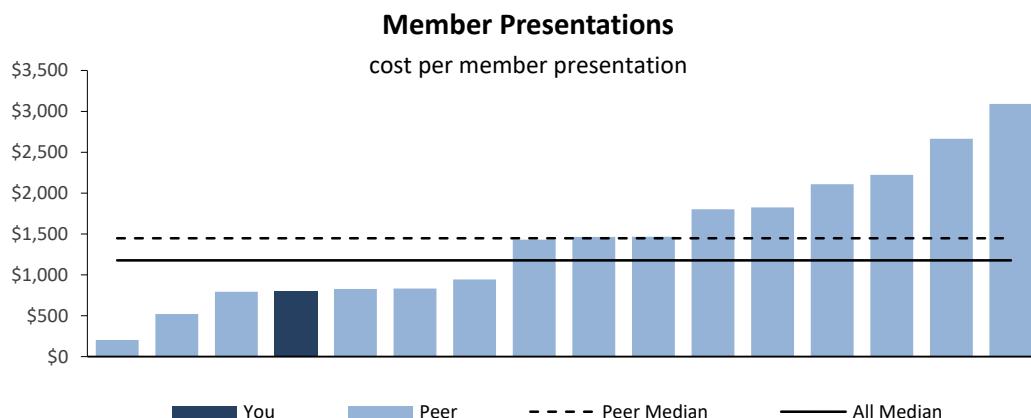
### 2. Mix of activity volume

Counseling in field locations is more costly than counseling in-house.

Activity Volume: % by Type	You	Peer Avg	Cost Impact
In-house	95%	62%	increasing
In the field	0%	33%	decreasing
Via teleconference	5%	5%	neutral
Total members counseled 1-on-1	100%	100%	

## 2D Member Presentations

Your member presentations cost per member presentation was \$804.62. This was \$642.95 below the peer median of \$1,447.57.



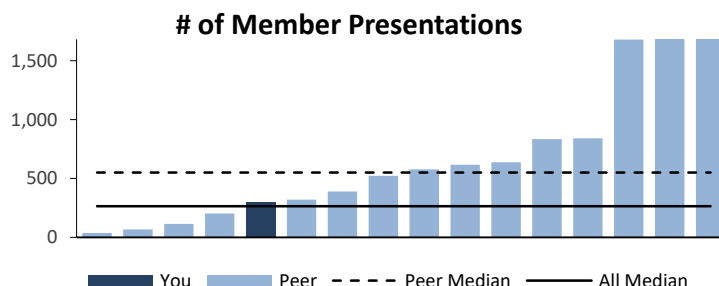
Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Member Presentation
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$53,200	\$97,081	-\$579.29
Fewer member presentations per direct FTE (productivity)	76	90	\$112.81
Lower third party costs per member presentation	\$102.31	\$203.05	-\$100.74
Unexplained <sup>1</sup>			-\$75.73
Cost per member presentation	\$804.62	\$1,447.57	-\$642.95

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 2D Member Presentations - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale disadvantage. Your 303 member presentations was 45% lower than the peer median of 551.



### 2. Mix of activity volume

Presentations and group counseling in field locations are more costly than in-house.

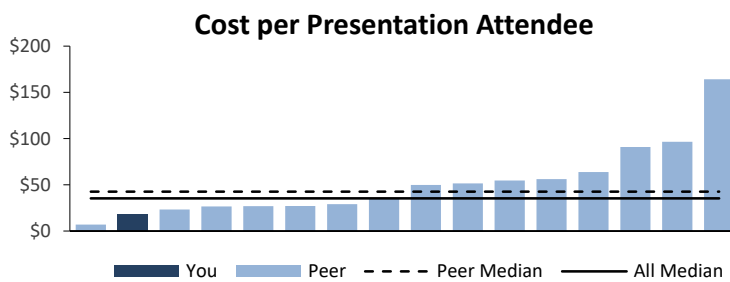
Member Presentations by Location	You	Peer Avg	Cost Impact
In-house and webcast	46%	20%	
In the field	53%	66%	decreasing
Benefit fairs	1%	14%	
Total presentations and group counseling	100%	100%	

### 3. Additional work per member presentation

If you have more attendees per presentation, then the cost per attendee will be lower and the volume of member presentations per FTE will be higher. You had an average of 45 attendees per presentation, versus a peer average of 33.

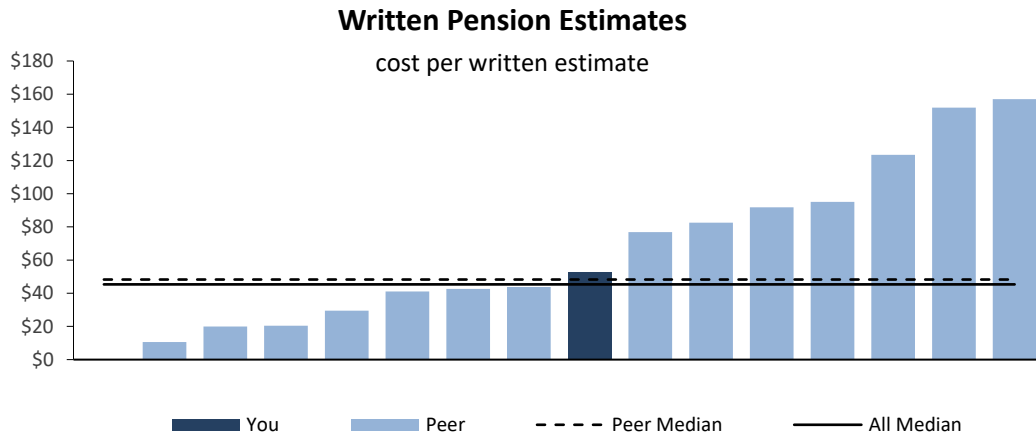
Causes of additional work	You	Peer Avg	Cost Impact
Average attendees per presentation	45	33	decreasing

An alternative way of analyzing this activity's cost is on a 'per attendee' basis. Your cost per presentation attendee was \$18. This was below the peer median cost of \$43.



## 2E Written Pension Estimates

Your written pension estimates cost per written estimate was \$52.73. This was \$4.47 above the peer median of \$48.26.



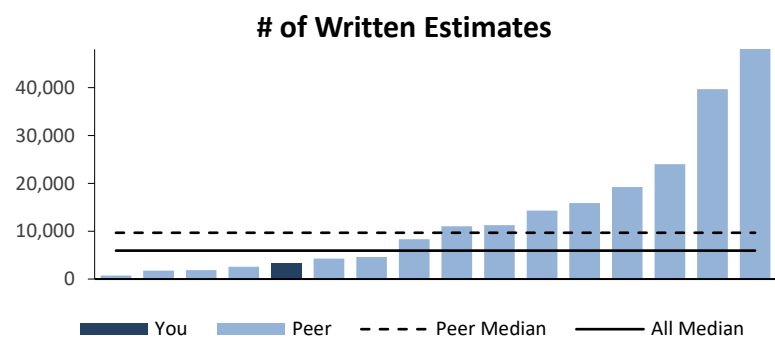
Reasons why your cost was above median	Comparison		Impact <sup>1</sup>
	You	Peer Median	\$s per Written Estimate
Lower salaries and benefits per direct FTE	\$54,667	\$84,663	-\$25.53
Fewer written estimates per direct FTE (productivity)	1,175	1,669	\$13.77
Higher third party costs per written estimate	\$6.21	\$1.63	\$4.58
Unexplained <sup>1</sup>			\$11.64
Cost per written estimate	\$52.73	\$48.26	\$4.47

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

## 2E Written Pension Estimates - Factors that impact productivity

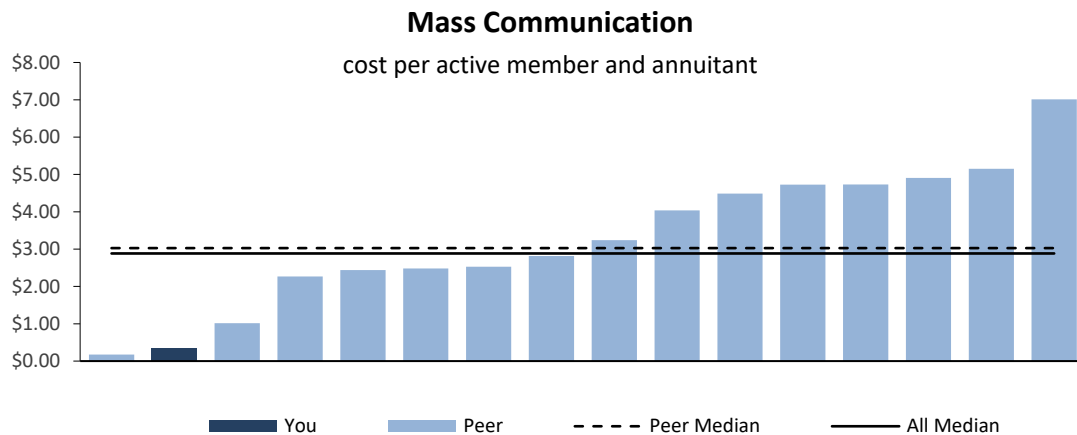
### 1. Economies of scale

You had an economy of scale disadvantage. Your 3,173 written estimates was 67% lower than the peer median of 9,675.



## 2F Mass Communication

Your mass communication cost per active member and annuitant was \$0.34. This was \$2.69 below the peer median of \$3.03.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$60,263	\$99,614	-\$0.19
Fewer direct FTE per 10,000 active members and annuitants (productivity) <sup>2</sup>	0.05	0.17	-\$0.75
Lower third party costs per active member and annuitant	\$0.05	\$1.49	-\$1.44
Unexplained <sup>1</sup>			-\$0.30
Cost per active member and annuitant	\$0.34	\$3.03	-\$2.69

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

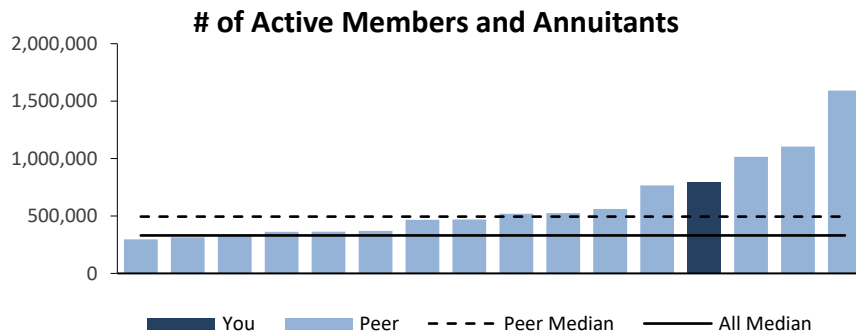
2. You had 3.8 mass communication FTE which was 51% less than the peer median of 7.7. The percentage difference was more favorable on a 'per active members and annuitants' basis (your 0.05 FTE per 10,000 active members and annuitants was 72% less than the peer median of 0.17) because you had an economy of scale advantage.



## 2F Mass Communication - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale advantage. Your 794,185 active members and annuitants was 61% higher than the peer median of 494,546.

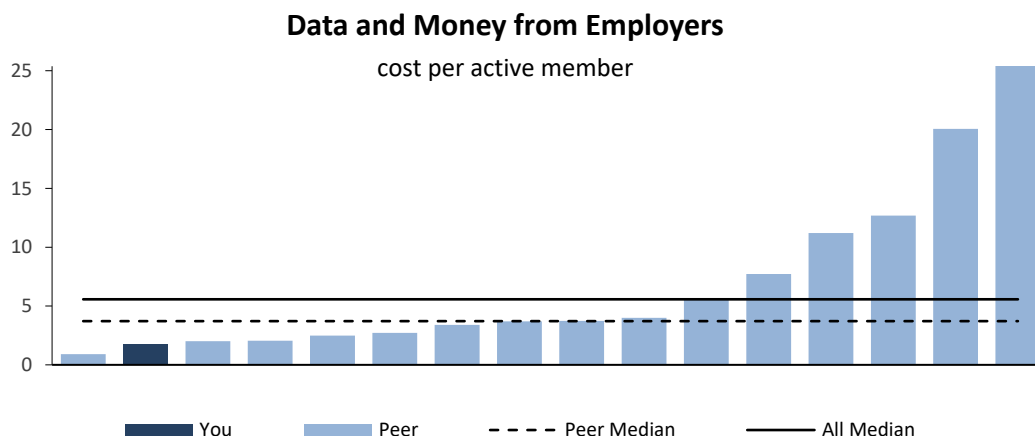


### 2. Additional mass communication work per active member and annuitant

Causes of additional work	You	Peer Avg	Cost Impact
Website Service Score (out of 100) - Generally, the higher the score, the more time communication staff spends on design and maintenance of the site.	87	78	increasing
Times per year you send newsletters to:			
a) All members (active, inactive and annuitants)?	0.0	1.3	decreasing
b) Active and inactive members?	1.0	1.0	neutral
c) Active members and annuitants?	0.0	n/a	
d) Active members only?	2.0	2.0	neutral
e) Inactive members only?	0.0	0.1	decreasing
f) Annuitants only?	1.0	2.6	decreasing
g) Age segments (i.e., under 35, 35-50, 50 plus)?	0.0	0.8	decreasing
h) Women only or men only?	0.0	n/a	
i) Employer or employment category (i.e., a different newsletter for teachers vs. bus drivers)?	0.0	3.1	decreasing
j) Other? (describe your other newsletter segments below)	0.0	2.6	decreasing
Times per year you send member statements to:			
a) Active members?	1.0	1.0	neutral
b) Inactive members?	0.0	0.9	decreasing
% of member statements mailed to active members' homes	0%	38%	decreasing
Do you send:			
a) Welcome kits to new members?	No	88%Yes	decreasing
b) Brochure summarizing benefits to active members every year?	Yes	38%Yes	increasing

### 3A Data and Money from Employers

Your data and money from employers cost per active member was \$1.77. This was \$1.95 below the peer median of \$3.72. The biggest reason why was that you had lower salaries and benefits per direct FTE.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$55,189	\$93,706	-\$1.21
Fewer direct FTE per 10,000 active members (productivity) <sup>2</sup>	0.19	0.23	-\$0.26
Lower third party costs per active member	\$0.04	\$0.13	-\$0.08
Unexplained <sup>1</sup>			-\$0.40
Cost per active member	\$1.77	\$3.72	-\$1.95

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

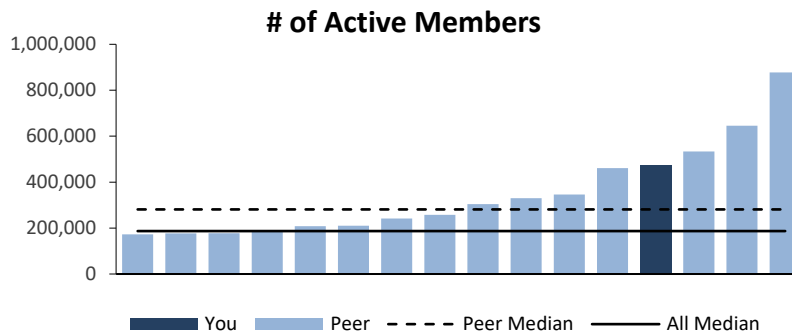
2. You had 14.8 data and money from employers FTE which was 41% more than the peer median of 10.5. The difference changes direction and was more favorable on a 'per active members' basis (your 0.19 data and money from employers FTE per 10,000 active members was 20% less than the peer median of 0.23) because you had an

CEM uses active members as the divisor of this activity's cost. For systems with few employers, active members is the better predictor of cost whereas for systems with numerous employers the number of employers is the better predictor. Therefore, on the following page we show the number of employers as a divisor to provide an alternate cost comparison.

### 3A Data and Money from Employers - Factors that impact productivity

#### 1. Economies of scale

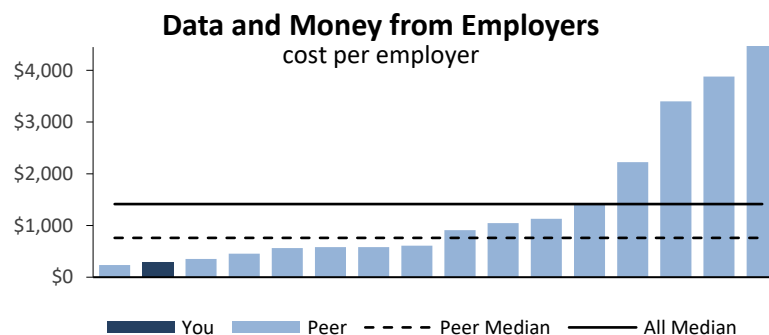
You had an economy of scale advantage. Your 471,958 active members was 68% higher than the peer median of 281,179.



#### 2. Additional data and money from employers work per active member

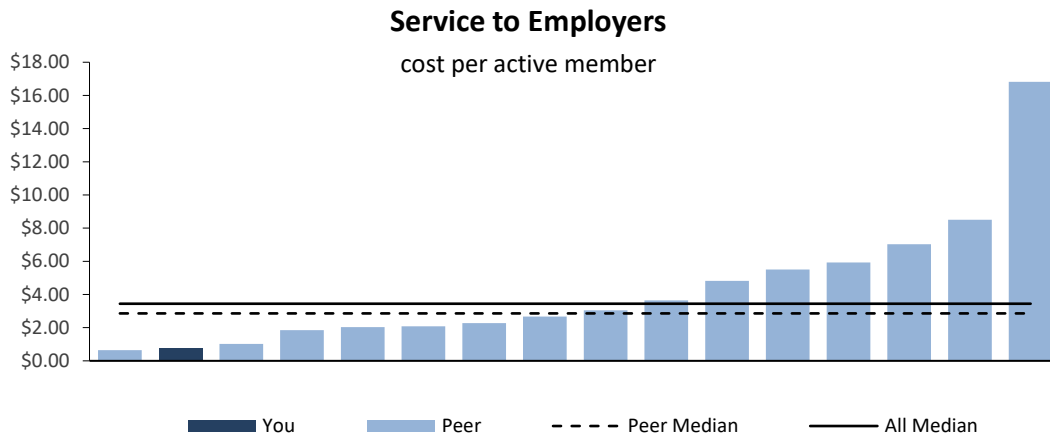
Causes of additional work	You	Peer Avg	Cost Impact
How many 'reconciliation points' (i.e., employers, state agencies, departments and/or service providers, etc.) do you deal with when:			
• Validating member data? (as a % of active members)	0.6%	0.6%	neutral
• Reconciling money issues? (as a % of active members)	0.6%	0.5%	increasing
Active members whose data is provided in paper format (as a % of active members)	3.8%	0.3%	increasing
Status changes as a % of active members			
• New active members	11.2%	9.8%	increasing
• Re-hired inactive members	0.4%	2.7%	decreasing
• Re-hired service retirees, if annuity stops	0.0%	0.0%	neutral
• Active members exiting to inactive or withdrawal	6.9%	7.2%	decreasing
• Active member service retirements	3.1%	2.9%	increasing

#### 3. Alternate cost drivers: Data and money from employers cost per employer



### 3B Service to Employers

Your service to employers cost per active member was \$0.76. This was \$2.10 below the peer median of \$2.86.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$56,367	\$99,874	-\$0.55
Fewer direct FTE per 10,000 active members (productivity) <sup>2</sup>	0.08	0.14	-\$0.37
Lower third party costs per active member	\$0.04	\$0.17	-\$0.12
Unexplained <sup>1</sup>			-\$1.05
Cost per active member	\$0.76	\$2.86	-\$2.10

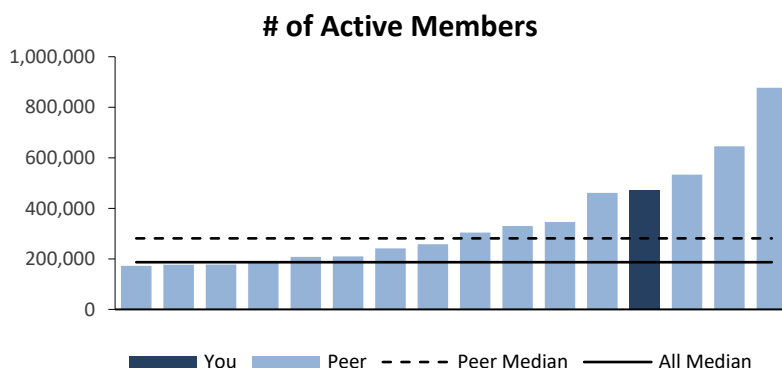
1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 6.0 service to employers FTE which was 9% less than the peer median of 6.6. The percentage difference was more favorable on a 'per active members' basis (your 0.08 FTE per 10,000 active members was 47% less than the peer median of 0.14) because you had an economy of scale advantage.

## 3B Service to Employers - Factors that impact productivity

### 1. Economies of scale

You had an economy of scale advantage. Your 471,958 active members was 68% higher than the peer median of 281,179.

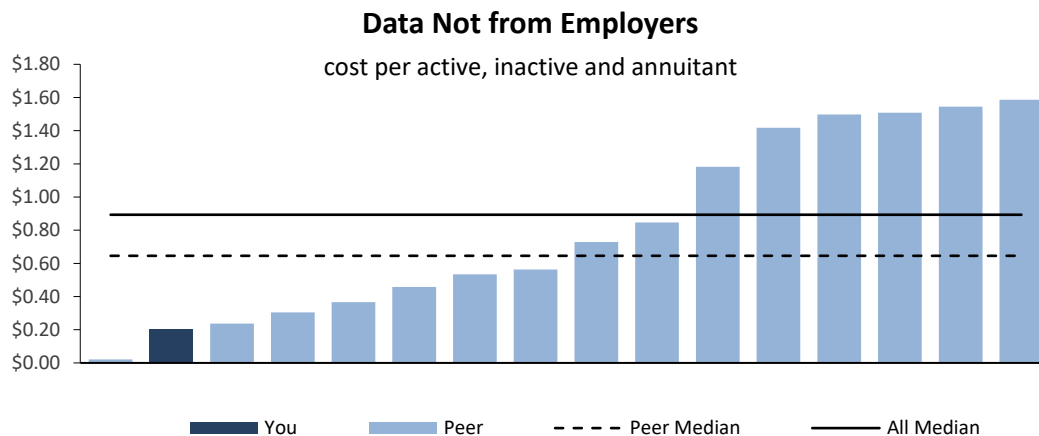


### 2. Additional service to employers work per active member

Causes of additional work	You	Peer Avg	Cost Impact
How many 'reconciliation points' (i.e., employers, state agencies, departments and/or service providers, etc.) do you deal with when:			
• Validating member data? (as a % of active members)	0.6%	0.6%	neutral
• Reconciling money issues? (as a % of active members)	0.6%	0.5%	increasing
Service transactions a % of active members:			
a) Incoming calls from employers?	0.7%	7.5%	decreasing
b) Email queries from employers?	4.6%	8.6%	decreasing
c) Conferences for employers?	0.0%	0.0%	neutral
d) Presentations given to employers such as orientation workshops or seminars on benefit changes, etc?	0.0%	0.0%	neutral
e) On-site reviews (or audits or inspections) of your employers?			
[For example, several systems perform reviews of their employers that have problems providing data and or contributions on a timely basis to ensure that they are correctly fulfilling their obligations to their members.]	0.0%	0.0%	neutral
f) Other site visits to employers [exclude 'd' and 'e' above]?	0.0%	0.0%	neutral

### 3C Data Not from Employers

Your data not from employers cost per active, inactive and annuitant was \$0.20. This was \$0.45 below the peer median of \$0.65.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active, Inactive and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$50,857	\$91,969	-\$0.15
Fewer direct FTE per 10,000 actives, inactives, annuitants (productivity) <sup>2</sup>	0.04	0.11	-\$0.33
Lower third party costs per active, inactive and annuitant	\$0.02	\$0.06	-\$0.04
Unexplained <sup>1</sup>			\$0.07
Cost per active, inactive and annuitant	\$0.20	\$0.65	-\$0.45

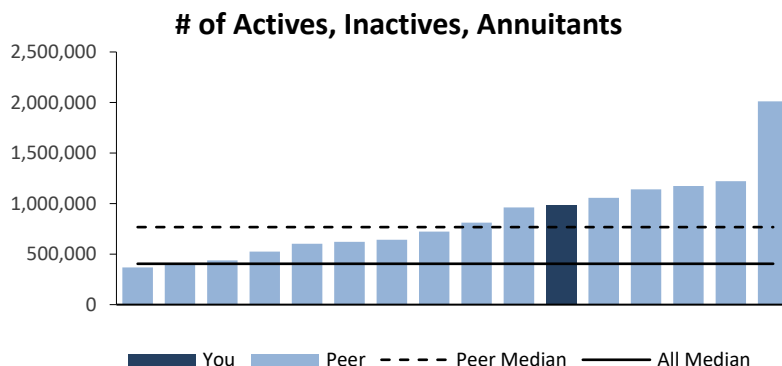
1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 3.5 data not from employers FTE which was 40% less than the peer median of 5.8. The percentage difference was more favorable on a 'per actives, inactives, annuitants' basis (your 0.04 FTE per 10,000 actives, inactives, annuitants was 59% less than the peer median of 0.11) because you had an economy of scale advantage.

### 3C Data Not from Employers - Factors that impact productivity

#### 1. Economies of scale

You had an economy of scale advantage. Your 989,316 actives, inactive, annuitants was 29% higher than the peer median of 766,905.

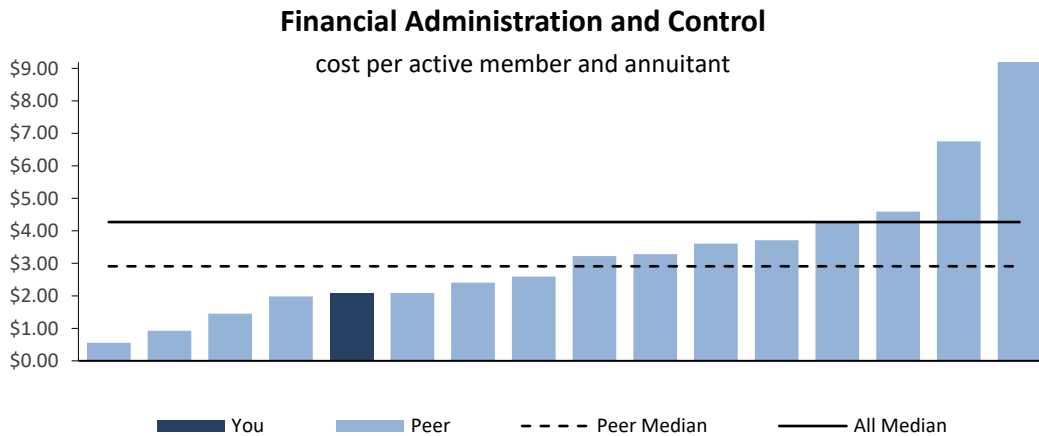


#### 2. Additional data not from employers work per active, inactive and annuitant

Causes of additional work	You	Peer Avg	Cost Impact
Do you actively keep track of the addresses of inactive members?	Yes	88%Yes	increasing
If yes, inactive members as a % of actives, inactive, annuitants	19.7%	29.2%	decreasing
Status changes as a % of actives, inactive, annuitants:			
• Deaths	0.3%	0.2%	increasing

## 4A Financial Administration and Control

Your financial administration and control cost per active member and annuitant was \$2.08. This was \$0.83 below the peer median of \$2.91.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member and Annuitant
	You	Peer Median	
Higher salaries and benefits per direct FTE	\$206,500	\$116,613	\$0.09
Fewer direct FTE per 10,000 active members and annuitants (productivity) <sup>2</sup>	0.01	0.24	-\$4.78
Higher third party costs per active member and annuitant	\$1.91	\$0.51	\$1.41
Unexplained <sup>1</sup>			\$2.46
Cost per active member and annuitant	\$2.08	\$2.91	-\$0.83

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 0.8 financial administration and control FTE which was 92% less than the peer median of 9.6. The percentage difference was more favorable on a 'per active members and annuitants' basis (your 0.01 FTE per 10,000 active members and annuitants was 96% less than the peer median of 0.24) because you had an economy of scale advantage.

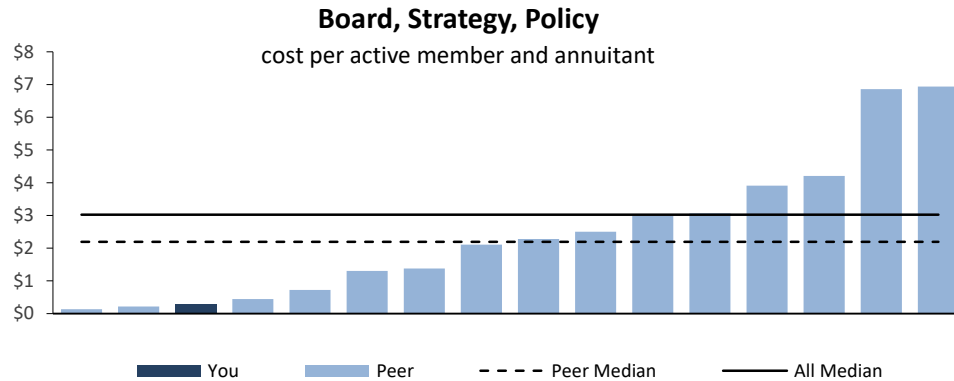
Usually, the biggest reason for differences in this activity's cost is the number of financial administration and control FTE per 10,000 members. Two key reasons for differences in FTE per 10,000 (and/or third party costs) are:

- Economies of scale - You had an economy of scale advantage. Your 794,185 active members and annuitants was 61% higher than the peer median of 494,546.
- Doing more/less - For example, some systems have more extensive budgeting than others.



## 4B Board, Strategy, Policy

Your board, strategy, policy cost per active member and annuitant was \$0.28. This was \$1.91 below the peer median of \$2.19.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member and Annuitant
	You	Peer Median	
Higher salaries and benefits per direct FTE	\$206,500	\$179,170	\$0.03
Fewer direct FTE per 10,000 active members and annuitants (productivity) <sup>2</sup>	0.01	0.10	-\$1.78
Lower third party costs per active member and annuitant	\$0.03	\$0.42	-\$0.40
Unexplained <sup>1</sup>			\$0.23
Cost per active member and annuitant	\$0.28	\$2.19	-\$1.91

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 1.0 board, strategy, policy FTE which was 75% less than the peer median of 4.1. The percentage difference was more favorable on a 'per active members and annuitants' basis (your 0.01 FTE per 10,000 active members and annuitants was 87% less than the peer median of 0.10) because you had an economy of scale advantage.

Usually, the biggest reason for differences in this activity's cost is the number of board, strategy, policy FTE per 10,000 members. Two key reasons for differences in FTE per 10,000 (and/or third party costs) are:

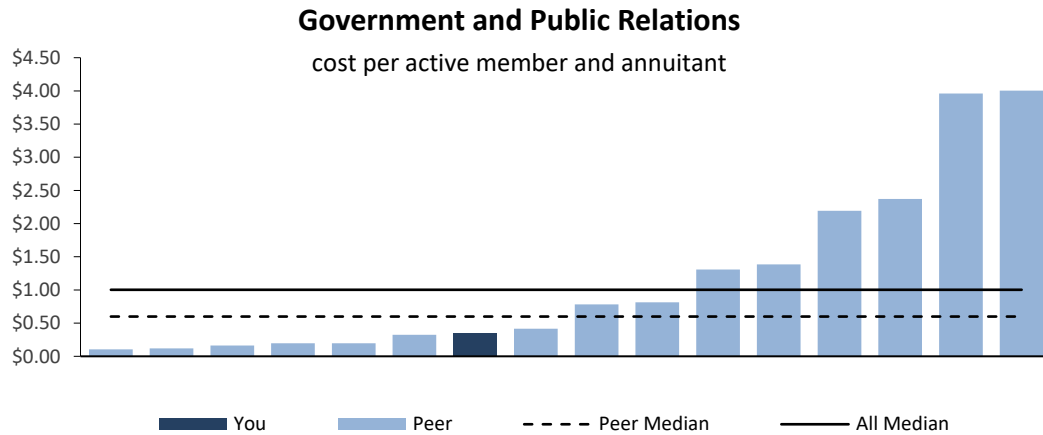
- Economies of scale - You had an economy of scale advantage. Your 794,185 active members and annuitants was 61% higher than the peer median of 494,546.
- Doing more/less - For example, your 5 oversight meetings last year was below the peer median of 26.

# of meetings last year, including sub-committees	Peer	
	You	Peer Median * Peer Avg
a) Board of Trustees?	4	11 12.9
b) Non-board legislative oversight committee?	n/a	6 5.3
c) Advisory committee?	1	5 2.8
d) Members' Council?	n/a	n/a n/a
e) Other?	n/a	4 9.0
Total	5	26 32

\* Peer medians will not add to the total. Only averages are additive.

## 4C Government and Public Relations

Your government and public relations cost per active member and annuitant was \$0.35. This was \$0.25 below the peer median of \$0.60.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$116,450	\$147,188	-\$0.08
Equal direct FTE per 10,000 active members and annuitants (productivity) <sup>2</sup>	0.03	0.03	-\$0.08
Equal third party costs per active member and annuitant	\$0.06	\$0.06	\$0.00
Unexplained <sup>1</sup>			-\$0.09
Cost per active member and annuitant	\$0.35	\$0.60	-\$0.25

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

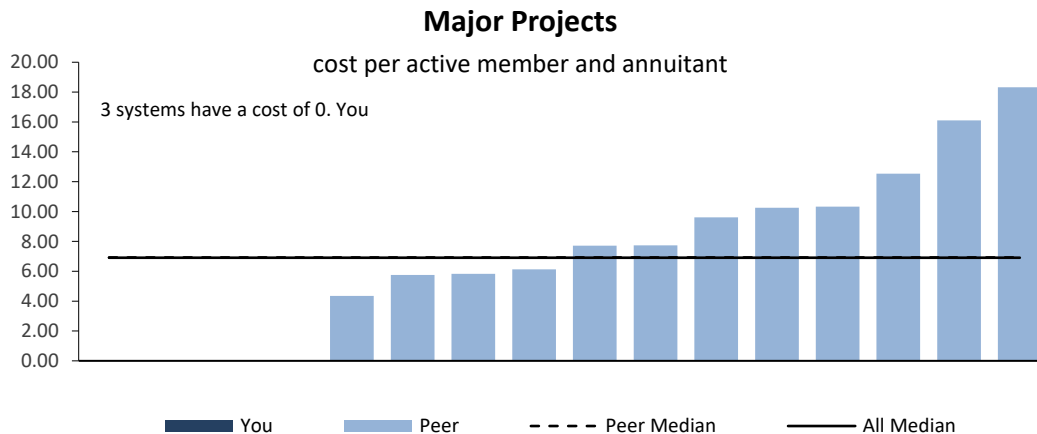
2. You had 2.0 government and public relations FTE which was 21% more than the peer median of 1.7. The difference changes direction and was more favorable on a 'per active members and annuitants' basis (your 0.03 government and public relations FTE per 10,000 active members and annuitants was equal to the peer median of 0.03) because you had an economy of scale advantage.

Usually, the biggest reason for differences in this activity's cost is the number of government and public relations FTE per 10,000 members. Two key reasons for differences in FTE per 10,000 (and/or third party costs) are:

- Economies of scale - You had an economy of scale advantage. Your 794,185 active members and annuitants was 61% higher than the peer median of 494,546.
- Doing more/less - For example, some systems do not have any government relations staff.

## 5A-D Major Projects

You have no cost for this activity. The peer median cost was \$6.92. This comparison includes both '5A and 5C Amortized major projects' plus '5B and 5D Major Projects (if you don't capitalize)'.

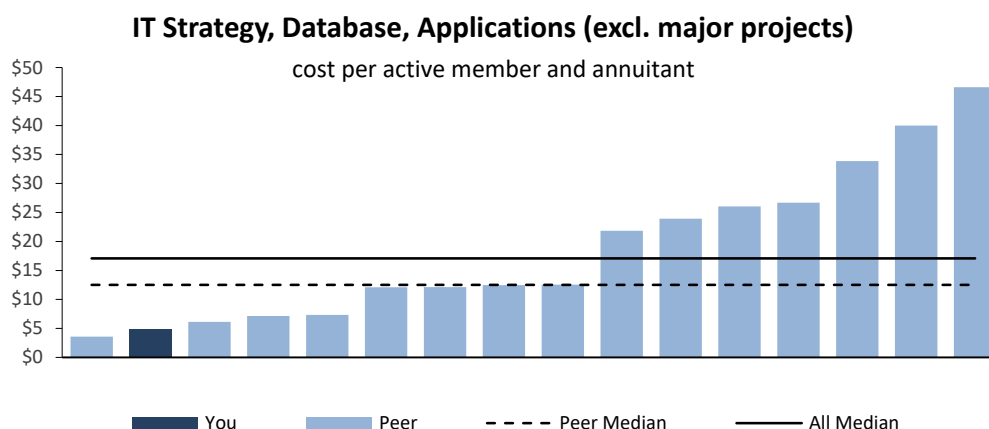


Reasons for differences in the cost for major projects include:

- **Economies of scale** - Scale is particularly important for major projects because of the substantial fixed costs of developing the IT infrastructure necessary for pension systems to operate. You had an economy of scale advantage. Your 794,185 active members and annuitants was 60.6% higher than the peer median of 494,546. Thus you had more members over which to spread major projects costs.
- **Plan complexity** - It is more expensive to develop and maintain IT systems for plans with complex rule sets. Your total plan complexity score was 42 out of 100. This was above the peer median of 41.
- **IT investment cycle** - If you recently upgraded your IT systems, then your amortization costs will be higher than a system that has not upgraded their IT systems since 1990.
- **Capitalization** - Systems that do not capitalize major project costs will have more variable major project costs. Systems that only recently started capitalizing major projects costs will have lower costs than systems that have been capitalizing for a long time.

## 6A IT Strategy, Database Management and Applications (excl. major projects)

Your IT strategy, database, applications (excl. major projects) cost per active member and annuitant was \$4.95. This was \$7.56 below the peer median of \$12.51. The biggest reason why was that you had fewer direct FTE per 10,000 active members and annuitants<sup>2</sup>.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$87,294	\$127,082	-\$0.17
Fewer direct FTE per 10,000 active members and annuitants <sup>2</sup>	0.04	0.45	-\$3.51
Lower third party costs per active member and annuitant	\$4.67	\$8.06	-\$3.39
Unexplained <sup>1</sup>			-\$0.49
Cost per active member and annuitant	\$4.95	\$12.51	-\$7.56

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

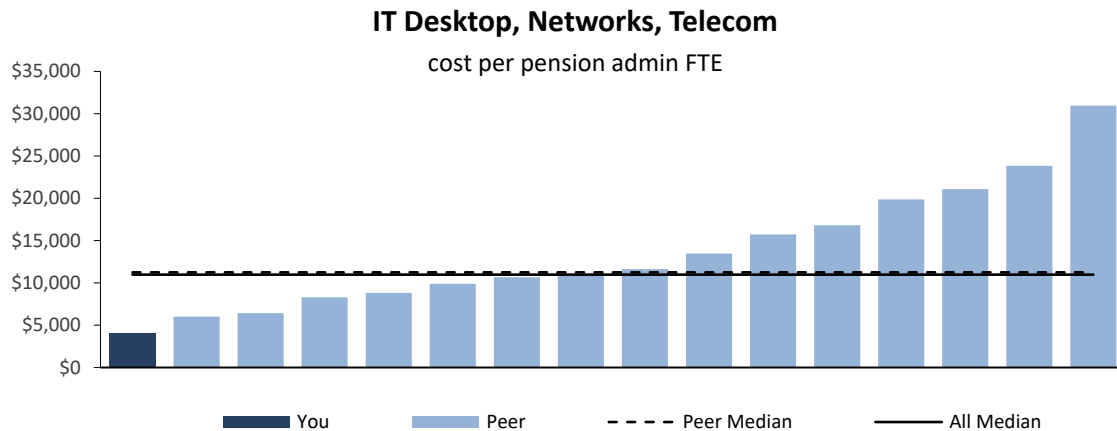
2. You had 3.4 IT strategy, database, applications (excl. major projects) FTE which was 83% less than the peer median of 20.6. The percentage difference was more favorable on a 'per active member and annuitant' basis (your 0.04 FTE per 10,000 active member and annuitant was 90% less than the peer median of 0.45) because you had an economy of scale advantage.

Three key reasons for differences in FTE per 10,000 (and/or third party costs) are:

- Economies of scale - Scale is particularly important for IT strategy, database, applications (excl. major projects) because of the substantial fixed costs of maintaining the IT infrastructure necessary for pension systems to operate. You had an economy of scale advantage. Your 794,185 active members and annuitants was 60.6% higher than the peer median of 494,546. Thus you had more members over which to spread IT strategy, database, applications (excl. major projects) costs.
- Plan complexity - It is more expensive to develop and maintain IT systems for plans with complex rule sets. Your total plan complexity score was 42 out of 100. This was above the peer median of 41.
- IT investment cycle

## 6B IT Desktop, Networks, Telecom

Your it desktop, networks, telecom cost per pension admin FTE was \$4,072. This was \$7,178 below the peer median of \$11,250.



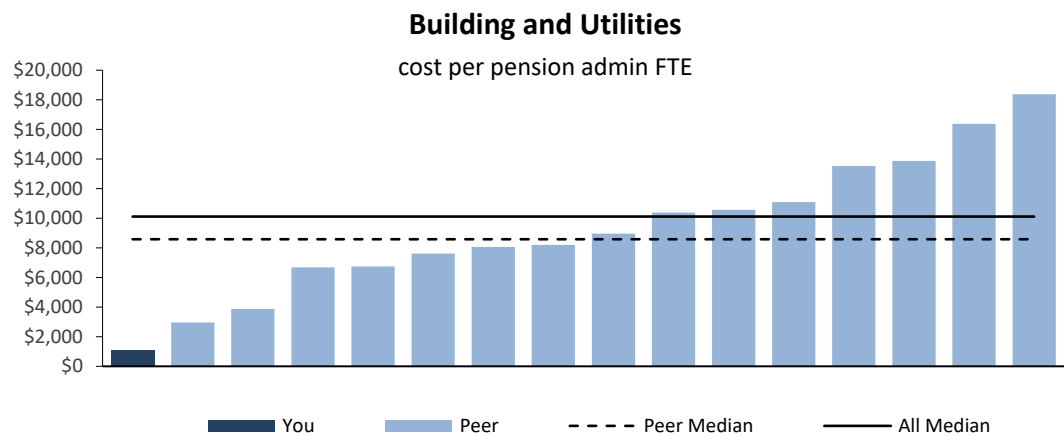
Reasons why your cost was below median	Comparison		Impact <sup>1</sup>
	You	Peer Median	\$s per Pension Admin FTE
Lower salaries and benefits per direct FTE	\$52,545	\$127,927	-\$454
Fewer direct FTE per 100 pension admin FTE <sup>2</sup>	0.60	4.75	-\$2,182
Lower third party costs per pension admin FTE	\$3,834	\$8,040	-\$4,206
Unexplained <sup>1</sup>			-\$336
Cost per pension admin FTE	\$4,072	\$11,250	-\$7,178

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 1.1 IT desktop, networks, telecom FTE which was 91% less than the peer median of 11.9. The percentage difference was less favorable on a 'per pension admin FTE' basis (your 0.60 FTE per 100 pension admin FTE was 87% less than the peer median of 4.75) because you had an economy of scale disadvantage.

# 7A Building and Utilities

Your building and utilities cost per pension admin FTE was \$1,079. This was \$7,503 below the peer median of \$8,582.

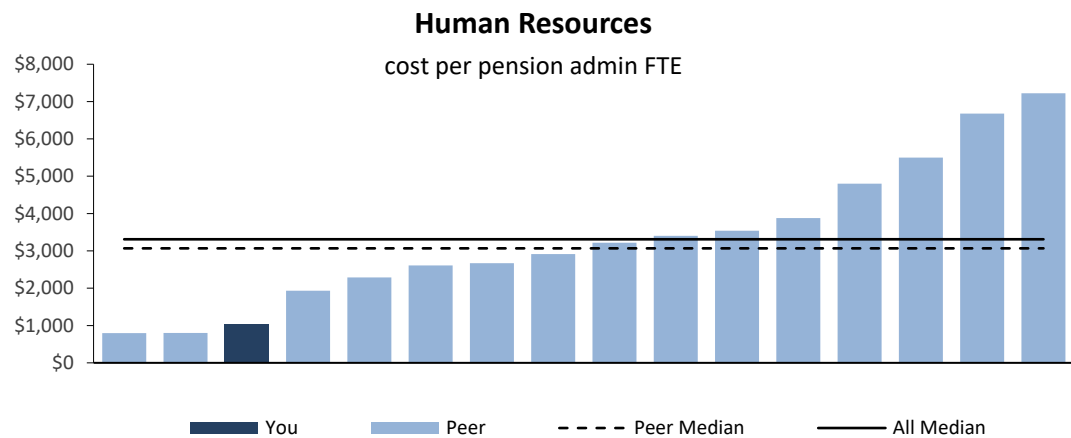


The biggest reason for differences in building cost is usually differences in third party and other costs (i.e., rent, lease, building and office depreciation, utilities). Reasons why these costs differ include:

- Quality of the building
- Non-market pricing on property provided by the government
- Cost environment
- Square feet of workspace per FTE

# 7B Human Resources

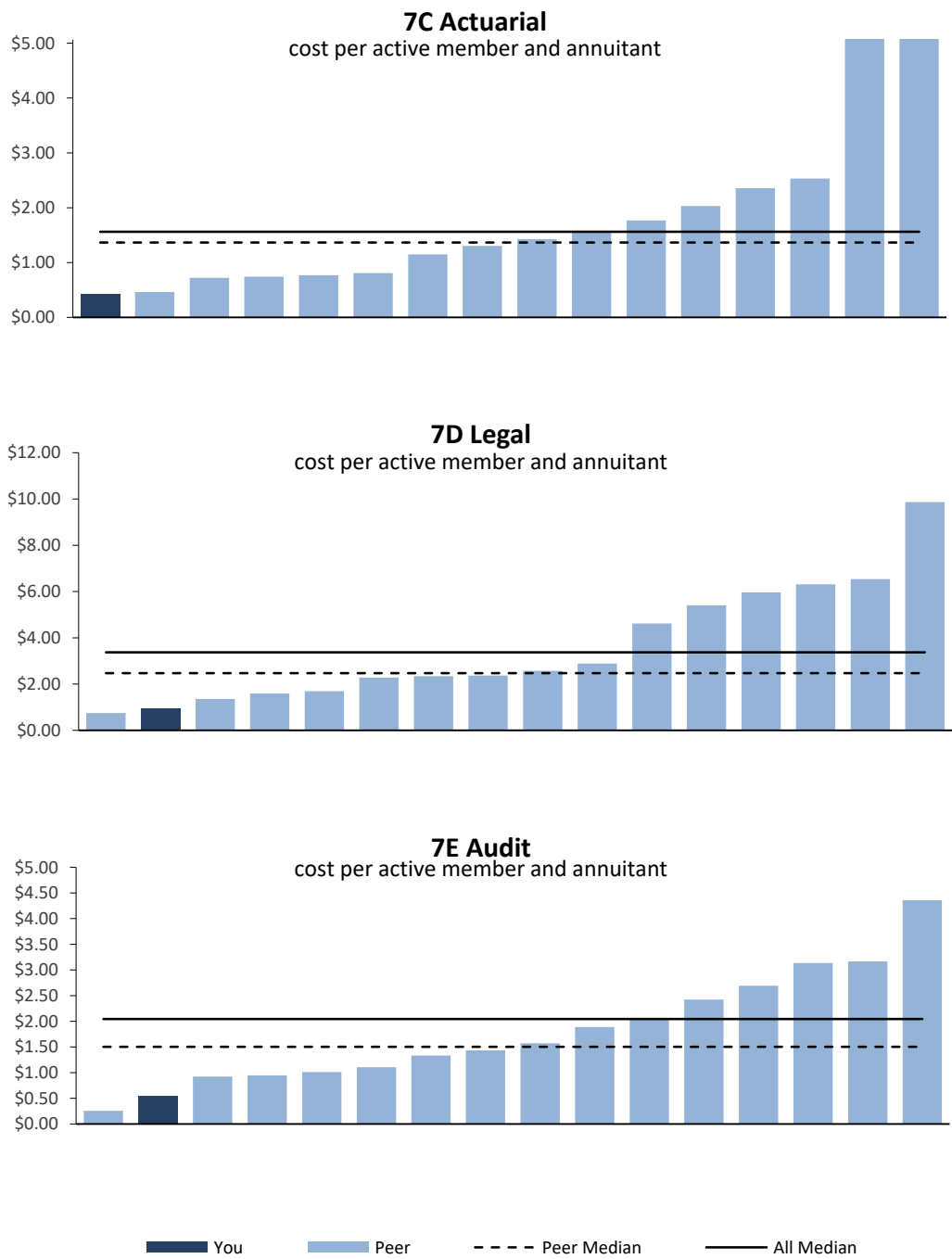
Your human resources cost per pension admin FTE was \$1,031. This was \$2,037 below the peer median of \$3,068.



# 7C-E Professional Costs

Your cost for activity:

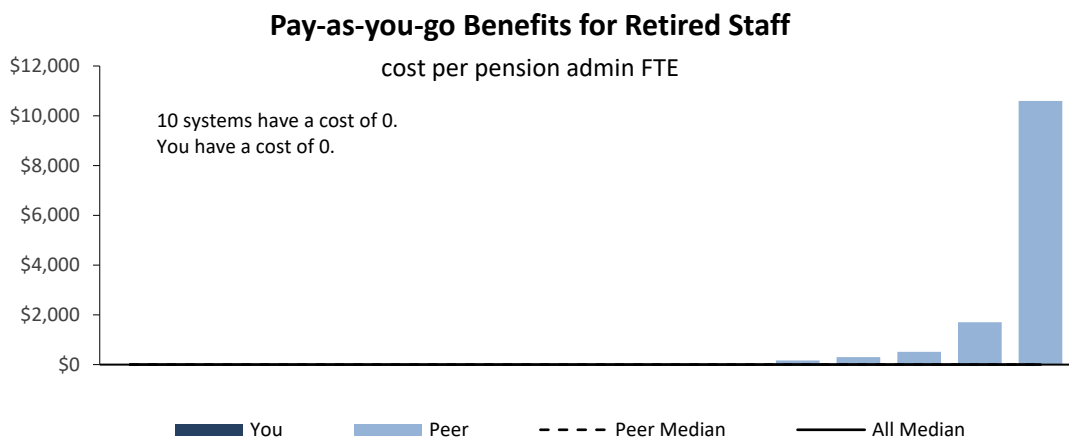
- Your actuarial cost per active member and annuitant was \$0.43. This was \$0.94 below the peer median of \$1.37.
- Your legal cost per active member and annuitant was \$0.96. This was \$1.51 below the peer median of \$2.47.
- Your audit cost per active member and annuitant was \$0.55. This was \$0.95 below the peer median of \$1.50.





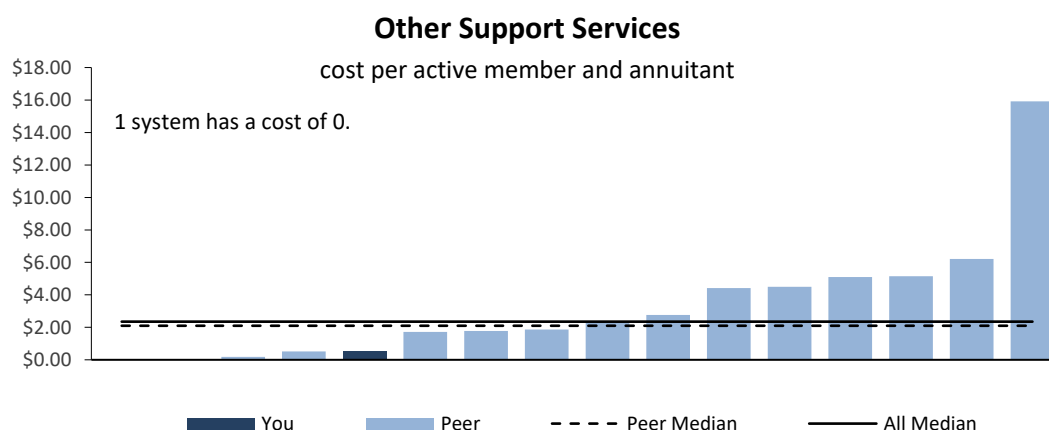
# 7F Pay-as-you-go Benefits for Retired Staff

You have no cost for this activity. The peer median cost was \$0.00.



## 7G Other Support Services

Your other support services cost per active member and annuitant was \$0.52. This was \$1.58 below the peer median of \$2.10. The biggest reason why was that you had fewer direct FTE per 10,000 active members and annuitants<sup>2</sup>.



Reasons why your cost was below median	Comparison		Impact <sup>1</sup> \$s per Active Member and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$50,791	\$85,185	-\$0.19
Fewer direct FTE per 10,000 active members and annuitants <sup>2</sup>	0.1	0.2	-\$0.77
Lower third party costs per active member and annuitant	\$0.26	\$0.47	-\$0.21
Unexplained <sup>1</sup>			-\$0.41
Cost per active member and annuitant	\$0.52	\$2.10	-\$1.58

1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 4.3 other support services FTE which was 42% less than the peer median of 7.4. The percentage difference was more favorable on a 'per active member and annuitant' basis (your 0.05 FTE per 10,000 active member and annuitant was 74% less than the peer median of 0.21) because you had an economy of scale advantage.

Three key reasons for differences in FTE per 10,000 (and/or third party costs) are:

- Economies of scale - Scale is particularly important for other support services because of the substantial fixed costs of maintaining the IT infrastructure necessary for pension systems to operate. You had an economy of scale advantage. Your 794,185 active members and annuitants was 60.6% higher than the peer median of 494,546. Thus you had more members over which to spread other support services costs.
- Plan complexity - It is more expensive to develop and maintain IT systems for plans with complex rule sets. Your total plan complexity score was 42 out of 100. This was above the peer median of 41.
- IT investment cycle

## Alternative comparison: Fully-attributed front-office activity costs

An alternative way of analyzing and comparing activity costs is by attributing 100% of governance and support costs (i.e., governance and financial control, major projects, IT, and support services and other) to the front office activities. Front office activities are the activities that come in contact with clients or employers, such as paying pensions, pension inception, and member calls. The methodology used to calculate fully-attributed costs is shown on the following page.

In 2010, CEM shifted the focus of its analysis from fully-attributed activity costs to direct activity costs because:

- Front-office managers did not recognize or trust the fully attributed costs.
- It is impossible to ensure consistency in attribution methodology for IT and major project costs. Therefore, differences in fully-attributed costs often reflected differences in attribution methodology.
- Reasons for differences in fully-attributed costs were often hidden and repetitive. For example, unusually high building and utilities costs could become a recurring reason for differences in all fully-attributed costs.

Fully-Attributed Activity Costs (\$s per unit of activity volume)																
Activity	Cost per:	You	Peer							All						
			Avg	Max	Q3	Med	Q1	Min	#	Avg	Max	Q3	Med	Q1	Min	#
<b>1. Member Transactions</b>																
a. Pension Payments	annuitant	3	17	48	20	14	11	3	16	24	108	25	18	12	3	44
b. Pension Inceptions	new payee inception	157	408	1,255	437	296	223	79	16	622	2,453	780	492	301	79	44
c. Refunds, Withdrawals, and Transfers-out	withdrawal and transfer-out	92	306	1,904	276	175	116	48	16	783	5,749	738	271	137	24	44
d. Purchases and Transfers-in	purchase and transfer-in	139	1,283	3,838	1,778	796	437	139	16	2,549	56,622	1,337	646	296	0	44
e. Disability	disability application	717	4,576	11,332	6,387	4,178	1,094	717	16	4,790	27,118	5,289	3,764	1,193	0	39
<b>2. Member Communication</b>																
a. Call Center	call and email	16	40	108	52	33	20	14	16	33	108	42	25	16	0	44
b. Mail Room, Imaging	incoming mail	3	14	31	20	12	7	3	16	26	101	32	20	10	1	44
c. 1-on-1 Counseling	member counseled 1-on-1	153	301	934	378	304	151	51	16	245	982	364	180	94	5	44
d. Member Presentations	member presentation	1,529	3,690	8,724	4,509	2,745	1,949	449	16	3,497	11,720	4,492	2,888	1,639	251	43
e. Written Pension Estimates	written estimate	99	202	561	259	156	84	3	16	284	1,678	312	148	84	0	44
f. Mass Communication	active member and annuitant	1	7	13	9	6	5	0	16	8	33	11	6	4	0	44
<b>3. Collections and Data Maintenance</b>																
a. Data and Money from Employers	active member	3	19	70	18	12	8	2	16	22	105	27	16	10	0	44
b. Service to Employers	active member	1	12	55	13	8	5	1	16	10	55	13	9	5	0	44
c. Data Not from Employers	active, inactive and annuitant	0	2	5	3	2	1	0	16	4	13	5	3	1	0	44
<b>Total Pension Administration</b>	active member and annuitant	23	98	236	110	88	69	17	16	119	400	146	91	75	17	44
<b>Non-Pension</b>																
1f. Healthcare Administration	annuitant	1	13	60	22	5	0	0	16	8	137	5	0	0	0	44
1g. Optional and Third Party Administered Benefits	active member	0	10	45	15	5	0	0	16	4	45	6	0	0	0	44

## Calculation of fully-attributed front-office costs

(Fully-attributed costs are compared in the alternative comparison on the previous page)

Activity	Direct		Attributions <sup>1</sup>				Fully-Attributed		
	Staff (# FTE)	Costs (Salaries + Third Party)	5. Major Projects	6a IT Strategy, DB Mgmt, Applications	6b + 7a - g Support Services and Other	4. Governance & Financial Control	Cost per unit <sup>3</sup>	Cost per unit <sup>3</sup>	Cost per Active Member and Annuity
<b>1. Member Transactions</b>									
a. Pension Payments	7.5	558	0	173	136	103	970	3	1.22
b. Pension Inceptions	25.3	1,326	0	582	457	349	2,714	157	3.42
c. Refunds, Withdrawals, and Transfers-out	15.5	849	0	357	280	214	1,700	92	2.14
d. Purchases and Transfers-in	3.1	186	0	71	56	43	356	139	0.45
e. Disability	15.6	867	0	359	282	215	1,722	717	2.17
f. Healthcare Administration	2.6	160	0	60	47	36	303	1	0.38
g. Optional and Third Party Administered Benefits	0.6	76	0	14	11	8	109	0	0.14
<b>2. Member Communication</b>									
a. Call Center	54.3	2,838	0	1,249	981	749	5,817	16	7.32
b. Mail Room, Imaging	7.0	415	0	161	126	97	799	3	1.01
c. 1-on-1 Counseling	4.0	229	0	92	72	55	448	153	0.56
d. Member Presentations	4.0	244	0	92	72	55	463	1,529	0.58
e. Written Pension Estimates	2.7	167	0	62	49	37	315	99	0.40
f. Mass Communication	3.8	267	0	87	69	52	476	1	0.60
<b>3. Collections and Data Maintenance</b>									
a. Data and Money from Employers	14.8	837	0	341	267	204	1,649	3	2.08
b. Service to Employers	6.0	358	0	138	108	83	687	1	0.87
c. Data Not from Employers	3.5	198	0	81	63	48	390	0	0.49
<b>4. Governance and Financial Control</b>									
a. Financial Administration and Control	0.8	1,683	0	18	14	-1,716	0		
b. Board, Strategy, Policy	1.0	229	0	23	18	-270	0		
c. Government and Public Relations	2.0	280	0	46	36	-362	0		
<b>5. Major Projects</b>									
a. Amortization of non-IT Major Projects	n/a	0	0				0		
b. Non-IT Major Projects (if you don't capitalize)	0.0	0	0				0		
c. Amortization of IT Major Projects	n/a	0	0				0		
d. IT Major Projects (if you don't capitalize)	0.0	0	0				0		
<b>6. Information Technology</b>									
a. IT Strategy, Database, Applications (excl. major projects)	3.4	4,006		-4,006			0		
b. IT Desktop, Networks, Telecom	1.1	759			-759		0		
<b>7. Support Services and Other</b>									
a. Building and Utilities	0.0	201			-201		0		
b. Human Resources	0.0	192			-192		0		
c. Actuarial	0.6	348			-348		0		
d. Legal and Rule Interpretation	1.9	776			-776		0		
e. Internal and External Audit	0.9	448			-448		0		
f. Pay-as-you-go Benefits for Retired Staff	n/a	0			0		0		
g. Other Support Services	4.3	423			-423		0		
<b>Total Administration</b>	186.3	18,919	0	0	0	0	18,919		23.82
less: <sup>2</sup>									
1f. Healthcare Administration							-303		-0.38
1g. Optional and Third Party Administered Benefits							-109		-0.14
<b>Total Pension Administration</b>							18,507		23.30

1. Attributions of activities 4, 5, 6, and 7 are pro rata based on direct FTE, unless you provided the attributions yourself.

2. The fully-attributed costs of activities 1f and 1g are excluded from pension administration costs to ensure comparability.

3. Units vary by activity. Units are described in the second column on the previous page.

# 5

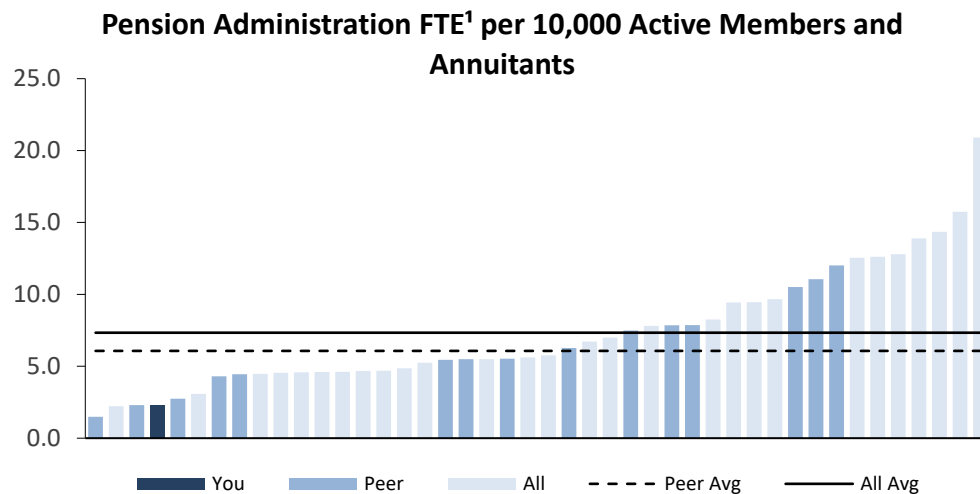
## Staff Costs and Productivity

This section includes comparisons to your peers, in aggregate and by activity, of:

- Full-time-equivalent staff (FTE) per member
- Salary and benefits per FTE
- Productivity (transaction volumes per FTE)

## Total FTE

Differences in the number of full-time-equivalent staff (FTE) used to serve members is a key reason for differences in costs between similarly organized systems. Generally the more FTE you use to serve members, the higher your costs. You had 2.31 pension administration FTE<sup>1</sup> per 10,000 members. This was below the peer average of 6.07.



1. Pension administration FTE excludes: FTE whose salaries are being capitalized, FTE administering healthcare and FTE administering optional benefits.

Reasons for differences in total FTEs used to serve members include differences in:

- Outsourcing. For example, if you outsource legal or actuarial work, you will have fewer FTE than systems that do this work using internal staff.
- Transactions volumes, which in turn are caused by differences in:
  - Services provided, for example, some plans do not offer financial planning
  - Member mix and demographics, for example, active members generate more transactions than inactive members
- Productivity (i.e., transaction volumes per FTE) which in turn is caused by differences in:
  - Service levels, for example, shorter wait times may require more staff
  - Staff skills and productivity
  - Organizational effectiveness
  - Economies of scale
  - Plan rule complexity
  - IT capability

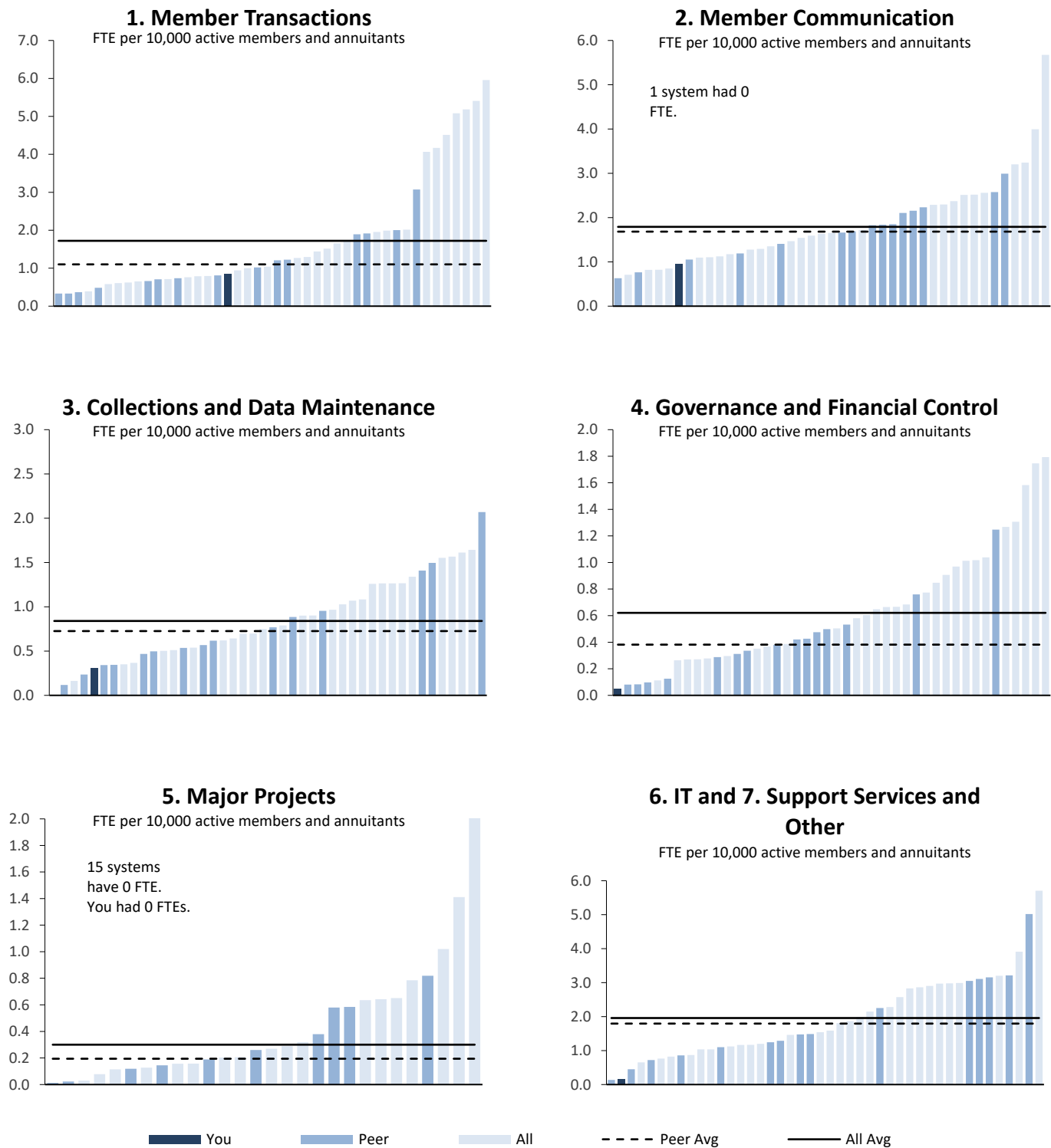
## FTE by activity

Activity	# of Direct <sup>1</sup> FTE			# of FTE per 10,000 Active Members and Annuitants		
	You	Peer Avg	All Avg	You	Peer Avg	All Avg
<b>1. Member Transactions</b>						
a. Pension Payments	7.5	16.8	11.6	0.09	0.24	0.33
b. Pension Inceptions	25.3	25.9	20.4	0.32	0.35	0.54
c. Refunds, Withdrawals, and Transfers-out	15.5	9.9	9.9	0.20	0.17	0.32
d. Purchases and Transfers-in	3.1	11.8	12.2	0.04	0.14	0.34
e. Disability	<u>15.6</u>	<u>14.1</u>	<u>7.8</u>	<u>0.20</u>	<u>0.19</u>	<u>0.19</u>
Total Member Transactions	67.0	78.5	61.9	0.84	1.10	1.72
<b>2. Member Communication</b>						
a. Call Center	54.3	54.4	32.0	0.68	0.84	0.75
b. Mail Room, Imaging	7.0	12.2	9.9	0.09	0.20	0.28
c. 1-on-1 Counseling	4.0	14.2	9.6	0.05	0.22	0.24
d. Member Presentations	4.0	8.5	5.0	0.05	0.14	0.13
e. Written Pension Estimates	2.7	6.0	6.3	0.03	0.11	0.18
f. Mass Communication	<u>3.8</u>	<u>9.9</u>	<u>7.5</u>	<u>0.05</u>	<u>0.17</u>	<u>0.22</u>
Total Member Communication	75.8	105.2	70.2	0.95	1.68	1.79
<b>3. Collections and Data Maintenance</b>						
a. Data and Money from Employers	14.8	25.3	17.0	0.19	0.38	0.47
b. Service to Employers	6.0	17.4	9.6	0.08	0.23	0.21
c. Data Not from Employers	<u>3.5</u>	<u>5.3</u>	<u>5.3</u>	<u>0.04</u>	<u>0.11</u>	<u>0.16</u>
Total Collections and Data Maintenance	24.3	48.0	31.9	0.31	0.73	0.84
<b>4. Governance and Financial Control</b>						
a. Financial Administration and Control	0.8	16.6	13.4	0.01	0.23	0.39
b. Board, Strategy, Policy	1.0	8.0	6.9	0.01	0.11	0.17
c. Government and Public Relations	<u>2.0</u>	<u>4.3</u>	<u>2.8</u>	<u>0.03</u>	<u>0.06</u>	<u>0.08</u>
Total Governance and Financial Control	3.8	28.8	23.1	0.05	0.41	0.64
<b>5. Major Projects</b>						
a. Amortization of non-IT Major Projects <sup>2</sup>	n/a	n/a	n/a	n/a	n/a	n/a
b. Non-IT Major Projects (if you don't capitalize)	0.0	3.7	3.6	n/a	0.07	0.10
c. Amortization of IT Major Projects <sup>2</sup>	n/a	n/a	n/a	n/a	n/a	n/a
d. IT Major Projects (if you don't capitalize)	<u>0.0</u>	<u>8.4</u>	<u>7.2</u>	<u>n/a</u>	<u>0.14</u>	<u>0.21</u>
Total Major Projects	0.0	12.1	10.7	0.00	0.21	0.31
<b>6. Information Technology</b>						
a. IT Strategy, Database, Applications (excl. major projects)	3.4	58.1	34.9	0.04	0.86	0.81
b. IT Desktop, Networks, Telecom	<u>1.1</u>	<u>15.2</u>	<u>10.0</u>	<u>0.01</u>	<u>0.27</u>	<u>0.27</u>
Total Information Technology	4.5	73.3	44.9	0.06	1.13	1.07
<b>7. Support Services and Other</b>						
a. Building and Utilities	0.0	5.2	3.1	n/a	0.12	0.08
b. Human Resources	0.0	13.0	8.8	n/a	0.17	0.22
c. Actuarial	0.6	5.1	2.5	0.01	0.05	0.05
d. Legal and Rule Interpretation	1.9	13.3	9.4	0.02	0.19	0.26
e. Internal and External Audit	0.9	5.1	4.8	0.01	0.08	0.16
f. Pay-as-you-go Benefits for Retired Staff	n/a	n/a	n/a	n/a	n/a	n/a
g. Other Support Services	<u>4.3</u>	<u>15.4</u>	<u>8.9</u>	<u>0.05</u>	<u>0.20</u>	<u>0.20</u>
Total Support Services and Other	7.7	57.1	37.5	0.10	0.81	0.96
<b>Total Pension Admin FTE (excludes below)</b>	183.1	402.9	280.3	2.31	6.07	7.33
FTE whose salaries are being capitalized	0.0	14.6	7.5	n/a	0.19	0.10
1f. Healthcare Administration	2.6	6.0	2.8	0.03	0.14	0.09
1g. Optional and Third Party Administered Benefits	0.6	6.8	3.1	0.01	0.13	0.07
<b>Total Administration FTE</b>	186.3	430.3	293.6	2.35	6.53	7.59

1. Direct staff includes staff directly performing the activity, plus related support and management staff that are in the same department and directly support the activity.

2. We are unable to identify the historic FTE embedded in activities 5a. and 5c. amortization of major projects.

# FTE per 10,000 members by activity aggregates

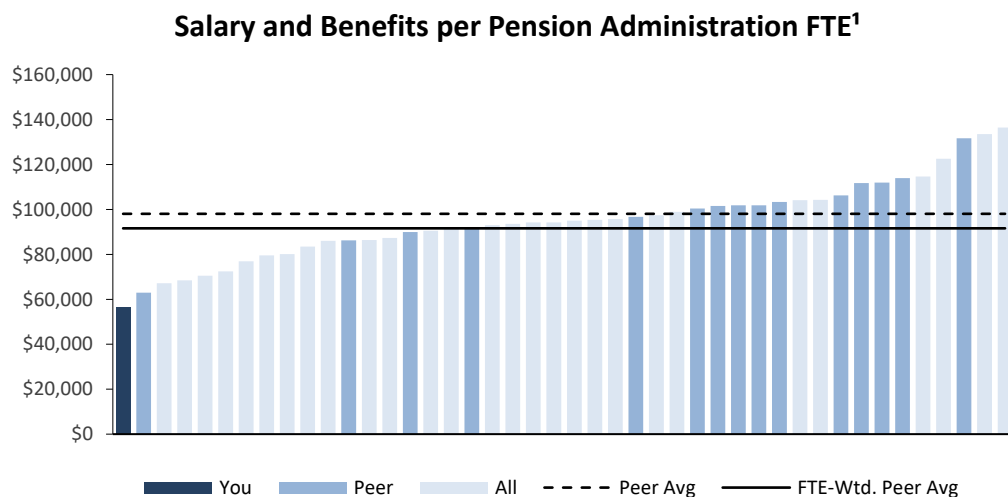




## Salaries and benefits

Your salaries and benefits per pension administration FTE<sup>1</sup> was \$56,568. This was 42% below the peer average of \$98,049.

If you want to understand how salaries and benefits impact relative cost performance, the more relevant average is the FTE-weighted peer average because salary differences matter more for peers with more FTEs. Your salaries and benefits per pension administration FTE of \$56,568 was below the FTE-weighted peer average of \$91,593.



1. Pension administration FTE excludes: FTE whose salaries are being capitalized, FTE administering healthcare and FTE administering optional benefits. In order to avoid double counting when explaining why your total administration costs differ from the peer average, it also excludes the salaries and FTE of activity 6b. IT Desktop, Networks, Telecom, 7a. Building and Utilities, 7b. Human Resources, and, 7f. Pay-as-you-go Benefits for Retired Staff.

Salaries and benefits include compensation (salary, wages, overtime, bonuses), benefits (pensions, healthcare), related payroll taxes, and charges paid by the employer (as opposed to the employee). Salary and benefits per FTE may differ because of:

- Cost environment
- Staff with different skills and experience. Different activities require different skills sets. Therefore, salaries and benefits are compared by activity on page 7 of this section.
- Outsourcing. For example, if you outsource higher paying jobs by using consultants (i.e., legal, actuarial) your average salary might be lower.

Other costs that tend to vary per FTE include activities: 6b. IT Desktop, Networks, Telecom, 7a. Building and Utilities, 7b. Human Resources, and, 7f. Pay-as-you-go Benefits for Retired Staff. These costs are compared in Section 4 - Activity Costs.

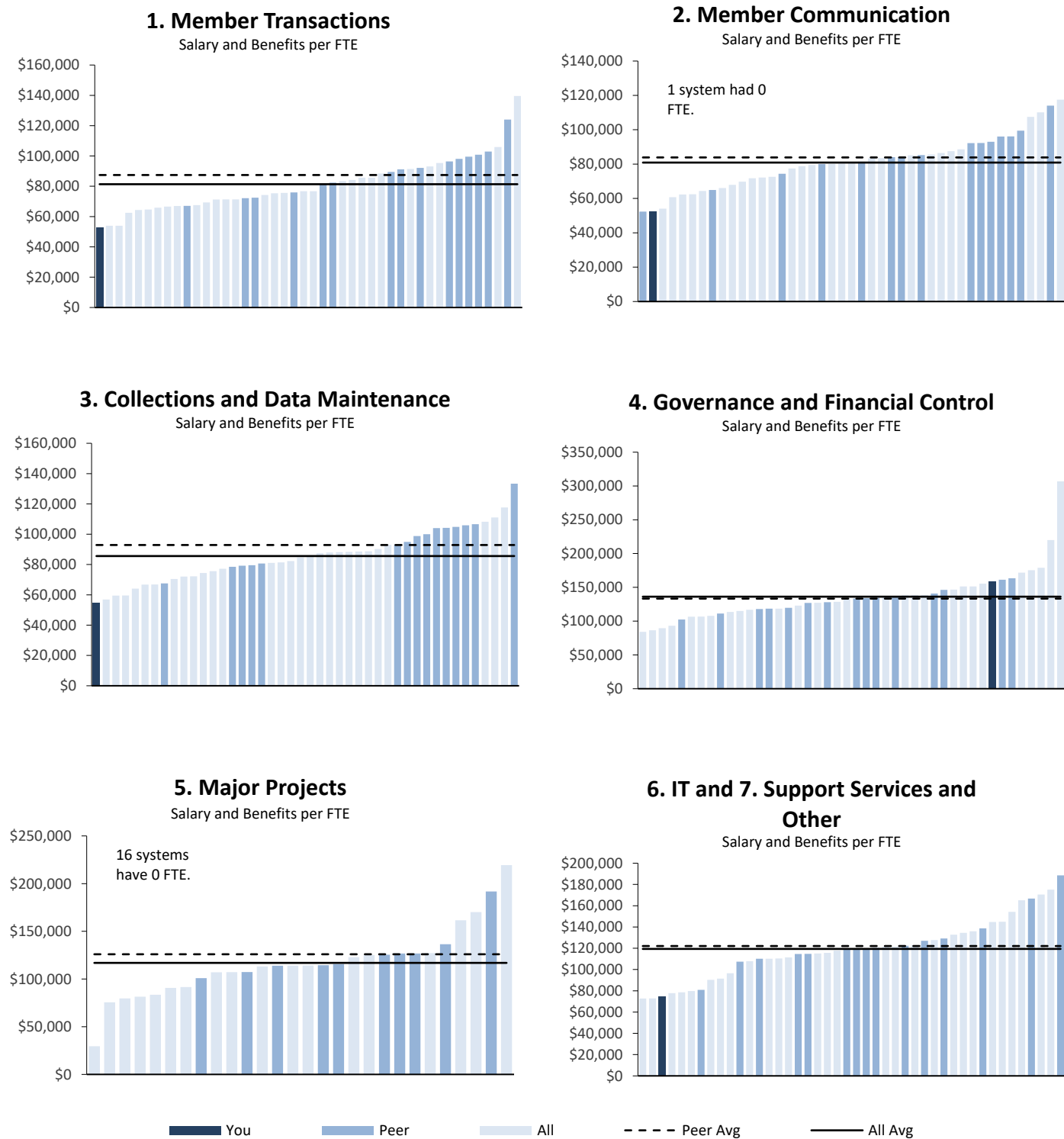
## Salaries and benefits per FTE by activity

Activity	Salaries and Benefits per FTE			Salaries and Benefits as a % of Direct Activity Cost		
	You	Peer Avg	All Avg	You	Peer Avg	All Avg
<b>1. Member Transactions</b>						
a. Pension Payments	\$54,067	\$87,951	\$83,485	73%	69%	67%
b. Pension Inceptions	\$51,652	\$87,565	\$80,322	99%	95%	92%
c. Refunds, Withdrawals, and Transfers-out	\$52,755	\$85,823	\$81,450	96%	92%	90%
d. Purchases and Transfers-in	\$53,677	\$88,172	\$82,650	89%	89%	90%
e. Disability	<u>\$54,282</u>	<u>\$93,494</u>	<u>\$84,076</u>	98%	68%	74%
	\$52,884	\$87,422	\$81,355			
<b>2. Member Communication</b>						
a. Call Center	\$51,901	\$80,055	\$75,958	99%	95%	92%
b. Mail Room, Imaging	\$51,386	\$78,925	\$68,346	87%	76%	73%
c. 1-on-1 Counseling	\$52,300	\$87,820	\$84,639	91%	94%	91%
d. Member Presentations	\$53,200	\$93,909	\$95,018	87%	84%	84%
e. Written Pension Estimates	\$54,667	\$81,775	\$79,009	88%	92%	91%
f. Mass Communication	<u>\$60,263</u>	<u>\$99,375</u>	<u>\$100,188</u>	86%	59%	60%
	\$52,460	\$83,878	\$80,886			
<b>3. Collections and Data Maintenance</b>						
a. Data and Money from Employers	\$55,189	\$93,580	\$84,312	98%	96%	94%
b. Service to Employers	\$56,367	\$95,114	\$90,017	94%	93%	89%
c. Data Not from Employers	<u>\$50,857</u>	<u>\$89,563</u>	<u>\$82,795</u>	90%	83%	83%
	\$54,856	\$92,887	\$85,592			
<b>4. Governance and Financial Control</b>						
a. Financial Administration and Control	\$206,500	\$121,243	\$117,743	10%	75%	80%
b. Board, Strategy, Policy	\$206,500	\$171,414	\$172,755	90%	76%	72%
c. Government and Public Relations	<u>\$116,450</u>	<u>\$150,699</u>	<u>\$151,300</u>	83%	82%	81%
	\$159,105	\$133,340	\$136,150			
<b>5. Major Projects</b>						
a. Amortization of non-IT Major Projects	n/a	n/a	n/a	n/a	n/a	n/a
b. Non-IT Major Projects (if you don't capitalize)	n/a	\$122,778	\$118,086	n/a	56%	62%
c. Amortization of IT Major Projects	n/a	n/a	n/a	n/a	n/a	n/a
d. IT Major Projects (if you don't capitalize)	<u>n/a</u>	<u>\$130,450</u>	<u>\$121,480</u>	n/a	53%	60%
	n/a	\$125,943	\$116,908			
<b>6. Information Technology</b>						
a. IT Strategy, Database, Applications (excl. major projects)	\$87,294	\$126,840	\$119,356	7%	50%	50%
b. IT Desktop, Networks, Telecom	<u>\$52,545</u>	<u>\$127,834</u>	<u>\$116,144</u>	8%	38%	38%
	\$78,800	\$126,586	\$116,732			
<b>7. Support Services and Other</b>						
a. Building and Utilities	n/a	\$94,149	\$96,116	0%	11%	8%
b. Human Resources	n/a	\$118,143	\$116,074	0%	78%	75%
c. Actuarial	\$91,167	\$155,654	\$159,014	16%	31%	30%
d. Legal and Rule Interpretation	\$107,737	\$136,216	\$137,428	26%	64%	70%
e. Internal and External Audit	\$83,222	\$126,933	\$123,064	17%	59%	59%
f. Pay-as-you-go Benefits for Retired Staff	n/a	n/a	n/a	n/a	100%	100%
g. Other Support Services	<u>\$50,791</u>	<u>\$84,702</u>	<u>\$84,659</u>	52%	63%	63%
	\$71,779	\$115,792	\$122,170			
Total Pension Administration <sup>1</sup>	\$56,544	\$100,086	\$97,295	56%	61%	60%
Total Pension Admin excluding activities 6b, 7a, 7b, and 7f <sup>2</sup>	\$56,568	\$98,049	\$95,042	59%	67%	65%

1. Pension administration FTE excludes: FTE whose salaries are being capitalized, FTE administering healthcare and FTE administering optional benefits.

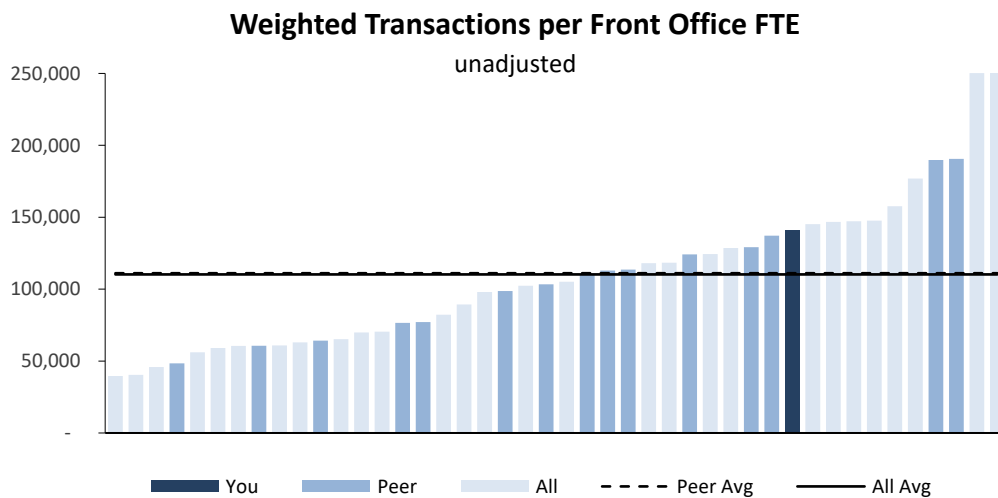
2. Section 3 'Total Costs' and the Executive Summary use the FTE-weighted peer average of \$91,593 to explain cost differences. It is used to explain cost differences because salary differences matter more for peers with more FTEs. To avoid double counting items quantified separately in the cost model, the FTE-weighted average also: (i) excludes activities 6b, 7a, 7b and 7f, and, (ii) weights front and governance and support salaries per your ratio of front to governance and support FTE.

# Salaries and benefits per FTE by activity aggregates



## Productivity

Total productivity is defined as the number of weighted transactions per front-office, full-time-equivalent staff (FTE). Your productivity was 140,740 per front-office FTE. This was above the in-house peer average of 111,088.



Weighted transaction volumes equal the cost-weighted average of front-office activity volumes. It is a measure of work. Details of the calculation are shown in Section 6 Transaction Volumes. Front office activities are the activities that come in contact with clients or employers, such as paying pensions, pension inception and member calls. It excludes support activities such as Governance and Financial Control, Major Projects and Support Services.

Differences in productivity are caused by differences in:

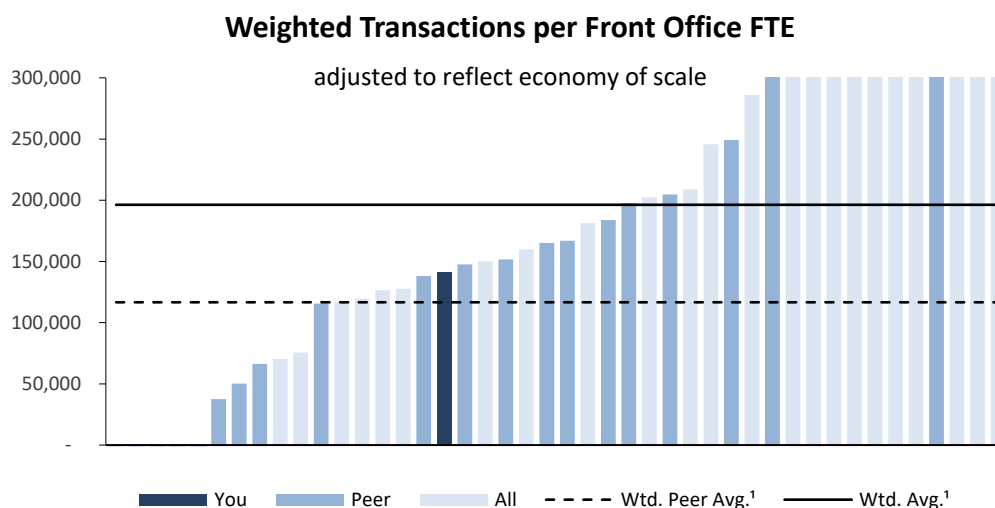
- Economies of scale (see next page)
- Staff skills and staff productivity
- IT capability / online transactions
- Service levels, for example, shorter wait times may require more staff
- Complexity of plan rules
- Using more consultants and third parties to do part of the work
- Projects
- Organization design

It is important to emphasize that total productivity is not a measure of staff productivity; staff productivity is however a component of total productivity.

## Productivity - adjusted for economies of scale

Productivity is impacted by economies of scale. CEM research shows that, on average, smaller systems have lower productivity than larger systems. Thus we need to adjust the productivity of your peers for economies of scale in order to produce an accurate comparison.

After adjusting for economies of scale, your productivity (weighted transaction volumes per FTE) was 21% above the weighted peer average.



1. The peer and all averages are weighted by workloads (i.e., weighted transactions per member) because differences in productivity matter more for peers with higher workloads when explaining cost differences.

## Productivity by activity

Productivity by activity must be interpreted cautiously because annual fluctuations in activity volumes can cause large swings in productivity. Unusually high volumes in a given year will make you look more productive than normal. Unusually low volumes will make you look less productive.

Productivity by Front-Office Activity		Activity Volume per FTE		
Front-Office Activities	Activity Volume Description	You	Peer Avg	All Avg
<b>1. Member Transactions</b>				
a. Pension Payments	Annuitants	42,964	28,152	24,162
b. Pension Inceptions	New Payee Inceptions	684	912	650
c. Refunds, Withdrawals, and Transfers-out	Refunds, Withdrawals, and Transfers-out	1,188	2,038	1,682
d. Purchases and Transfers-in	Purchases and Transfers-in	827	440	888
e. Disability	Disability Applications	154	196	165
<b>2. Member Communication</b>				
a. Call Center	Calls and Emails	6,572	7,830	9,925
b. Mail Room, Imaging	Incoming Mail	40,772	30,264	27,953
c. 1-on-1 Counseling	Members Counseled 1-on-1	735	1,232	2,533
d. Member Presentations	Member Presentations	76	117	144
e. Written Pension Estimates	Written Estimates	1,175	7,995	4,820
f. Mass Communication	Active Members and Annuitants	208,996	105,437	82,172
<b>3. Collections and Data Maintenance</b>				
a. Data and Money from Employers	Active Members	31,889	28,106	21,226
b. Service to Employers	Active Members	78,660	44,053	261,269
c. Data Not from Employers	Actives, Inactives, Annuitants	282,662	569,740	400,588
Weighted Transactions per Front Office FTE		140,740	111,088	110,250
adjusted for Economies of Scale <sup>1, 2</sup>		140,740	116,646	196,280

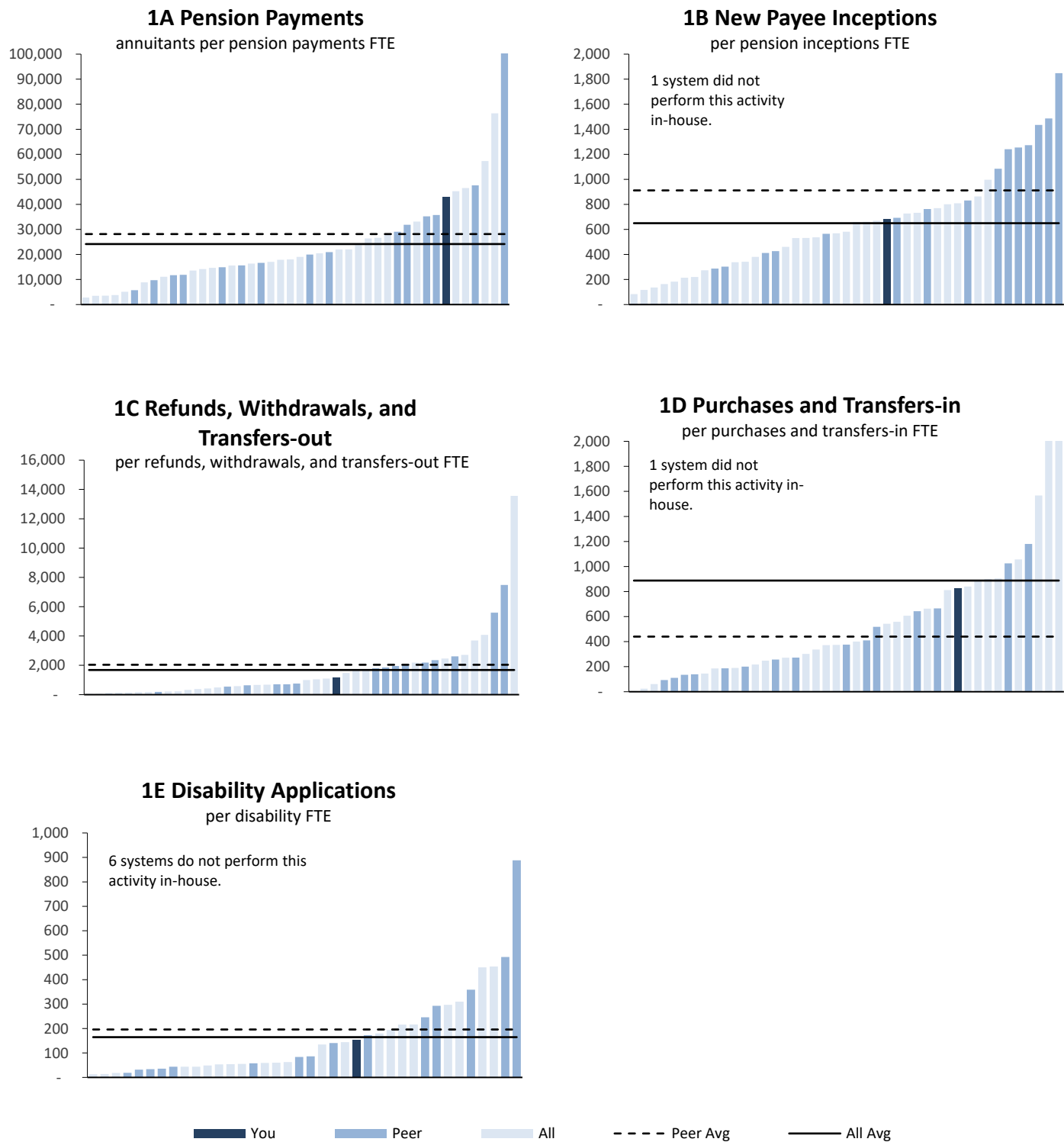
1. Productivity is impacted by economies of scale. CEM research shows that, on average, smaller systems have lower productivity than larger systems. Thus we need to adjust the productivity of your peers for economies of scale in order to produce an accurate comparison.
2. The peer and all averages, for this value only, are weighted by workloads (i.e., weighted transactions per member) because differences in productivity matter more for peers with higher workloads when explaining cost differences.

Differences in productivity are caused by differences in:

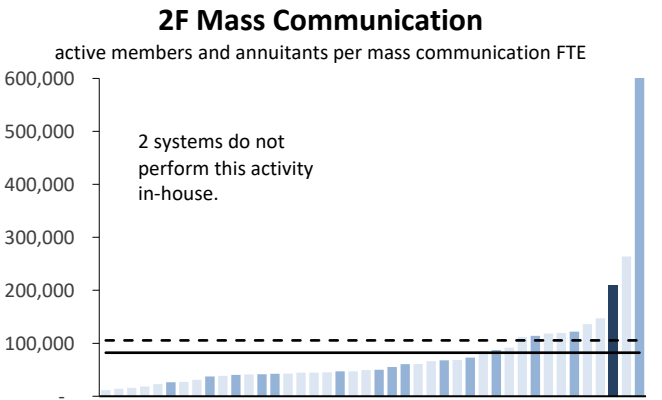
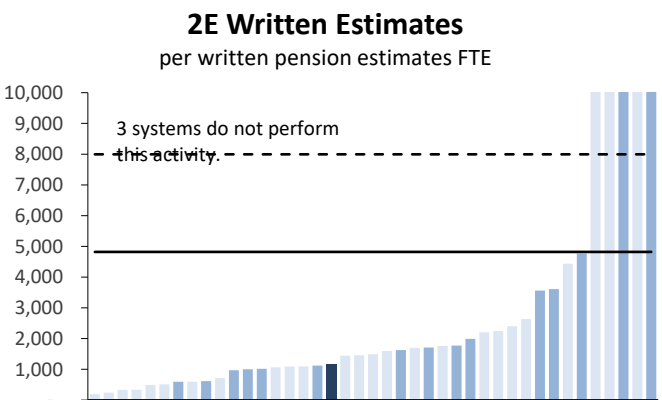
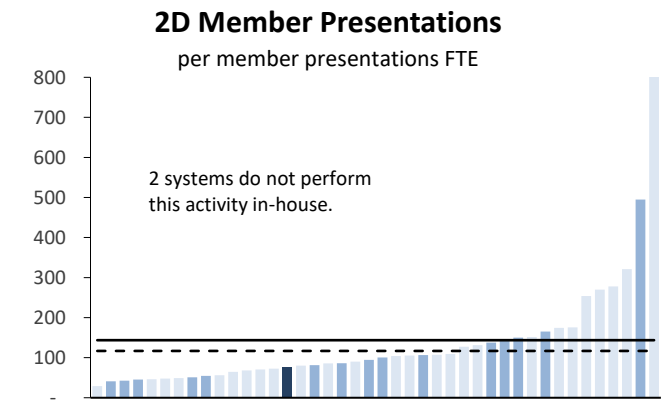
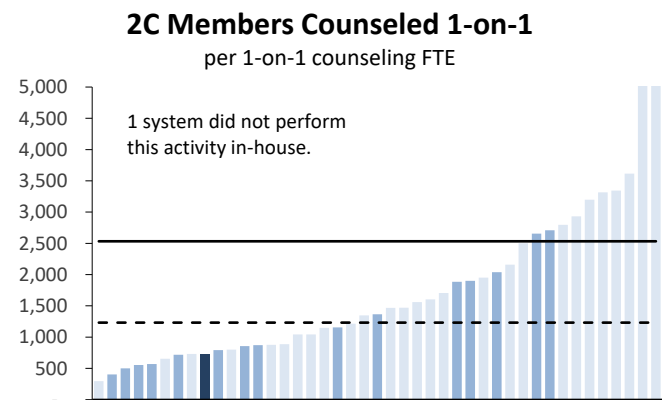
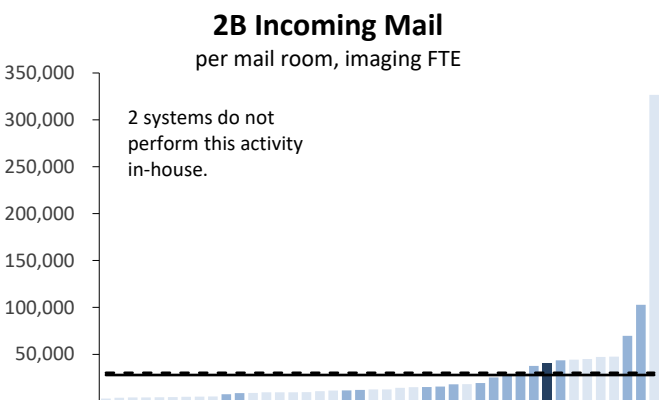
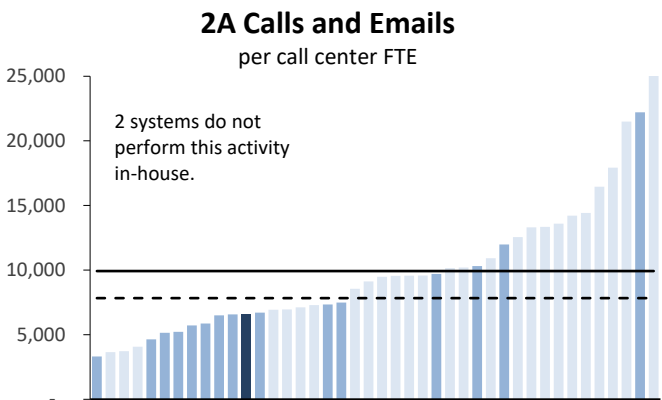
- Economies of scale (see previous page)
- Staff skills and staff productivity
- IT capability / online transactions
- Service levels, for example, shorter wait times may require more staff
- Complexity of plan rules
- Using more consultants and third parties to do part of the work
- Projects
- Organization design

It is important to emphasize that total productivity is not a measure of staff productivity; staff productivity is however a component of total productivity.

# Productivity by activity - member transactions



# Productivity by activity - member communication



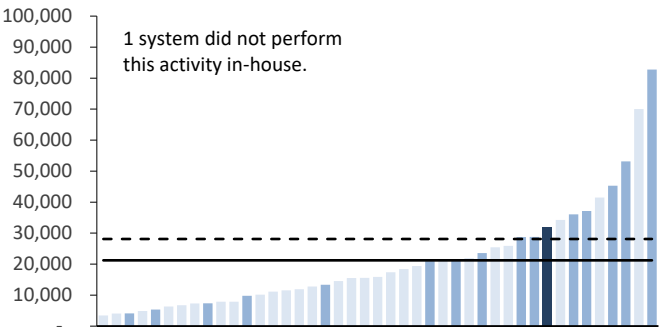
**You**      **Peer**      **All**      **Peer Avg**      **All Avg**



# Productivity by activity - collections and data maintenance

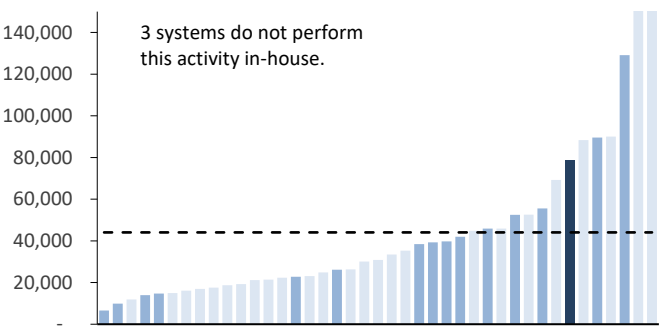
## 3A Data and Money from Employers

active members per data and money from employers FTE



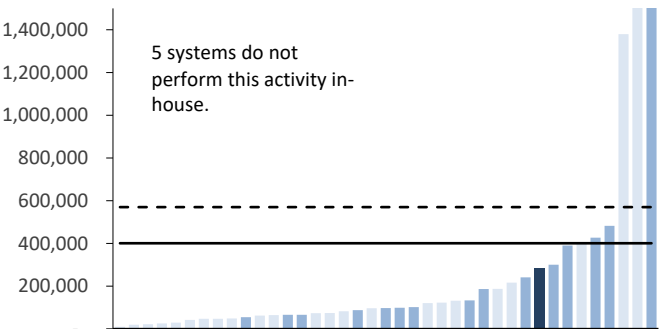
## 3B Service to Employers

active members per service to employers FTE



## 3C Data Not from Employers

actives, inactives, annuitants per data not from employers FTE



■ You   ■ Peer   ■ All   - - - - Peer Avg   — All Avg

# 6

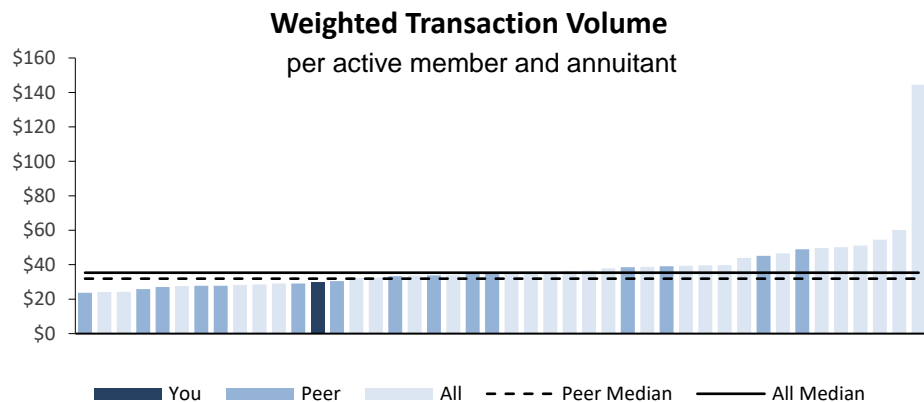
## Transaction Volumes

This section contains:

- Comparisons of the most important pension administration transaction volumes for each front-office activity. Transactions are a major driver of costs. It is higher cost to have more transactions per member.
- Comparisons of total workloads - your weighted transaction volumes per member. This shows whether your transaction volumes are more or less costly in aggregate.

## Workload: Weighted transaction volume per member

Your weighted transaction volume was \$29.61 per active member and annuitant. This was below the peer median of \$31.91.



Your weighted transaction volume per member indicates whether you are doing more or less administration work per member in aggregate than your peers. This could be due to reasons that are beyond your control, or because you are voluntarily doing more work for your members. Differences in work reflect differences in:

- Activities that you administer. For example, some systems do not administer disability.
- Service levels
- Membership mix
- Member demographics

The calculation of your weighted transaction volume is shown on the following page.

### Interpreting your weighted transaction volumes

Transaction volumes are an important driver of costs. As shown in 'section 3 - Total Cost', your below average weighted transaction volumes decreased your total cost by an estimated \$1.49 per member relative to the peer average.

Mindful that transaction volumes are a significant driver of cost, this is one area to focus attention on in terms of potentially saving money. You may look at where you process more work than your peers with a view to reducing that volume (provided you have control over the volume).

## Calculation of your weighted transaction volume

Your weighted transaction volume equals the cost weighted average of the 14 'front-office' pension administration transaction volumes shown in the table below.

Calculation of Your Weighted Transactions per Member			
Transaction (or Cost Driver) by Front-Office Activity	Your Volume (A)	Weight = All Median Cost per Transaction (B)	Weighted Volume (A x B)
1. Member Transactions			
a. Pension Payments (Annuitants)	322,227	\$8.14	2,623,971
b. New Payee Inceptions	17,309	\$130.32	2,255,709
c. Refunds, Withdrawals, and Transfers-out	18,420	\$104.47	1,924,328
d. Purchases and Transfers-in	2,564	\$192.34	493,165
e. Disability Applications	2,404	\$1,291.75	3,105,361
2. Member Communication			
a. Calls and Emails	356,833	\$8.78	3,131,413
b. Incoming Mail	285,402	\$6.53	1,862,849
c. Members Counseled 1-on-1	2,939	\$65.18	191,572
d. Member Presentations	303	\$1,177.06	356,648
e. Written Estimates	3,173	\$45.35	143,884
f. Mass Communication (Active Members and Annuitants)	794,185	\$2.88	2,290,021
3. Collections and Data Maintenance			
a. Data and Money from Employers (Active Members)	471,958	\$5.57	2,629,743
b. Service to Employers (Active Members)	471,958	\$3.44	1,625,258
c. Data Not from Employers (Actives, Inactives, Annuitants)	989,316	\$0.89	883,688
Total			23,517,612
Total per active member and annuitant			\$29.61

## Methodology notes

- **Weights** - The weights used for all activities are the all median cost per transaction. This enables us to normalize for the substantial differences in time and effort expended on each type of task. For example, a 1-on-1 counseling session is more costly and time consuming than answering a telephone call. This difference is reflected in the weights where the cost per 1-on-1 counseling session of \$65.18 is approximately 7 times higher than the cost per call of \$8.78.
- **Back-Office Activities** (e.g., Governance and Financial Control, Major Projects and Support Services) - The work of back-office activities is excluded from the weighted transaction volume score. This is because most work of back-office activities cannot be analyzed in terms of transaction volumes. For example, it would be nearly impossible to consider the role of a CEO in terms of the number of transactions that he or she processes.
- **Web** - Transaction volumes are weighted the same regardless of channel. Online transactions typically cost less, but if we applied a lower weight, then a system that has achieved a high level of online functionality would be unfairly penalized.
- **Secondary versus primary cost drivers** - The activity volumes used to determine your weighted transaction volume score are the primary cost drivers for each activity. Secondary cost drivers are ignored in this section because they are usually relatively immaterial.
- **Using members as a proxy** - For some activities, we have used members (or member subsets such as annuitants) as a proxy for the activity's transactions. For example, active members are used as a proxy for the transactions of the Collections and Data Maintenance activity. The implicit assumption is that data maintenance transactions, such as address changes, will occur at similar ratios of members for all systems.

## Comparison of transaction volumes by activity

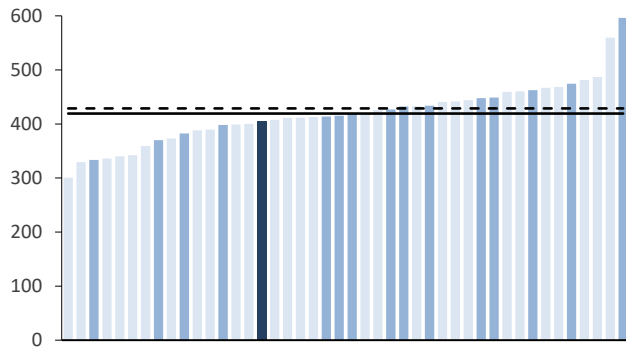
The table below shows whether you are doing more or fewer transactions per member than your peers by front-office activity. All volumes in the table are compared 'per 1,000 active members and annuitants' even if all member types do not always cause the volume. This is because active members and annuitants is the divisor when comparing total cost per member. Therefore, to know how volumes impact your relative total cost performance, they need to be compared on the same basis.

Comparisons of Transaction Volumes by Activity				
		Volume per 1,000 Active Members and Annuitants		
Transaction (or Cost Driver) by Front-Office Activity	Your Volume	You	Peer Avg	All Avg
1. Member Transactions				
a. Pension Payments (Annuitants)	322,227	406	429	419
b. New Payee Inceptions	17,309	22	24	23
c. Refunds, Withdrawals, and Transfers-out	18,420	23	21	20
d. Purchases and Transfers-in	2,564	3	5	28
e. Disability Applications	2,404	3	2	1
2. Member Communication				
a. Calls and Emails	356,833	449	559	642
b. Incoming Mail	285,402	359	394	352
c. Members Counseled 1-on-1	2,939	4	21	38
d. Member Presentations	303	0	1	1
e. Written Estimates	3,173	4	24	36
f. Mass Communication (Active Members and Annuitants)	794,185	1,000	1,000	1,000
3. Collections and Data Maintenance				
a. Data and Money from Employers (Active Members)	471,958	594	571	581
b. Service to Employers (Active Members)	471,958	594	571	581
c. Data Not from Employers (Actives, Inactives, Annuitants)	989,316	1,246	1,460	1,277
Weighted Total		29,612	33,149	38,656

## Member transactions per 1,000 members: Graphical comparisons

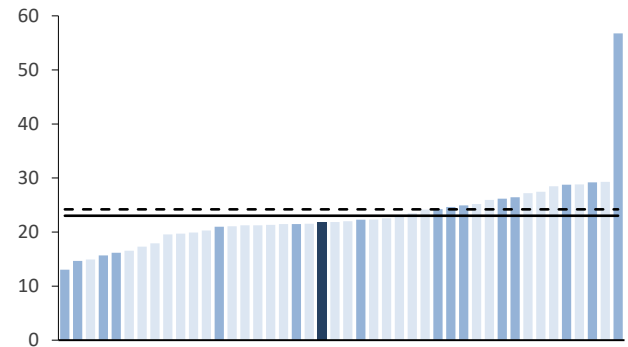
### 1A Pension Payments (Annuitants)

per 1,000 active members and annuitants



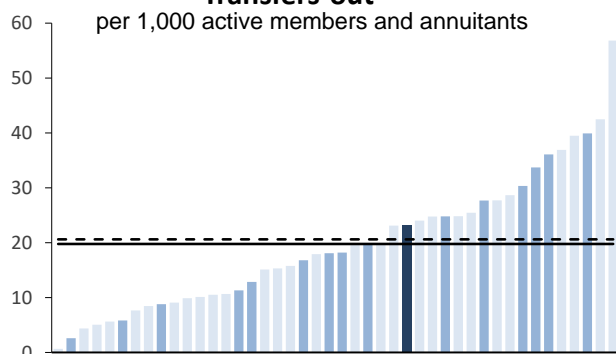
### 1B New Payee Inceptions

per 1,000 active members and annuitants



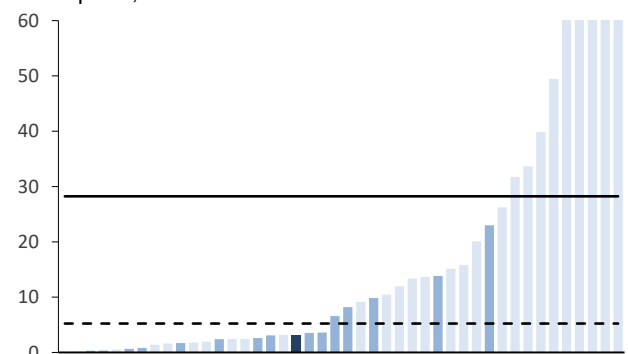
### 1C Refunds, Withdrawals, and Transfers-out

per 1,000 active members and annuitants



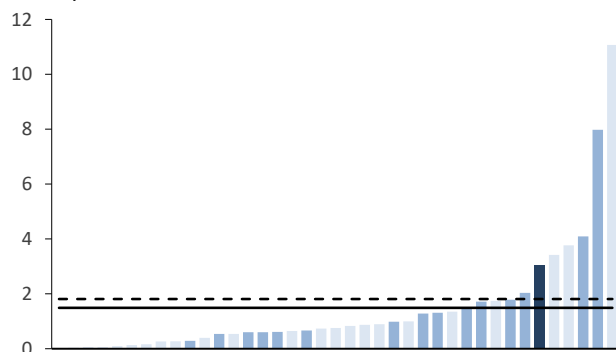
### 1D Purchases and Transfers-in

per 1,000 active members and annuitants



### 1E Disability Applications

per 1,000 active members and annuitants



■ You

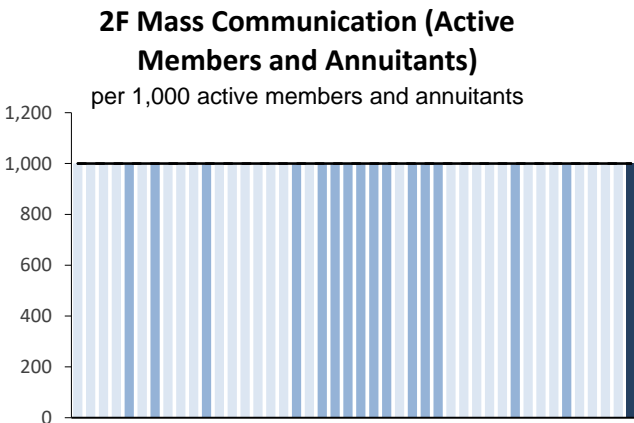
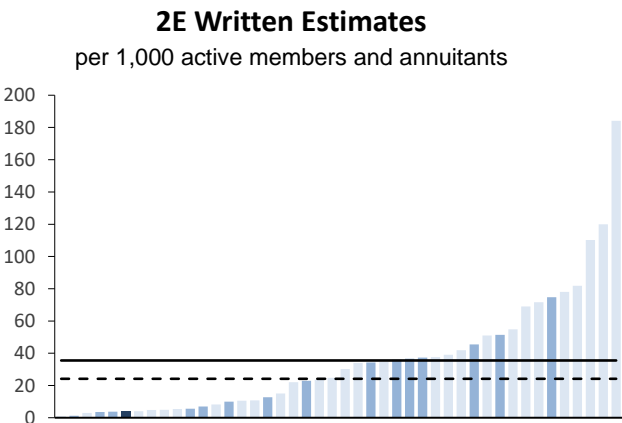
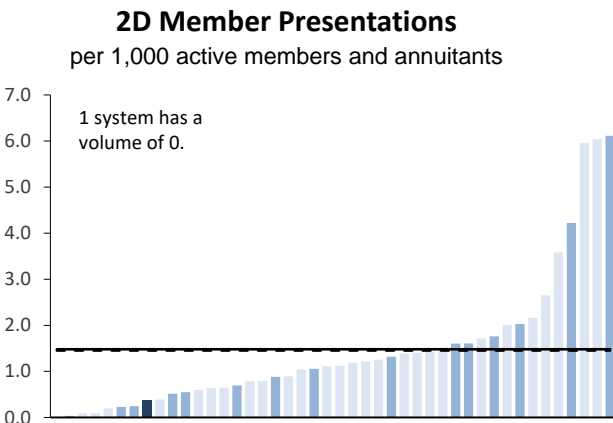
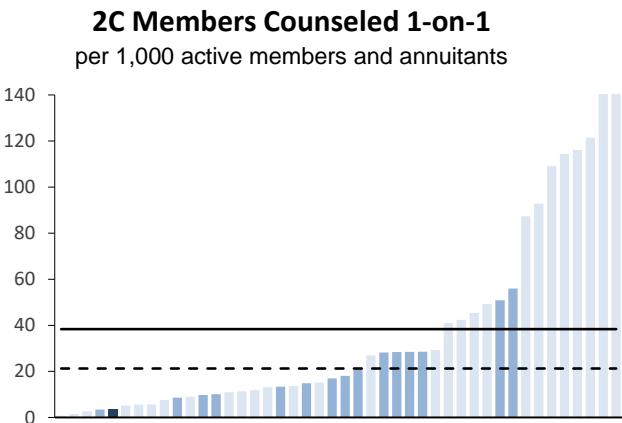
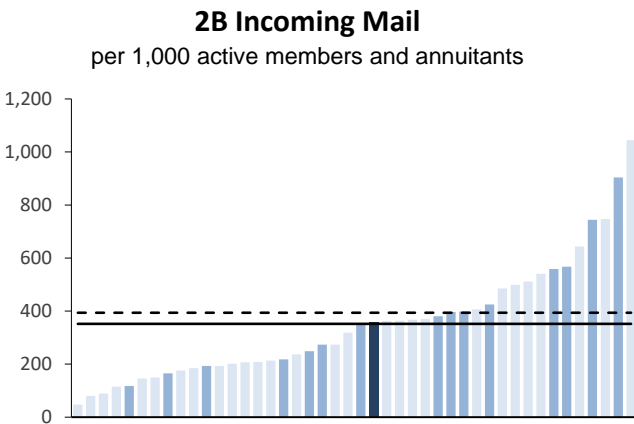
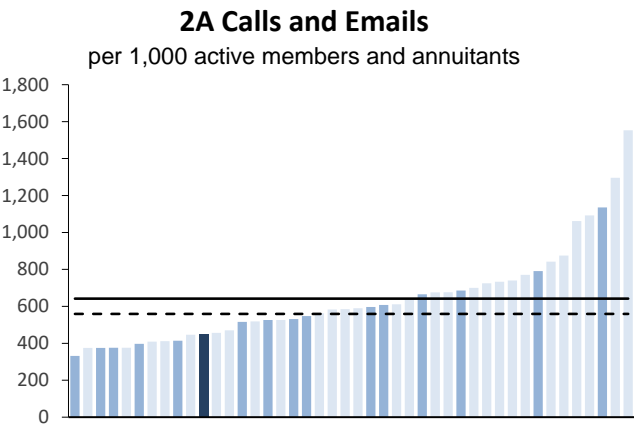
■ Peer

■ All

--- Peer Avg

— All Avg

Communications transactions per 1,000 members: Graphical comparisons



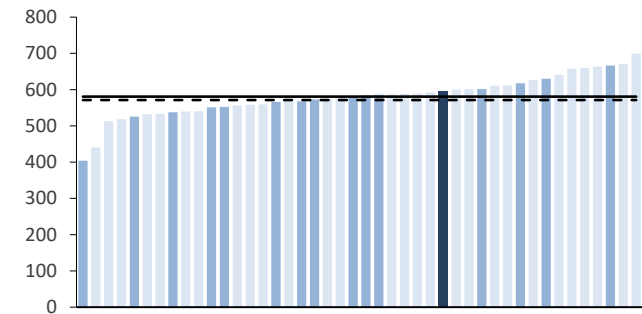
**You**      **Peer**      **All**      - - - - Peer Avg      — All Avg



# Collections and data transactions per 1,000 members: Graphical comparisons

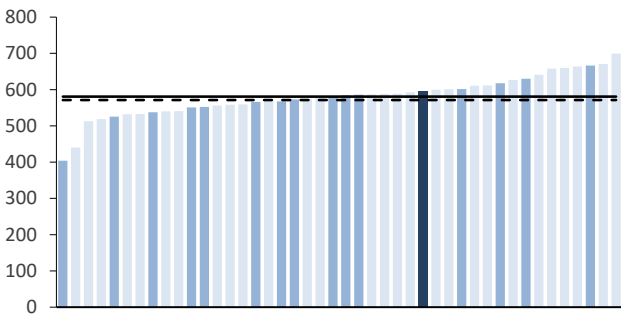
3A Data and Money from Employers  
(Active Members)

per 1,000 active members and annuitants



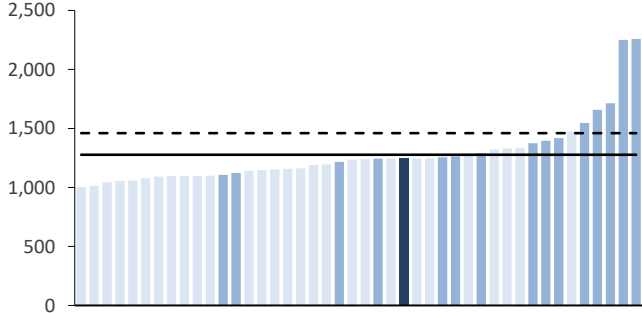
3B Service to Employers (Active Members)

per 1,000 active members and annuitants



3C Data Not from Employers (Actives, Inactives, Annuitants)

per 1,000 active members and annuitants



■ You    ■ Peer    ■ All    - - - Peer Avg    — All Avg

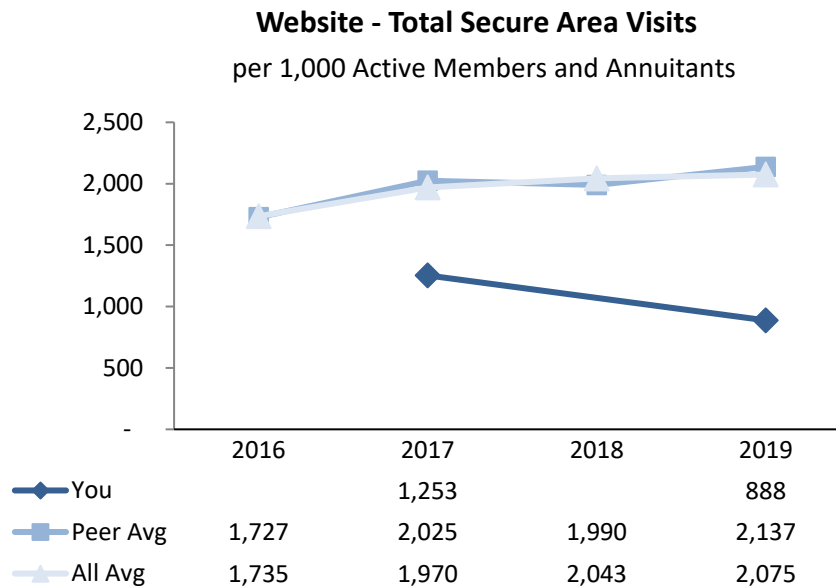
## Online transactions

Online Tool	% offering tool			If offered: Volume per 1,000 active members and annuitants		
	You	Peer	All	You	Peer Median	All Median
Benefit calculators						
In non-secure area	Yes	56% Yes	52% Yes	553	298	254
In secure area not linked to member data	No	25% Yes	20% Yes	n/a	14	13
In secure area linked to member's salary and service data	Yes	81% Yes	86% Yes	974	599	578
Service credit purchase calculator	Yes	88% Yes	77% Yes	118	32	41
Register for counseling sessions	Yes	56% Yes	42% Yes	39	12	13
Real-time access to available dates and times	No	89% Yes	94% Yes			
Register for counseling presentations	Yes	87% Yes	76% Yes	Unknown	18	19
Live chat	No	0% Yes	2% Yes	n/a	n/a	n/a
Change address	Yes	94% Yes	91% Yes	17	46	41
Change beneficiary	Yes	81% Yes	66% Yes	127	27	46
Change email address	Yes	94% Yes	91% Yes	147	43	34
Reset password	Yes	94% Yes	91% Yes	119	119	95
Tools for annuitants						
Change banking information for direct deposit	Yes	75% Yes	55% Yes	64	21	6
Change tax withholding amount	Yes	81% Yes	70% Yes	47	25	21
Download or print duplicate tax receipts	Yes	88% Yes	82% Yes	86	72	66
View annuity payment details	Yes	88% Yes	86% Yes	179	179	135
Submit a retirement application	Yes	63% Yes	45% Yes	3	8	7
View status of online retirement application	Yes	60% Yes	41% Yes	25	59	21
Apply for a refund or a transfer-out	No	69% Yes	28% Yes	n/a	12	15
Digital file of recent correspondence and member documents	No	69% Yes	51% Yes	n/a	438	352
Download member statement	Yes	81% Yes	91% Yes	576	162	219
Upload documents	No	56% Yes	49% Yes	n/a	5	22
View pensionable earnings and/or service without downloading	Yes	88% Yes	86% Yes	732	1,008	919
If yes:						
Are both salary and service data available?	Yes	93% Yes	97% Yes			
Is online data up-to-date to the most recent pay period?	Yes	86% Yes	81% Yes			
Is a complete annual history from the beginning of employment provided?	Yes	79% Yes	59% Yes			
If you administer a core DC or hybrid DB/ DC plan:						
Switch between investment options	n/a	75% Yes	77% Yes	n/a	3	3
Change deferral percentage selections for regular contributions	n/a	38% Yes	38% Yes	n/a	5	8
Initiate withdrawals	n/a	50% Yes	54% Yes	n/a	3	4
View current valuation of their account	n/a	88% Yes	85% Yes	n/a	507	320

Offering online transactions as an option is higher service. Online transactions can also reduce costs provided sufficient volumes are achieved.

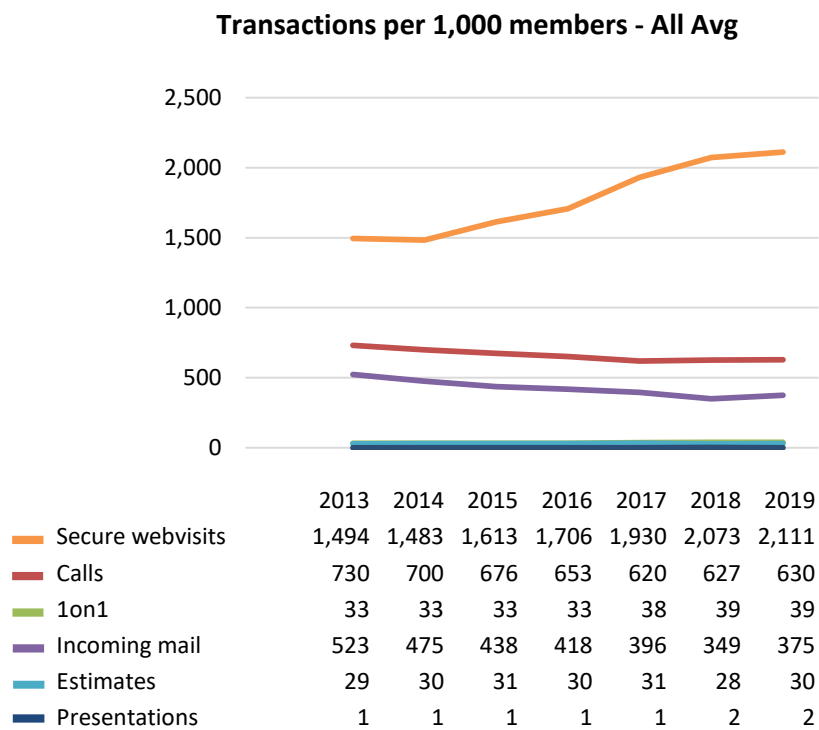
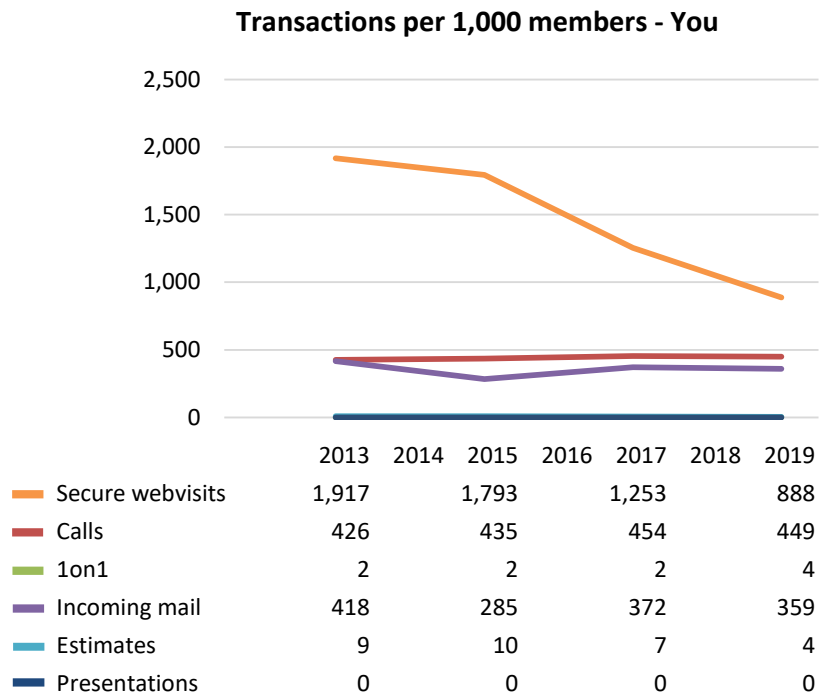
## Online trends

Total secure website visits per 1,000 Active Members and Annuitants for your peers that have participated for 4 consecutive years has grown at a compound annual rate of 7.4% between 2016 and 2019. The all participant average is 6.1%. Your growth rate over the same period is unavailable per annum.



Trend analysis is based on systems that have provided 4 consecutive years of data.

## Transaction trends



Trend analysis is based on 36 systems that provided 7 consecutive years of data.

# 7

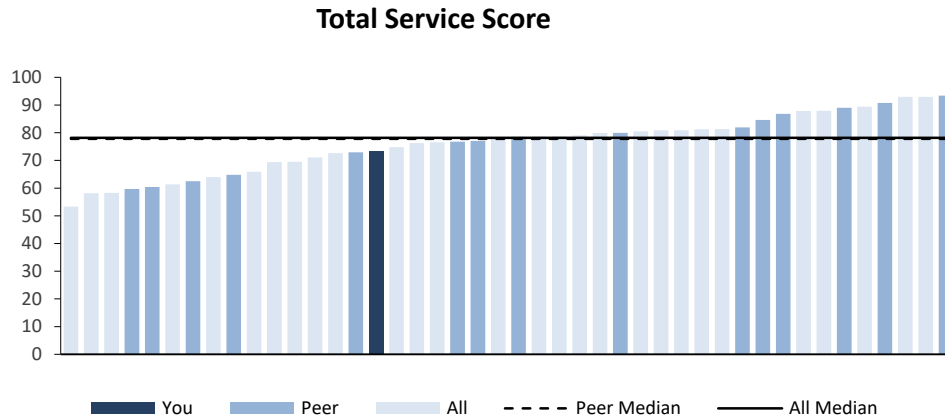
## Service Levels

This section:

- Analyzes your current service levels relative to your peers, and other retirement systems in the U.S., Canada, Denmark, Sweden and the Netherlands to identify what you do and how it compares to others.
- Identifies areas where you may be able to improve or reduce your service levels.
- Provides details of the methodology and criteria we used to evaluate your service levels.

## Total service score

Your total service score was 73 out of 100. This was below the peer median of 78.



Your total service score is the weighted average of your service scores for the activities shown on the next page.

### Interpreting your service score

A higher service score is not necessarily better. This is because:

- High service may not always be cost effective or optimal. For example, it is clearly higher service for your members to have a contact center open 24 hours a day but few systems would be able to justify the cost.
- Our 'weights' are an approximation of the importance of an individual service element. The weights will not always reflect the relative importance that you or your members attach to an individual service element.

The service measures are most useful for identifying what you are doing differently than your peers. Understanding these differences can give you ideas on how you may want to improve or reduce the service you provide to your members.

### Service score methodology changes

CEM's changed satisfaction surveying to customer experience surveying. Refer to Appendix E for further details.

## Comparisons of activity service scores

Your total service score is the weighted average of your service scores for each of the activities shown in the table below. The rationale for the weighting scheme is discussed on the following page.

Service Scores by Activity													
Activity	Weight <sup>1</sup>	You <sup>2, 3</sup>				Peer 2019				All 2019			
		2019	2018	2017	2016	Avg	Max	Med	Min	Avg	Max	Med	Min
1. Member Transactions													
a. Pension Payments	10.0%	100		100		100	100	100	99	100	100	100	95
b. Pension Inceptions	7.4%	81		85		83	100	89	9	83	100	88	9
c. Refunds, Withdrawals, and Transfers-out	1.3%	90		90		88	100	95	5	74	100	90	5
d. Purchases and Transfers-in	3.1%	95		95		82	100	90	20	73	100	87	0
e. Disability	3.8%	91		91		79	100	82	10	82	100	82	10
2. Member Communication													
a. Call Center	21.0%	53		40		64	96	63	38	67	96	70	35
c. 1-on-1 Counseling	7.4%	36		29		79	99	85	36	79	100	82	36
d. Member Presentations	6.5%	95		71		92	100	100	35	92	100	100	0
e. Written Pension Estimates	4.7%	81		76		79	100	84	25	81	100	87	25
f. Mass Communication													
• Website <sup>2</sup>	21.3%	87		82		78	95	84	22	75	98	77	22
• News and targeted communication	2.8%	54		68		79	95	79	54	71	99	77	13
• Member statements	4.7%	77		77		80	96	85	56	78	96	82	10
3. Quality Indicators													
Customer Experience Surveying	5.0%	36		17		34	75	35	7	34	89	30	0
Disaster Recovery	1.0%	56		56		85	100	87	56	90	100	94	56
Total service score	100%	73		67		77	93	78	60	76	93	78	53

1. The rationale for the weighting scheme is shown on the next page. Other systems may have slightly different activity weights than you. Their weights reflect the member transactions that they administer. For example, you do not administer disability whereas some of your peers do. Therefore, the average total service score will not match the activity weight multiplied by the average activity service score.

2. Website capabilities are also incorporated in the service scores for other activities. Those activities and the contribution of the website-related part of the score are: 1a Pension Payments, 0.5%, 2c 1-on-1 Counseling, 1.3%, 2d Member Presentations, 4.5% and 2e Written Pension Estimates, 2.1%, for a total of 8.4%

3. Historic scores have been restated to reflect changes in methodology.

## Rationale for the weighting scheme

CEM considered the following 7 criteria to determine the weights used to calculate your total service score:

1. **Feedback from Participants**

The weights reflect feedback from participants solicited at on-site meetings, symposiums and peer conferences.

2. **Relative Cost of Each Activity**

As shown in section 3, the average participant spends 5.3% of its annual budget on member calls versus 1.9% for 1-on-1 counseling. Thus, based solely on relative cost, member calls are 2.7 times more important than 1-on-1

3. **Relative Volume of Each Activity** (i.e., how many times does the service 'touch' a member?)

The average system does 23 pension inceptions and receives 642 member calls for every 1,000 active members and annuitants. Thus, based solely on relative volume, calls are 27.9 times more important than pension inceptions.

4. **Expectations Based on External Experience**

Members have external comparisons for receiving payments, telephone calls, and annual statements (for example, they can compare some of your services with the services provided by their bank). However, it is unlikely that they can compare a pension inception. It is important to recognize that members can compare some processes externally.

5. **Personalized Human Contact**

Research shows that human contact provides the greatest opportunity for generating customer satisfaction. Thus, based solely on personalized human contact, counseling and calls are more important than 'no contact' activities such as the website or paying pensions.

6. **About Members' Money**

Nothing gets a member's attention faster than their own money. Based on this criterion, things like benefit calculators linked to member data, benefit statements and paying pensions are much more important than newsletters or brochures.

7. **Mission Critical**

Paying pensions is mission critical. Producing newsletters is not.



## Service Trends

Service Score Trends by Activity															
Activity	You					4-Year <sup>1</sup> Peer Average					4-Year <sup>1</sup> All Average				
	2016	2017	2018	2019	% <sup>2</sup>	2016	2017	2018	2019	% <sup>2</sup>	2016	2017	2018	2019	% <sup>2</sup>
1. Member Transactions															
a. Pension Payments		100		100	n/a	100	100	100	100	0.0%	100	100	100	100	0.0%
b. Pension Inceptions		85		81	n/a	82	82	82	82	0.0%	84	83	85	85	0.4%
c. Refunds, Withdrawals, and Transfers-out		90		90	n/a	75	82	86	87	5.1%	68	71	73	72	1.9%
d. Purchases and Transfers-in		95		95	n/a	82	83	83	85	1.2%	69	74	71	72	1.4%
e. Disability		91		91	n/a	79	79	77	78	-0.4%	84	83	82	84	0.0%
2. Member Communication															
a. Call Center		40		53	n/a	65	67	68	67	1.0%	69	71	69	68	-0.5%
c. 1-on-1 Counseling		29		36	n/a	84	83	84	84	0.0%	78	79	79	80	0.8%
d. Member Presentations		71		95	n/a	96	97	96	95	-0.3%	91	93	96	93	0.7%
e. Written Pension Estimates		76		81	n/a	83	82	82	81	-0.8%	81	83	83	82	0.4%
f. Mass Communication															
• Website		82		87	n/a	74	76	76	77	1.3%	72	73	74	75	1.4%
• News and targeted communication		68		54	n/a	82	83	82	82	0.0%	75	76	76	73	-0.9%
• Member statements		77		77	n/a	83	83	85	83	0.0%	79	79	80	79	0.0%
3. Quality Indicators															
Customer Experience Surveying		17		36	n/a	31	31	34	33	2.1%	31	32	34	35	4.1%
Disaster Recovery		56		56	n/a	88	88	89	90	0.8%	91	92	93	92	0.4%
Total Service Score		67		73	n/a	77	78	78	78	0.4%	76	77	77	77	0.4%

1. Trend analysis is based on systems that have participated for 4-consecutive years (13 peers and 33 World systems). This ensures that trends are not caused by changes in the composition of the participants.

2. % is the compound annual growth rate from 2016 to 2019.

Historic scores have been restated to reflect changes in methodology. If any service question was not asked in a prior year, we used your response from the year when the question was first asked as a default.

## Where can you potentially improve your score?

Potential Improvement in Total Service Score by Activity			
Activity	Weight	Your Service Score	Potential improvement in your total service score if you scored 100 for the activity <sup>1</sup>
1. Member Transactions			
a. Pension Payments	10.0%	100.0	0.0 points
b. Pension Inceptions	7.4%	81.4	1.4 points
c. Refunds, Withdrawals, and Transfers-out	1.3%	90.0	0.1 points
d. Purchases and Transfers-in	3.1%	95.0	0.2 points
e. Disability	3.8%	91.0	0.3 points
2. Member Communication			
a. Call Center	21.0%	53.2	9.8 points
c. 1-on-1 Counseling	7.4%	36.3	4.7 points
d. Member Presentations	6.5%	95.0	0.3 points
e. Written Pension Estimates	4.7%	81.2	0.9 points
f. Mass Communication			
• Website	21.3%	87.0	2.8 points
• News and targeted communication	2.8%	53.5	1.3 points
• Member statements	4.7%	77.0	1.1 points
3. Quality Indicators			
Customer Experience Surveying	5.0%	36.1	3.2 points
Disaster Recovery	1.0%	56.0	0.4 points
Total	100%	73.5	26.5 points

1. Each listed potential improvement to total service score equals 100 minus your 2019 score multiplied by the weight used to determine the total service score.

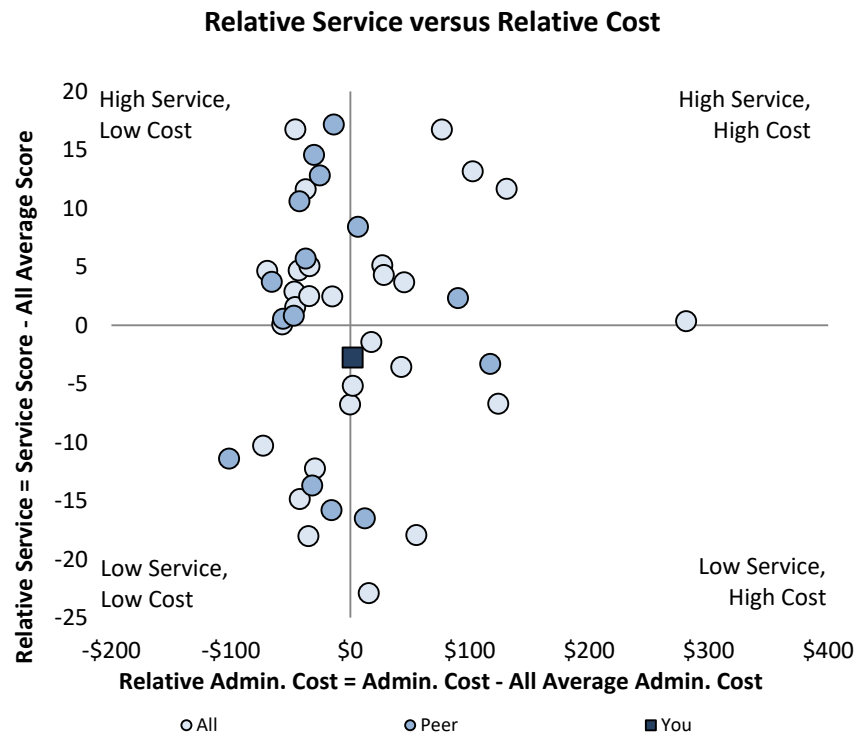
## Biggest potential improvements to your total service score

CEM is not recommending these changes. Higher service is not necessarily optimal or cost effective. We include this summary analysis because many participants want to know what they would have to do to achieve a higher score. For a complete list of all improvements required to achieve a perfect service score, please refer to the last pages of this section.

The table below lists five key areas where the biggest potential improvements to your total service score can be made.

Biggest potential improvements to your total service score		
Rank	Factor	Potential Improvement
# 1	You have 4 menu layers on your telephone tree. To achieve a perfect service score you must have one or fewer menu layers.	+ 2.10
# 2	11.6% of your incoming calls resulted in undesired outcomes (e.g., busy signals, messages, hang-ups). To achieve a perfect service score, members must experience no undesired call outcomes.	+ 1.96
# 3	On average, members calling your call center reach a knowledgeable person in 133 seconds. To achieve a perfect service score, members must reach a knowledgeable person on the phone in 60 seconds or less.	+ 1.53
# 4	0.0% of your total 1-on-1 sessions were located in the field. To achieve a perfect service score, the number of 1-on-1 sessions located in the field must be 25% or more.	+ 1.04
# 5	17.4% of your service pension inceptions experienced a cashflow interruption greater than one month. To achieve a perfect service score 100% of your service pensions must be incepted without a cashflow interruption greater than one month.	+ 1.00

## Relationship between service and pension administration cost

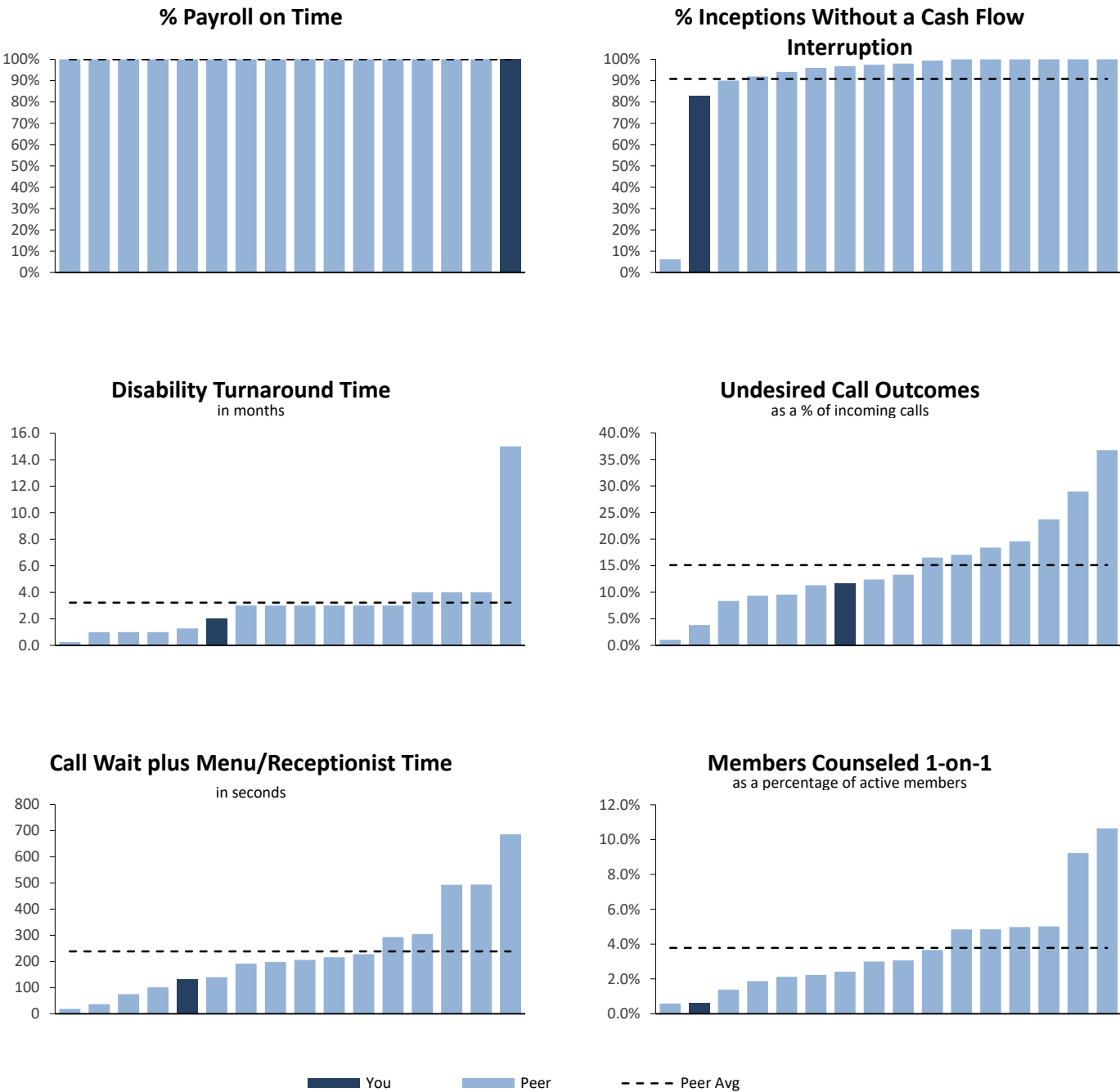


Service scores are not good predictors of costs because:

- Costs are driven much more by the volume of service transactions (e.g., the number of calls, 1-on-1 sessions, presentations, etc.) than they are by their timeliness, availability, or quality.
- Service is partly a function of historic investment in information technology. These historic costs are not always reflected in current administration costs.

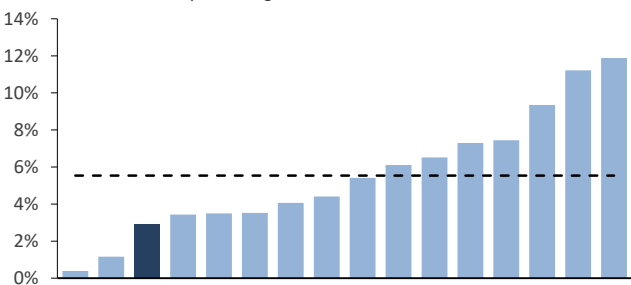
# Graphical comparison of key measures

This page shows key service metrics that are especially important from a member's perspective.

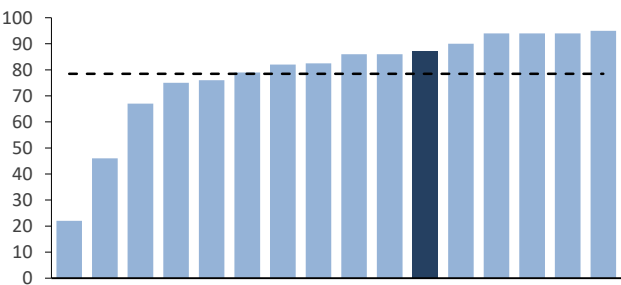


# Graphical comparison of key measures

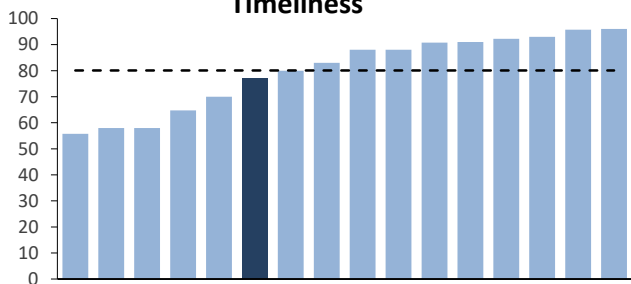
**Members Attending Presentations**  
as a percentage of active members



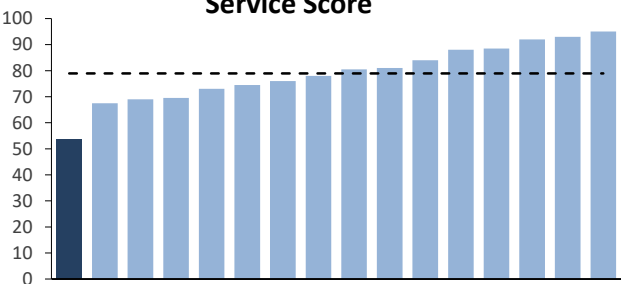
**Website Capability**



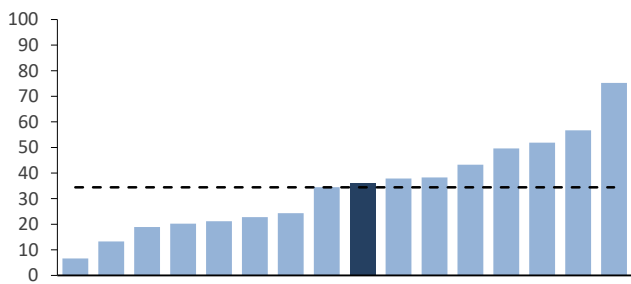
**Member Statement Content and Timeliness**



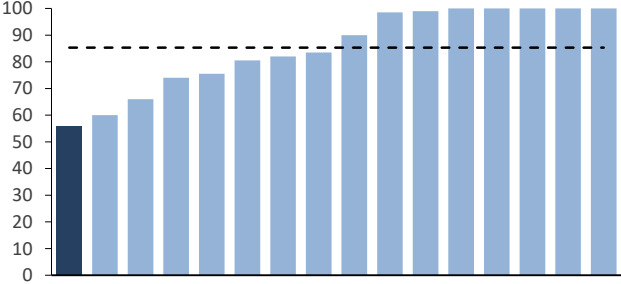
**News And Targeted Communication Service Score**



**Customer Experience Service Score**



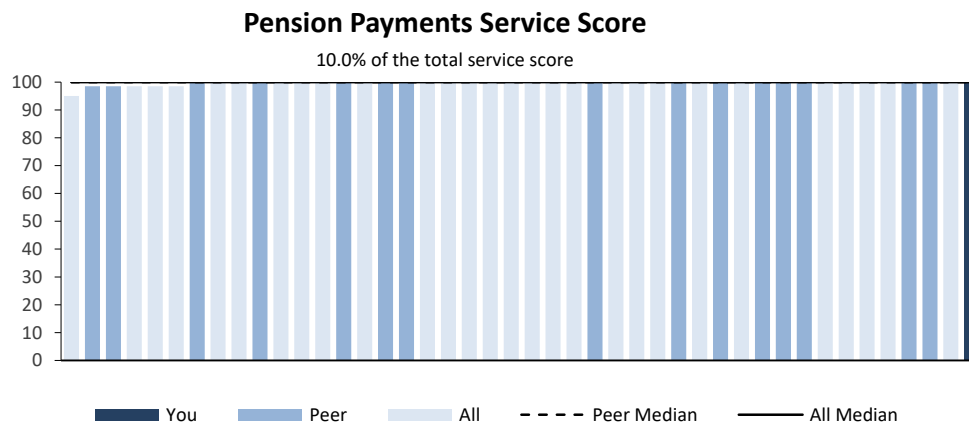
**Disaster Recovery Service Score**



**You**      **Peer**      **Peer Avg**

## 1A Pension Payments

Your service score for paying pensions was 100 out of 100. This was equal to the peer median.

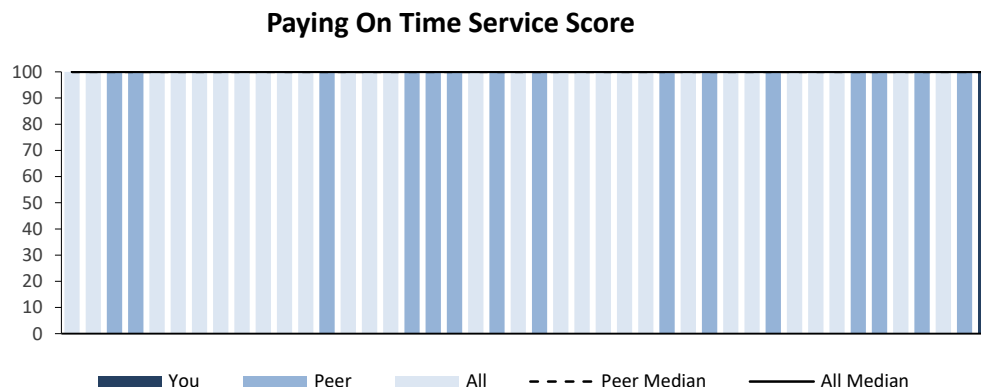


Your service score for 1a pension payments is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Pension Payments Service Score Components		
	Weight	Your Score
a. Paying on time	95%	100.0
b. Payment advices	5%	100.0
Weighted Total	100%	100.0

## a. Paying on time

Your service score for paying on time was 100 out of 100. This was equal to the peer median.



1. Scoring method	Your Data	Your Score
+ 100 if none of your pension payrolls were late vis-à-vis your normal payment cycle, otherwise 100 - (10 X number of late payrolls X average days late)	n/a	100
Total score		100

### 2. Rationale for the scoring method

Paying pensions on time is a critical component for all retirement systems. A perfect score requires that all regular payments are paid on time to the correct annuitants.

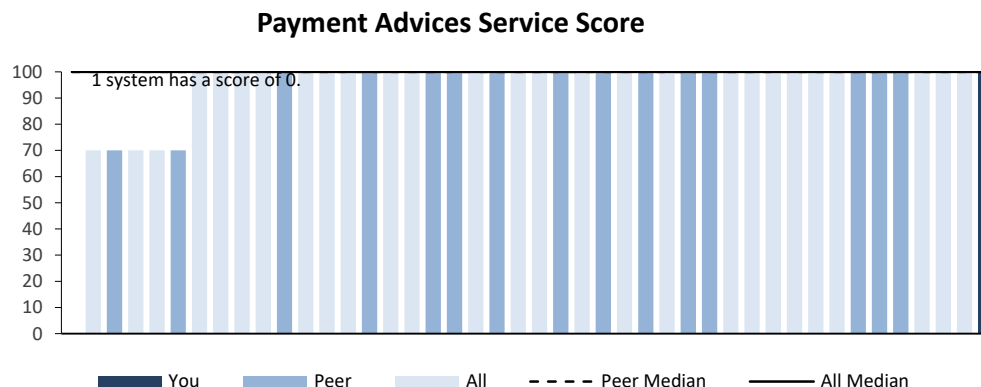
### 3. Survey questions used

	You	Peer Avg
Q11 Were any of your pension payrolls late vis-à-vis your normal payment cycle? [For example, a payroll might be late because of IT system problems, etc.]	No	0% Yes
a) How many payrolls were late?	n/a	n/a
b) On average, how many days late were they?	n/a	n/a



## b. Payment advices

Your service score for payment advices was 100 out of 100. This was equal to the peer median.



1. Scoring method	Your Data	Your Score
+ 100 if payment advices can be viewed online	Yes	100.0
<u>Or if you send payment advices by paper:</u>		
+ 80 if you send payment advices detailing the gross payment and deductions with every payment, 70 if every time amount changes, 50 if payment advices are sent quarterly, otherwise 0	Every Time Amount Changes	n/a
+ 20 if you can comply with a request not to send a payment advice	Yes	n/a
Total score		100.0

### 2. Rationale for the scoring method

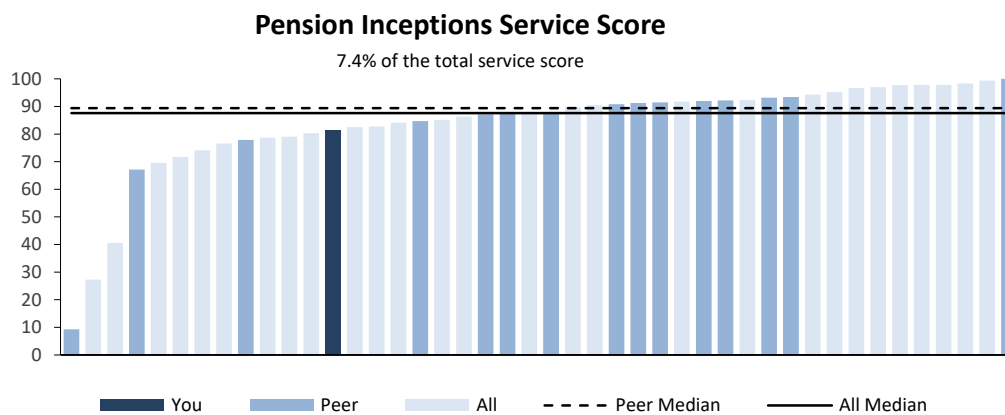
Paperless is most cost-effective. Therefore, systems that provide payment advices online get full points. Alternatively, systems that still send paper and can comply with a members request not to send payment advices, also receive the highest score.

## b. Payment advices

3. Survey questions used		You	Peer Avg
Q13	Do you send out payment advices (i.e., gross/ net specifications) in paper format to members receiving EFT payments?	Yes	81% Yes
	a) How frequently do you send payment advices with your EFT payments detailing the gross payment and deductions?	Every Time Amount Changes	6 times
	b) Can you comply with a member's request not to send them payment advices?	Yes	46% Yes
Q79	Indicate whether the following capabilities are available on your website and provide volumes:		
	o) View pension payment details? [i.e., gross amounts, deductions]	Yes	88% Yes

## 1B Pension Inceptions

Your service score for pension inceptions was 81 out of 100. This was below the peer median of 89.

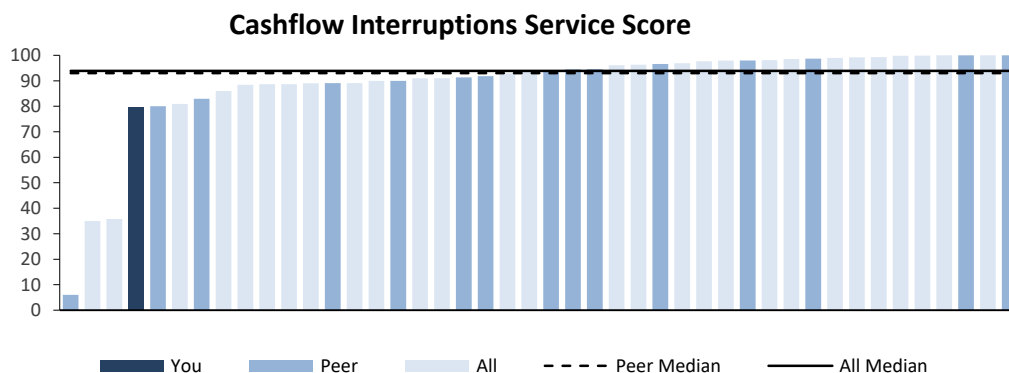


Your service score for 1b pension inceptions is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Pension Inceptions Service Score Components		
	Weight	Your Score
a. Cashflow interruptions	78%	79.6
b. Survivor pensions	11%	75.4
c. Red tape	11%	100.0
Weighted Total	100%	81.4

## a. Cashflow interruptions

Your service score for cashflow interruptions was 80 out of 100. This was below the peer median of 93.



1. Scoring method		Your Data	Your Score
+ 100	if 100% of your service pensions were inceptioned without a cashflow interruption greater than 1 month, otherwise 100 X percent of inceptions that occur within 1 month of final paycheck	82.6%	82.6
- 10	If a service retirement is based on estimates, less: 10 X percent of service retirements based on estimates X average number of months to finalize / 3 [Subject to a maximum deduction of 10 and a minimum score of 0]	Yes 15.2% 6.0	-3.0
Total score			79.6

### 2. Rationale for the scoring method

Retiring members should not experience a cash flow interruption between their final pay check and their first pension check. A cash flow interruption could cause financial hardship.

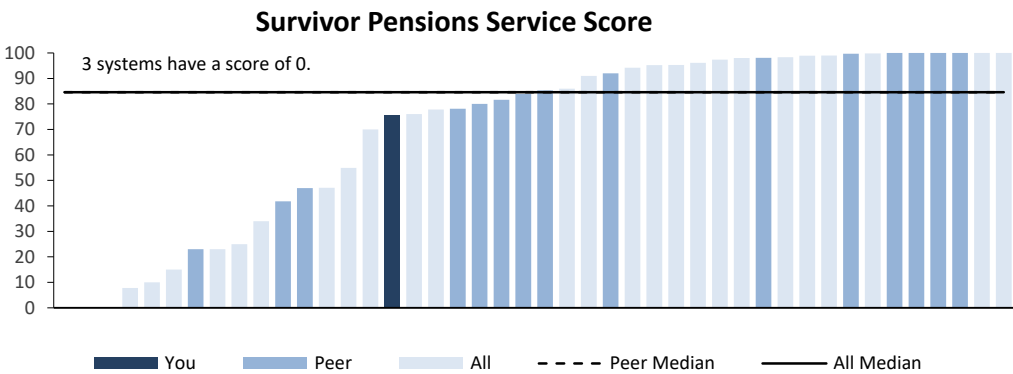
When pension payments are based on estimates, the sooner the amount is finalized, the better because estimates can cause financial uncertainty.

## a. Cashflow interruptions

3. Survey questions used		You	Peer Avg
Q16	What percentage of annuity inceptions for: a) Retiring active members are paid without an interruption of cash flow greater than 1 month between the final pay check and the first pension check?	82.6%	90.8%
Q17	Will you initiate a service retirement pension based on existing data or estimates, recognizing that you will have to finalize the payments later after you get final a) If yes, what proportion of your service retirement inceptions to retiring active members was based on existing data or estimates? b) On average, how long did it take to finalize service retirement inceptions based on estimates? (in months)	Yes 15.2% 6.0	94% Yes 74.6% 3.7 months

b. Survivor pensions

Your service score for survivor pensions was 75 out of 100. This was below the peer median of 85.



1. Scoring method		Your Data	Your Score
+ 100	if all of your survivor pensions were inceptioned without a cashflow interruption greater than 1 month, otherwise: 100 x percent of pensions paid without interruption to survivors	75.4%	75.4
Total score			75.4

2. Rationale for the scoring method	
An interruption in a pension benefit at the death of the primary annuitant creates potential hardship for the survivor at a difficult time. A perfect score requires that all survivor pensions are paid without interruption.	

3. Survey questions used		You	Peer Avg
Q16	What percentage of annuity inceptiones for: b) Survivors are paid without an interruption of cash flow between the pensioner's final pension check and the survivor's first pension check?	75.4%	80.4%

## c. Red tape

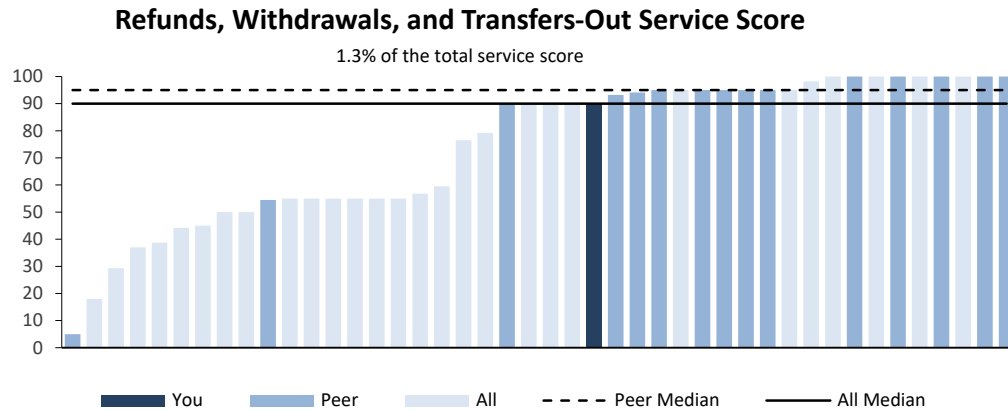
1. Scoring method		Your Data	Your Score
+ 80	if you do not require notarization of retirement applications, or + 40 if you require notarization of some retirement applications	not required	80.0
+ 20	if you do not require birth/marriage certificates before incepting a pension	not required	20.0
Total score			100.0

2. Rationale for the scoring method	
Extra red tape creates work for members and may not provide additional protection for the system. For example, notarizations can be fraudulent. Many systems have decided that the potential risk reduction does not justify the inconvenience caused to members.	

3. Survey questions used		You	Peer Avg
Q18	Do you require birth certificates and/or marriage certificates before incepting a pension?	No	44% Yes
Q19	Do you require notarization of normal or early retirement applications?	No	25% Yes

## 1C Refunds, Withdrawals, and Transfers-out

Your service score for refunds, transfers-out and withdrawals was 90 out of 100. This was below the peer median of 95.



1. Scoring method		Your Data	Your Score
<u>Withdrawal timeliness</u>			
+ 45	If withdrawals are completed on the day the mandatory wait period ends, otherwise, otherwise 45 - 4.5 X number of days over the mandatory wait period [Subject to a minimum score of 0]	10 days	45.0
<u>Transfers-out timeliness</u>			
+ 45	if transfers-out are completed in 30 days or less, otherwise 45 - 0.9 for each day over 30 days [Subject to a minimum score of 0]	10 days	45.0
<u>No red tape</u>			
+ 10	if you do not require notarization for refund or transfer-out applications, 5 if some applications require notarization, 0 if notarization is required	required	0.0
Total score			90.0

2. Rationale for the scoring method
Speed from request to completion is what matters to members, regardless of whether the delays are caused by internal or external parties.

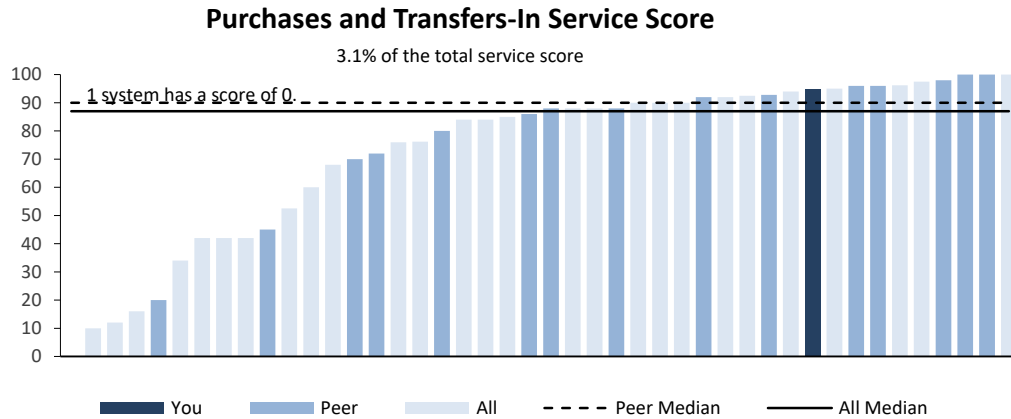


## 1C Refunds, Withdrawals, and Transfers-out

3. Survey questions used		You	Peer Avg
Q21	How long does it take on average for you to issue a refund check, including any required wait period, beginning from the time of the initial request by the member (in days)?	10	24 days
	a) Are you legislated to have a wait period before you can effect a refund?	Yes	56% Yes
	b) How long is the wait period? (in days)	60	40 days
	c) Can the wait period be waived?	No	33% Yes
Q22	How long does it take on average for you to complete an individual transfer-out to an external system, including delays caused by external parties, beginning from the time of initial request by the member (in business days)?	10	23 days
Q23	Do you require notarization of refund or transfer-out applications?	Yes	13% Yes

## 1D Purchases and Transfers-in

Your service score for purchases and transfers-in was 95 out of 100. This was above the peer median of 90.



1. Scoring method		Your Data	Your Score
<u>Service credit purchase estimates</u>			
+ 100	if you can provide a service credit purchase estimate in 1 day or less, otherwise 100 - 2.5 per day over 1 day	3	95.0
<u>Transfers-in</u>			
n/a	You do not do transfers-in, so excluded from the calculation of your score		
Total score			95.0

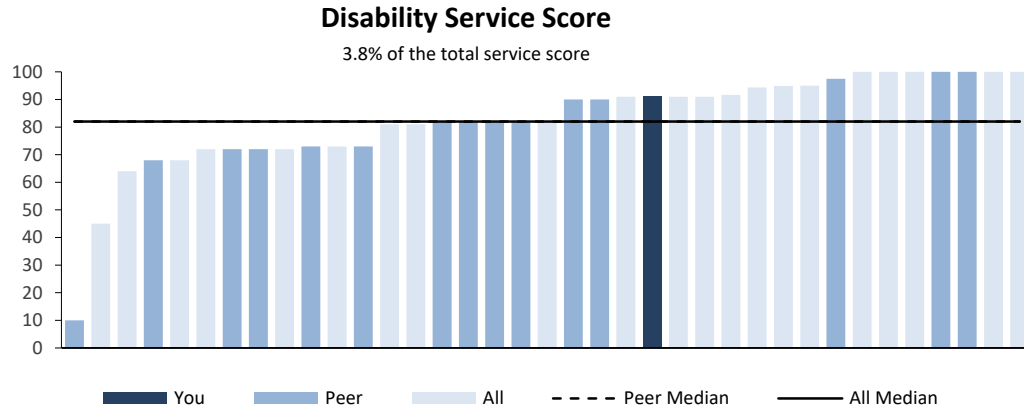
2. Rationale for the scoring method
<p>From a member perspective, faster is higher service.</p> <p>The score for transfers-in is mostly based on your own timeliness. A small part of the score is based on the total time it takes to complete transfers-in (i.e., including delays caused by third parties). Speed from request to completion is what matters to members, regardless of whether the delays are caused by internal or external parties.</p>

# 1D Purchases and Transfers-in

3. Survey questions used		You	Peer Avg
Q26	On average, how many business days does it take from the date of first request to provide a written service credit purchase cost?	3	21 days
Q27	How long does it take on average for you to do individual transfers-in? [Include any delays caused by external parties.]	n/a	1 month

## 1E Disability

Your service score for disability was 91 out of 100. This was above the peer median of 82.



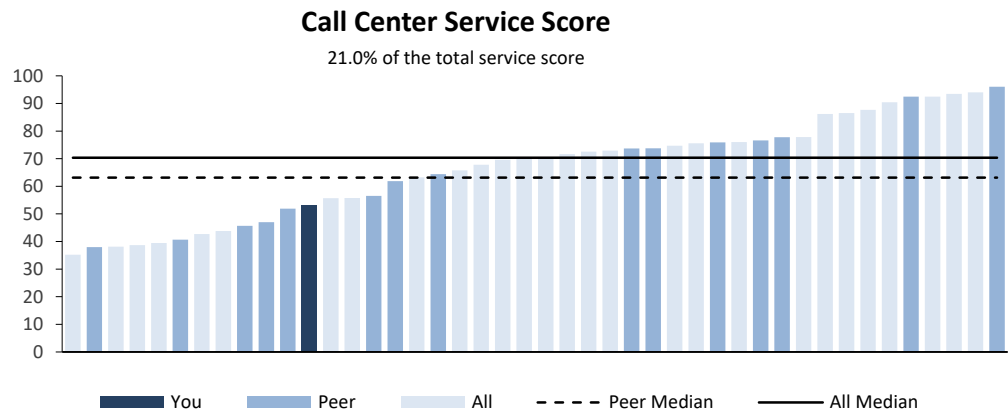
1. Scoring method		Your Data	Your Score
+ 90	if you return a decision on a disability application in 1 month or less, otherwise 90 - 9 for each month over 1 month [Subject to a minimum score of 0]	2.0 months	81
+ 10	if you do not require notarization of disability applications, 5 if some applications require notarization, 0 if notarization is required	not required	10
Total score			91

2. Rationale for the scoring method	
Taking more than 1 month to return a decision in a disability application can cause financial insecurity for members. Faster turnaround times are higher service from the member's perspective.	
Requiring notarization causes delays and inconvenience from the member's perspective.	

3. Survey questions used		You	Peer Avg
Q31	How many months, on average, does it take to return a decision on a disability application from: a) date of initial request from a member?	2.0	3 months
Q32	Do you require notarization of disability applications?	No	25% Yes

## 2A Call Center

Your call center service score was 53 out of 100. This was below the peer median of 63.

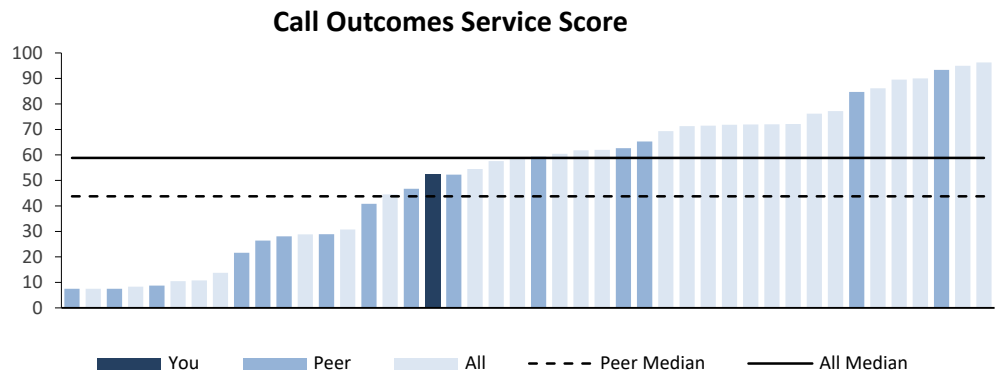


Your service score for 2a call center is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Call Center Service Score Components		
	Weight	Your Score
a. Call outcomes	20%	52.2
b. Call wait time	20%	64.8
c. Menu layers	10%	0.0
d. CRM and other capability	35%	50.0
e. Call quality	15%	82.0
Weighted Total	100%	53.2

# a. Call outcomes

Your service score for call outcomes was 52 out of 100. This was above the peer median of 44.



1. Scoring method		Your Data	Your Score
+ 90	if members experience no undesired call outcomes		90.0
	- % of calls resulting in other undesired outcomes X 400	11.6%	<u>-46.5</u>
	[Subject to a minimum score of 0]		43.5
+ 10	if your call center is open 50 or more hours a week, otherwise 10 - 0.5 for each hour less than 50 hours per week		
	[Subject to a minimum score of 0]	47.5	8.8
Total score			52.2

2. Rationale for the scoring method
A perfect score requires that all calls either get through to a knowledgeable person or are satisfied by self-serve options.
Shorter business hours are treated as an undesired outcome because after-hour callers do not reach a knowledgeable person.

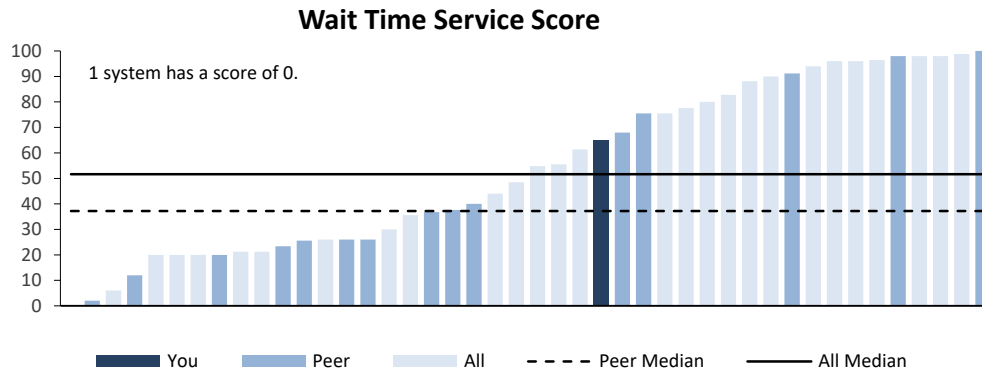
## a. Call outcomes

3. Survey questions used		You	Peer Avg
<u>Desired call outcomes</u>			
Q33	a) Incoming calls that reach and are responded to by a knowledgeable service representative (i.e., exclude messages, etc.)?	274,330	
	c) Incoming calls satisfied by self-serve options, if any?	<u>32,590</u>	
	Total desired call outcomes (A)	306,920	
<u>Undesired call outcomes during business hours</u>			
Q34	a) # Busy signal, never enters the system?	n/a	
	b) # Caller gets pre-recorded 'call another time' message during business hours?	15,129*	
	c) # Voice mail takes a message during business hours?	n/a	
	d) # Abandoned calls (i.e., caller hangs-up while in a menu)?	16,275*	
	e) # Abandoned calls (i.e., caller hangs-up while in a queue or on hold)?	8,503	
	f) # System hangs up on caller (or sends the caller back to the main menu) after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	n/a	
	g) # System sends the caller back to the main menu after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	n/a	
	h) # Busy signal after navigating an automated attendant menu, or after being transferred by a receptionist?	n/a	
	i) # Call rings unanswered during business hours?	n/a	
	# Receptionists takes a message	n/a	
Q39	If you have a callback feature, # of callback requests that were not completed	<u>453</u>	
	Total undesired call outcomes during business hours (B)	40,360	
	Total incoming calls (C = A + B)	346,827	
	Undesired outcomes as a percentage of total incoming calls (B / C)	11.6%	15.1%
<u>Undesired outcomes after business hours</u>			
Q49	How many hours per week is your 'call center' operational?	47.5h	46.0h

\* Your response was 'unknown'. A default was applied. See 'Appendix D' for details.

## b. Call wait time

Your service score for call wait time was 65 out of 100. This was above the peer median of 37.



1. Scoring method		Your Data	Your Score
<u>Calls</u>			
+ 90	if members reach a knowledgeable person in 60 seconds or less, otherwise 120 - 0.5 per second to reach a knowledgeable person [Subject to a minimum score of 0]	133 seconds	54
+ 2 to 20	If a member is notified of expected wait times: + 2 if wait time is 60 seconds or less, + 20 if wait time is more than 240 seconds [and you scored 0 for call wait time above], otherwise 2 + 0.1 per second over 60 seconds	Yes	9
<u>Emails</u>			
+ 8	if wait time is 0.5 days or less, otherwise 8 - 4 for each day over 0.5 days [Subject to a minimum score of 0]	2.0 days	2.0
Total score			64.8

## 2. Rationale for the scoring method

Faster is best. The value of knowing the expected wait time increases with the length of the wait.



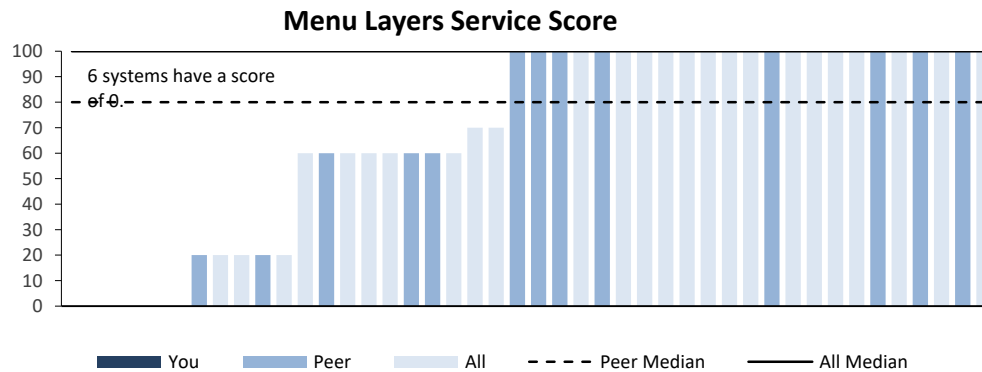
## b. Call wait time

3. Survey questions used		You	Peer Avg
	Average total time in seconds for a caller to reach a knowledgeable person. This is the sum of the time to:	133	239
	<u>(1) Navigate menus</u>		
Q35	If you have a menu:	Yes	94% Yes
	b) What is the average time in seconds that it would take a caller to negotiate the menu and listen to menu options before the caller is forwarded to a live person (or queue for a live person)? (A)	75	64
	c1) If yes, what percentage of calls is the menu system by-passed? (B)	<u>n/a</u>	<u>n/a</u>
	Adjusted time to navigate the menu = (A) X [1 - (B)]	75	64
	<u>(2) Navigate receptionists</u>		
Q36	If a receptionist usually responds first to member calls:	No	0% Yes
	Do you have a queue for the receptionist(s)?	n/a	n/a
	a1) If yes, what is the average wait time in seconds in the queue for the receptionist(s)? (A)	n/a	n/a
	If no, average time to get through to the receptionist (i.e., time on hold etc.) is assumed to be 10 seconds	n/a	n/a
	b) Average time in seconds for a caller to explain his needs to a receptionist (assumed to be 25 seconds). (B)	n/a	n/a
	b1) Satisfied by the receptionist without forwarding? (C)	<u>n/a</u>	<u>n/a</u>
	Adjusted time to navigate receptionists = (A) + (B) X [1 - (C)]	n/a	n/a
	<u>(3) Wait in queue</u>		
Q37	If you have a queue for a pool of knowledgeable staff:	Yes	100% Yes
	a) Average wait time in seconds in queue for a service representative?	58	178
	b) % of calls forwarded by a receptionist, if applicable, to the queue.	<u>n/a</u>	<u>n/a</u>
	Adjusted wait in the queue = (A) X (B), if applicable	58	178
Q38	Does your system notify the caller of the expected wait time, or their place in the queue, for reaching a knowledgeable service representative if the expected wait exceeds a certain threshold?	Yes	75% Yes
Q50	Can members communicate questions using email?	Yes	100% Yes
	a) What is the average time (in business days) to respond to an email query? Do not include auto-responses or confirmation of email receipt.	2.0	1.4 days

The sum of the peer average time to navigate menus, receptionists and wait in queue will add to more than the whole because non-applicable responses are not included in the averages.

### c. Menu layers

Your service score for menu layers was 0 out of 100. This was below the peer median of 80.



1. Scoring method		Your Data	Your Score
+ 100	if one or fewer menu layers, 60 if 2 menu layers, 20 if 3 menu layers, 0 if 4 or more menu layers	4	0.0
- 30	if a receptionist is the first point of contact.	No	0.0
Total score			0.0

## c. Menu layers

### 2. Rationale for the scoring method

Members prefer to get through to a knowledgeable person who can answer their questions immediately. Irritation increases rapidly with the number of menu layers.

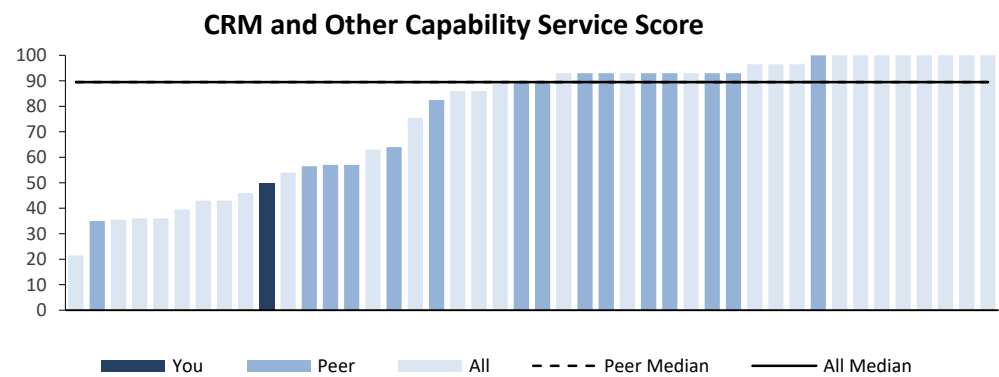
Receptionists are often more irritating than a menu layer because of the need to explain your needs twice, incorrect redirection, etc.

### 3. Survey questions used

		You	Peer Avg
Q35	Do you have a menu system that callers negotiate before speaking to someone? a) If yes, what is the average number of menu layers that must be navigated before a caller can speak to a live person?	Yes  4	94% Yes  2
Q36	When a member calls in, is the first point of human contact usually a receptionist(s) who transfers a high proportion of calls elsewhere in the organization? (indicate no if most calls go directly to a call center)	No	0% Yes

d. CRM and other capability

Your service score for CRM and other capability was 50 out of 100. This was below the peer median of 90.



## d. CRM and other capability

1. Scoring method		Your Data	Your Score
<u>If you are able to provide the following information on an immediate real-time basis or conduct the following transactions over the phone:</u>			
+ 10	estimate of the member's pension at retirement	No	0.0
+ 12	estimate is linked to the member's actual account data	n/a	0.0
+ 7	model alternate annuity payment scenarios	n/a	0.0
+ 7	provide refund or transfer value if member exited employment at time of call	Yes	7.0
+ 4	provide pensionable salary	Yes	4.0
+ 4	provide service credit history including gaps	Yes	4.0
+ 7	estimate cost to purchase service credit	No	0.0
+ 7	change address	No	0.0
+ 7	change banking information	No	0.0
+ 7	add or change email address	Yes	7.0
<u>If you offer the following tools to help serve callers better:</u>			
+ 3.5	record of the member's previous calls to the system	Yes	3.5
+ 3.5	copies of recent correspondence online	Yes	3.5
+ 3.5	knowledge based online help system available for use by the service representative	Yes	3.5
+ 3.5	most recent member statement	Yes	3.5
+ 3.5	beneficiary information	Yes	3.5
+ 3.5	toll free number	Yes	3.5
+ 3.5	workflow system with the real-time status of open items	Yes	3.5
+ 3.5	call volume projections	Yes	3.5
Total score			50.0

### 2. Rationale for the scoring method

You can serve your members better if you have real time access to all of their records, have tools that enable you to provide immediate, informed and accurate answers to their questions, and can conduct transactions over the phone.

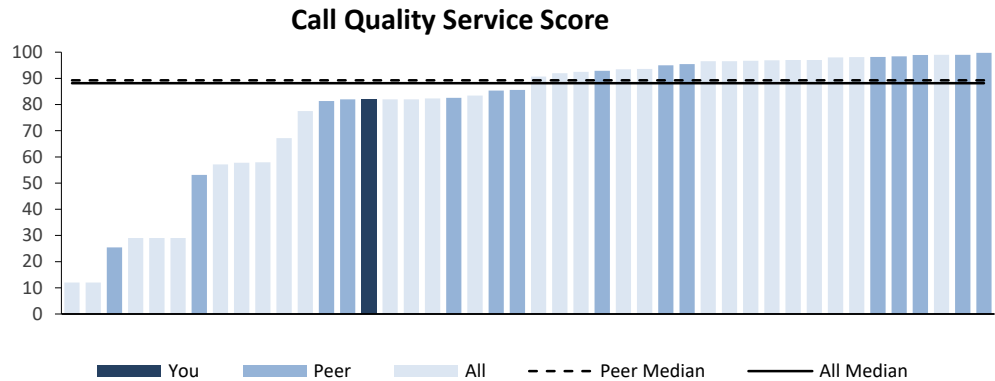
Your ability to serve members is greatly reduced if your capabilities or policies prevent you from answering questions over the phone.

## d. CRM and other capability

3. Survey questions used		You	Peer Avg
Q42	When a member calls in, do you have immediate computer access to the following member data:		
	a) Record of the member's previous calls to the system?	Yes	88% Yes
	b) Copies of recent correspondence online?	Yes	100% Yes
	c) Knowledge based on-line help system available for use by the service representative?	Yes	94% Yes
	d) Most recent member statement?	Yes	100% Yes
	e) Beneficiary information?	Yes	100% Yes
Q43	Do your service representatives have real-time access to a workflow system that lets them know the status of open items?	Yes	100% Yes
Q44	Do you provide the following information on an immediate real-time basis to members over the phone?		
	a) Estimates of the member's pension at retirement?	No	63% Yes
	a1) Can you easily model and provide alternate annuity payment scenarios? [i.e., joint and 50% survivor, joint and 70% survivor, etc.]	n/a	67% Yes
	a2) Is the estimate based on an interactive benefit calculator linked to the member's actual account data?	n/a	67% Yes
	b) Refund or transfer value assuming the member exited employment at the time of the call?	Yes	94% Yes
	c) Pensionable salary?	Yes	94% Yes
	d) Service credit history including gaps?	Yes	88% Yes
	e) Cost to purchase service credit?	No	60% Yes
Q45	Can members calling in perform the following transactions over the phone:		
	a) Change address?	No	81% Yes
	b) Add or change email address?	Yes	100% Yes
	c) Change payment instructions? [i.e., bank account]	No	25% Yes
Q47	Do you have and use tools to help you project call volumes?	Yes	94% Yes
Q48	Do you have a toll free number (or a number where members are only charged the cost of a local call no matter where they are located) that members can call to get a real person (not just an info line)?	Yes	100% Yes

# e. Call quality

Your service score for call quality monitoring was 82 out of 100. This was below the peer median of 89.



1. Scoring method		Your Data	Your Score
<u>Call quality monitoring</u>			
+ 55	if you review your staff's responses to member calls for coaching purposes 4 or more times per month; otherwise 13.75 X # of times per month you review calls	4	55.0
+ 15	if the review is based on listening in on a recording (versus a live call)	Recording	15.0
<u>First contact resolution</u>			
+ 30	if 100% of calls are satisfied by their first contact, 0 if 50% or fewer calls are satisfied by the first contact, otherwise 30 - 50 X (1 - % satisfied by the first contact) [Subject to a minimum score of 0, and 12 if not measured]	untracked	12.0
Total score			82.0

## e. Call quality

### 2. Rationale for the scoring method

Regularly monitoring and coaching your staff responses to member calls will improve quality and service. Monitoring recordings is superior to listening in live because it allows more time for review and it allows staff to listen to themselves.

It is higher service if a caller's questions are immediately satisfied by the first contact without being transferred.

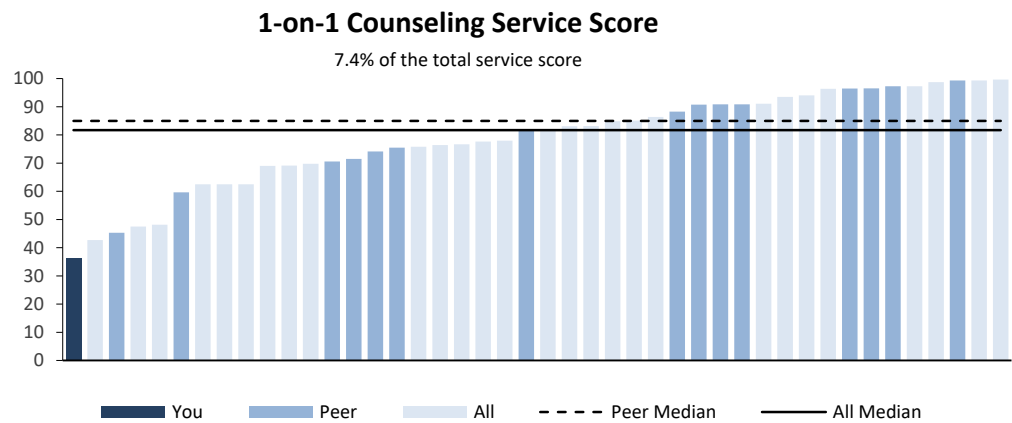
### 3. Survey questions used

		You	Peer Avg
Q40	c) % of calls satisfied by the first contact?	untracked	94%
Q46	Do you review your staff's responses to member calls for coaching purposes on a regular basis? [As opposed to intermittent or only while training new service representatives, etc.]	Yes	94% Yes
	a) How many calls per agent per month (on average) do you monitor?	4	6
	b) Are you listening in on a live call or a recording?	Recording	60% Recording



## 2C 1-on-1 Counseling

Your service score for 1-on-1 counseling was 36 out of 100. This was below the peer median of 85.

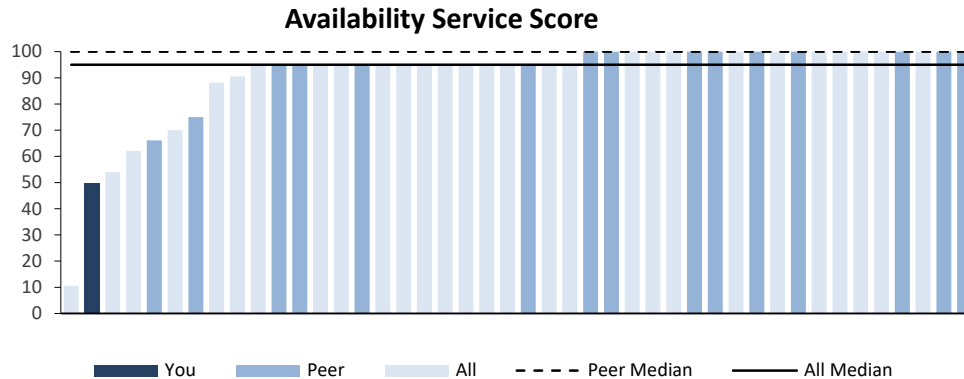


Your service score for 2c 1-on-1 counseling is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

1-on-1 Counseling Service Score Components		
	Weight	Your Score
a. Availability	50%	49.8
b. Field locations	20%	0.0
c. Wait times	20%	43.8
d. Capability	10%	26.7
Weighted Total	100%	36.3

## a. Availability

Your service score for availability was 50 out of 100. This was below the peer median of 100.



1. Scoring method	Your Data	Your Score
+ 70 if members counseled 1-on-1 as a % of your active members is 0.88% <sup>1</sup> or more, otherwise 7,990 <sup>1</sup> X number of members counseled 1-on-1 as a % of active members	0.6%	49.8
+ 25 if 1-on-1 counseling is freely available, without limitations	No	0.0
+ 5 if 1-on-1 counseling is available outside of normal working hours, otherwise 0	No	0.0
<b>Total score</b>		<b>49.8</b>

<sup>1</sup>Better website content and functionality reduces the number of members that attend 1-on-1 sessions. Using your percentage of pensions inceptioned online as a proxy for the strength of your website, we reduce the 1.0% attendee cutoff rate for a perfect availability score to a minimum of 0.15% (i.e. if 12.39% of your pension inceptions occur online, you need attendees equal to 0.88% of your active member population to achieve a perfect score of 70; we use a multiplication factor of 7,990 because  $70 / 0.88\% = 7,990$ ).

### 2. Rationale for the scoring method

Higher volumes relative to the number of pension inceptions occurring offline imply greater availability and value.

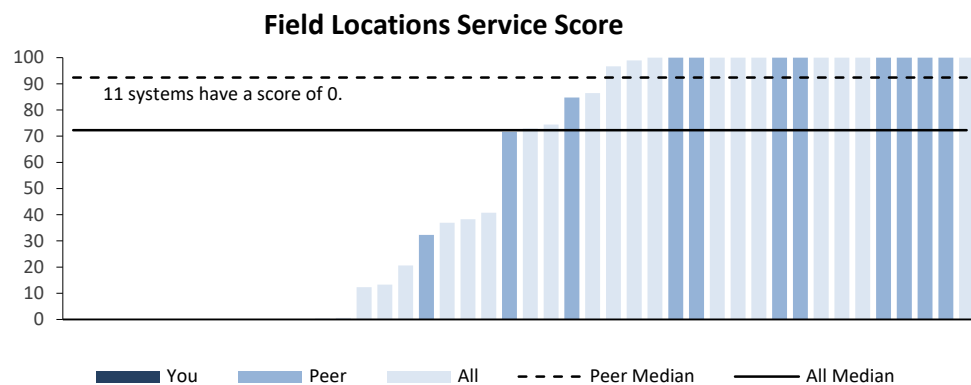
Members prefer freely available access to counseling with no time period limits, no limits on the number of sessions, etc.

## a. Availability

3. Survey questions used		You	Peer Avg
Q54	Total number of members counseled 1-on-1 (A)	2,939	15,118
Q5	Active Members (B)	471,958	350,284
	Members counseled 1-on-1 as a percentage of active members (A / B)	0.6%	3.8%
Q55	Is 1-on-1 retirement counseling a freely available option for most members? [If the only 1-on-1 counseling you do is for VIPs, disability, exceptions and emergencies then your answer should be no.]	Yes	100% Yes
Q56	Do you limit 1-on-1 counseling by:		
	a) Requiring that members be within a certain time period of earliest possible retirement?	Yes	13% Yes
	b) Placing a limit on the number of counseling sessions a member can request?	No	6% Yes
	c) Indicating that members should contact their employers or unions first for counseling?	Yes	6% Yes
	d) Other (describe)?	No	0% Yes
Q59	Do you offer 1-on-1 counseling sessions after normal working hours, such as evenings and/or weekends?	No	63% Yes

b. Field locations

Your service score for field locations was 0 out of 100. This was below the peer median of 92.



1. Scoring method		Your Data	Your Score
+ 70	if the number of 1-on-1 sessions located in the field as % of total sessions is 25% or more, otherwise 280 X % of total sessions located in the field	0.0%	0.0
+ 30	if 75% or more of your 1-on-1 field sessions are held at locations separate from the employer, otherwise 40 X % of field sessions separate from the employer	0%	0.0
Total score			0.0

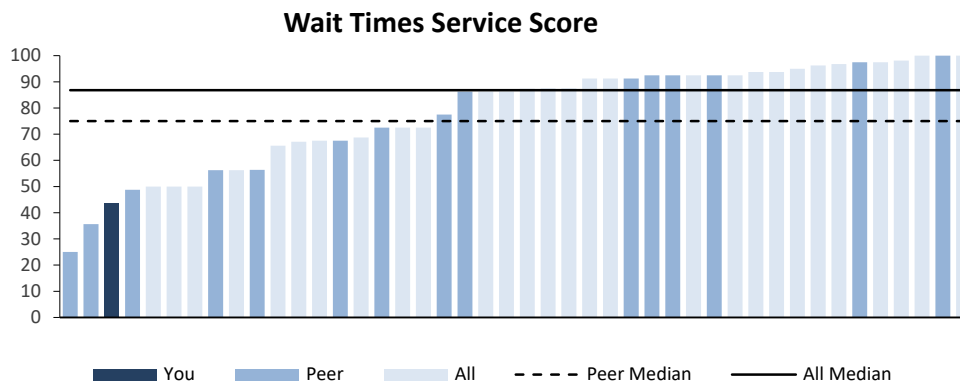
2. Rationale for the scoring method
A combination of in-house and in-the-field locations provides the best access for members to meet with you.
Field locations separate from the employer are preferred because they help preserve confidentiality and privacy.

## b. Field locations

3. Survey questions used		You	Peer Avg
Q54	Provide the number of members counseled 1-on-1 that were:		
	b) In the field at locations separate from the member's place of employment? (A)	0	7,277
	c) At the member's place of employment?	<u>0</u>	<u>521</u>
	Total number of members counseled 1-on-1 in the field (B)	0	7,766
	 % of 1-on-1 field sessions separate from employer (A / B)	0%	60%
	 Total number of members counseled 1-on-1 (C)	2,939	15,118
	 % of members counseled at 1-on-1 sessions held in the field (B / C)	0.0%	33.1%

## c. Wait times

Your service score for wait times was 44 out of 100. This was below the peer median of 75.



1. Scoring method		Your Data	Your Score
+ 25	if you offer pre-scheduled counseling	Yes	25.0
+ 25	If there is no wait time for pre-scheduled in-house counseling sessions, otherwise 25 - 1.25 X average number of days of wait time [Subject to a minimum score of 0]	5.0 days	18.8
+ 25	If there is no wait time for walk-in counseling, otherwise 25 - 1.25 X average number of minutes of wait time [Subject to a minimum score of 0]	n/a	0.0
+ 25	if 0% of walk-ins requesting a counseling session were turned away because the wait was too long, otherwise 25 - 125 X % of walk-ins turned away [Subject to a minimum score of 0]	n/a	0.0
Total score			43.8

### 2. Rationale for the scoring method

The shorter the wait times, the better.

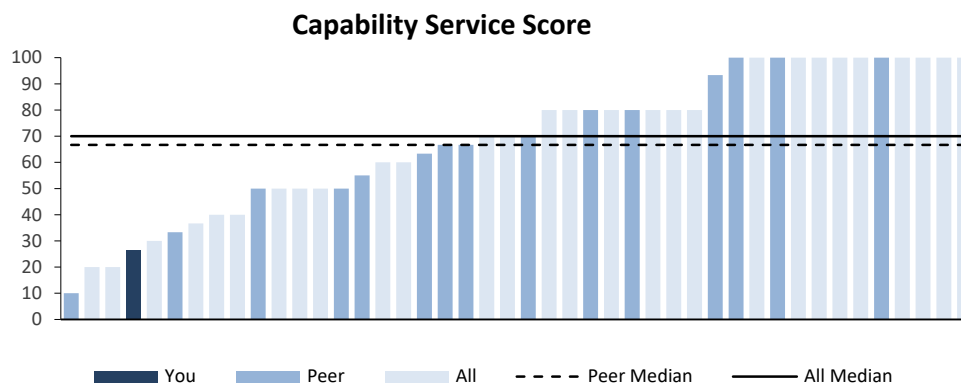
Some people like to be able to schedule an appointment. Also, a pre-scheduled session gives you the opportunity to prepare in advance.

### c. Wait times

3. Survey questions used		You	Peer Avg
Q57	Do you provide counseling for walk-in traffic?	No	81% Yes
	a) On average, how long does a walk-in member that requests a counseling session typically have to wait till they can meet with a counselor? (minutes)	n/a	10 min
	b) Approximately what percentage of walk-in members requesting a counseling session are turned away, or scheduled for another time, or leave with their needs unsatisfied because they decide the wait was too long?	n/a	0.5%
Q58	Do you offer prescheduled 1-on-1 counseling?	Yes	88% Yes
	a) If yes, how long does a member that requests a pre-scheduled counseling session typically have to wait, in business days, before he can meet with a counselor for an in-house 1-on-1 counseling session?	5.0	7.9 days

## d. Capability

Your service score for capability was 27 out of 100. This was below the peer median of 67.



1. Scoring method		Your Data	Your Score
<u>Sessions</u>			
+ 50	if you can provide a new written estimate during each of walk-in, pre-scheduled in-house and in-the-field sessions, otherwise 16.7 for walk-in, 16.7 for pre-scheduled in-house and 16.7 for in-the-field	0 Yes	0.0
+ 10	if you can provide accurate service credit purchase cost estimates during each of walk-in, pre-scheduled in-house and in-the-field sessions, otherwise 3.3 for walk-in, 3.3 for pre-scheduled in-house and 3.3 for in-the-field	0 Yes	0.0
+ 20	if counseling takes place in a private office with a door during each of walk-in, pre-scheduled in-house and in-the-field sessions, otherwise 6.7 for walk-in, 6.7 for pre-scheduled in-house and 6.7 for in-the-field	1 Yes	6.7
<u>Coaching</u>			
+ 20	if you regularly review counselors for coaching purposes	Yes	20.0
Total score			26.7



## d. Capability

### 2. Rationale for the scoring method

Members needs are best met when you can have a complete discussion about their retirement options. This includes being able to provide alternative scenarios to answer 'what-if' questions as they arise during 1-on-1 counseling sessions.

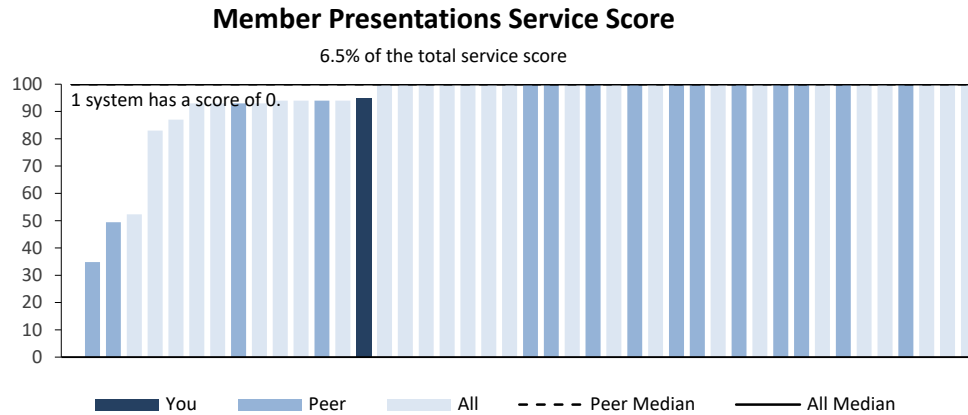
Members feel more comfortable if they can discuss their retirement income in an office with a door. If you review sessions for coaching purposes, this suggests that you monitor quality.

### 3. Survey questions used

		You	Peer Avg
Q60	a) Do almost all sessions take place in a private office with a door (versus a cubicle, etc.)?		
	a1) Walk-in traffic in-house?	n/a	77% Yes
	a2) Pre-scheduled in-house?	Yes	93% Yes
	a3) In-the-field?	No	54% Yes
	c) Do you provide new written estimates on a real-time basis for anybody that wants one?		
	c1) Walk-in traffic in-house?	n/a	77% Yes
	c2) Pre-scheduled in-house?	No	79% Yes
	c3) In-the-field?	No	62% Yes
	d) Do you provide an accurate cost to purchase service credit on a real-time basis for anybody that wants one?		
	d1) Walk-in Traffic In-house?	n/a	77% Yes
	d2) pre-scheduled In-house?	No	64% Yes
	d3) In-the-field?	No	46% Yes
Q61	Do you review 1-on-1 counseling sessions for coaching purposes on a regular basis? [As opposed to intermittent or only while training new counselors, etc.]	Yes	69% Yes

## 2D Member Presentations

Your service score for member presentations was 95 out of 100. This was below the peer median of 100.



1. Scoring method		Your Data	Your Score
<u>Availability</u>			
+ 70	if attendees as a percent of active members is 2.2% <sup>1</sup> or more, otherwise 3,196 <sup>1</sup> X attendees as percent of active members	2.9%	70.0
+ 5	if you offer presentations outside of normal working hours	No	0.0
<u>Types</u>			
+ 18	if you have 3 or more different targeted types of presentations (excluding healthcare and benefit changes), otherwise 6 X the number of types of presentations	3	18.0
<u>Coaching</u>			
+ 7	if you regularly review presenters for coaching purposes	Yes	7.0
<b>Total score</b>			<b>95.0</b>

<sup>1</sup>Better website content and functionality reduces the number of members that attend presentations. Using your percentage of pensions inceptioned online as a proxy for the strength of your website, we reduce the 2.5% attendee cutoff rate for a perfect availability score to a minimum of 0.4% (i.e. if 12.39% of your pension inceptions occur online, you need attendees equal to 2.19% of your active member population to achieve a perfect score of 70; we use a multiplication factor of 3,196 because  $70 / 2.19\% = 3,196$ ).

## 2D Member Presentations

### 2. Rationale for the scoring method

Higher volumes relative to the number of pension inceptions occurring offline imply greater availability and value.

More choices of times provide easier access and convenience.

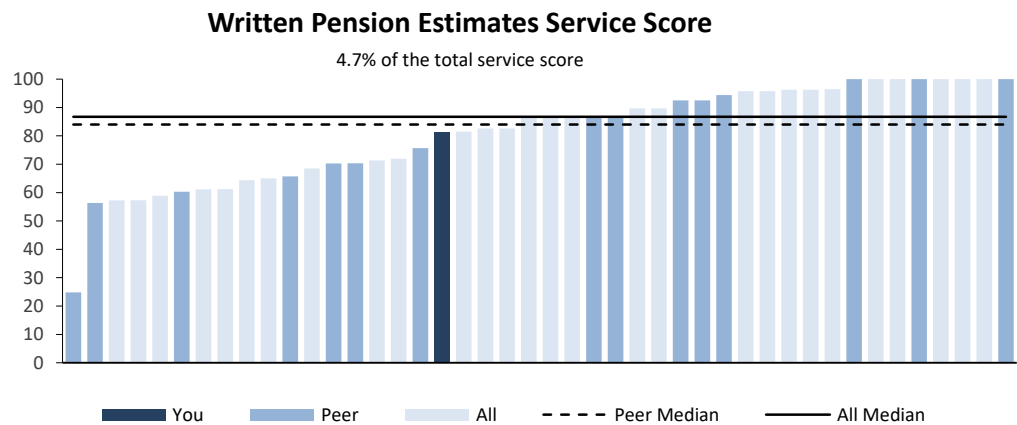
Presentations for different target audiences are higher service.

### 3. Survey questions used

		You	Peer Avg
	<u>Availability</u>		
Q65	What was the total number of attendees at all of the presentations? [Exclude benefit fair attendees] (A)	13,745	17,364
Q5	Active Members (B)	471,958	350,284
	Attendees as a percent of active members (A / B)	2.9%	5.5%
Q67	Do you offer presentations after normal working hours such as evenings and/or weekends?	No	94% Yes
	<u>Types</u>		
Q66	Did you do specific presentations for members, in the past fiscal year, targeted solely for:		
	a) New members?	Yes	88% Yes
	b) Members in mid career?	Yes	81% Yes
	c) Members approaching retirement or ready to retire?	Yes	100% Yes
	f) Other? (Please describe)	No	63% Yes
	Total presentation types	3	3
	<u>Coaching</u>		
Q68	Do you review presenters for coaching purposes on a regular and recurring basis? [As opposed to intermittent or only while training new presenters, etc.]	Yes	88% Yes

## 2E Written Pension Estimates

Your service score for written pension estimates was 81 out of 100. This was below the peer median of 84.

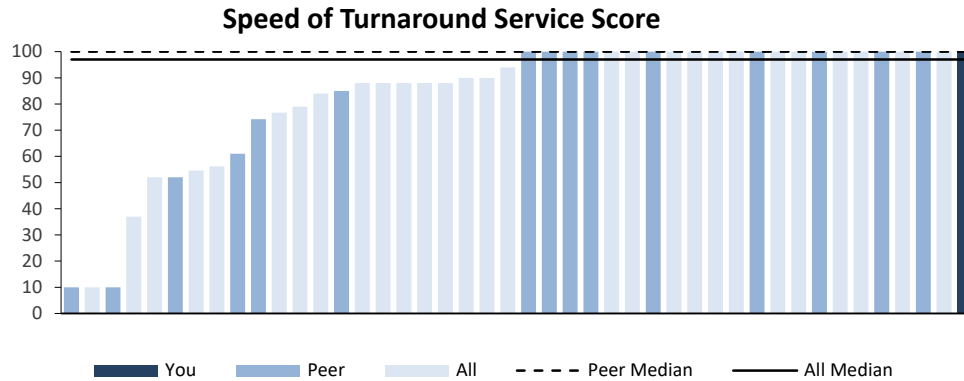


Your service score for 2e written pension estimates is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Written Pension Estimates Service Score Components		
	Weight	Your Score
a. Speed of turnaround	35%	100.0
b. Content	25%	100.0
c. Alternative channels	40%	53.0
Weighted Total	100%	81.2

## a. Speed of turnaround

Your service score for speed of turnaround was 100 out of 100. This was equal to the peer median.



1. Scoring method		Your Data	Your Score
+ 90	if the weighted average turnaround time for providing written pension estimates and online pension estimates* is less than 1 day, otherwise 90 - 3 for each day beyond 1 required to send estimates	0.0 days	90.0
+ 10	if you regularly measure the time to provide an estimate	Regular	10.0
Total score [Subject to a minimum score of 0]			100.0

\* online pension estimates are only included in the average if they can be used to retire

## 2. Rationale for the scoring method

A perfect score requires that you can turn around an estimate the same day as the request. From a member's perspective, receiving a requested estimate quickly is higher service.

We assume that it is higher service if you regularly measure turnaround times because we believe that what gets measured, gets managed.

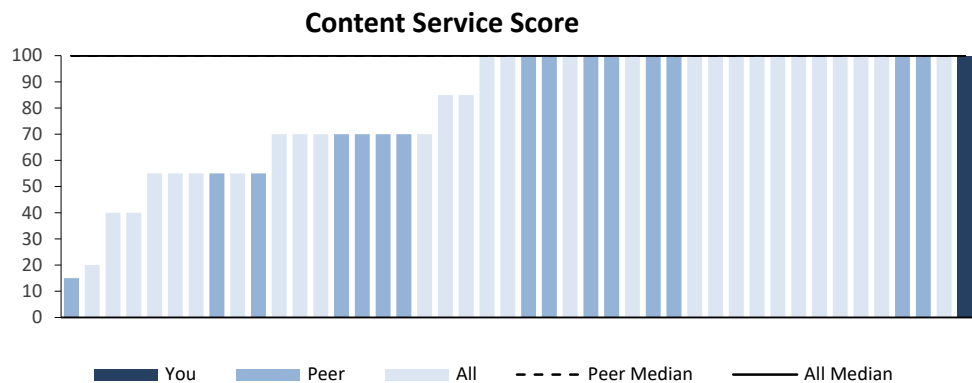
## a. Speed of turnaround

3. Survey questions used		You	Peer Avg
Q70	How many written pension estimates did you mail out pursuant to individual member requests? [Exclude estimates prepared during counseling sessions and not mailed in advance.]	3,173	35,283
Q72	On average, how many business days does it take to provide a written pension estimate from the time of initial request from a member? [Exclude time in the mail.] (B)	3 days	14 days
	a) Is this a number you regularly measure and track (versus an estimate)?	Regular	100% Yes
Q79	Indicate whether the following capabilities are available on your website and provide volumes:		
	c) Benefit calculator in secure area linked to member's salary and service data?	Yes	81% Yes
	If yes, volume? (C)	773,644	523,904
	p) Submit a retirement application online?	Yes	63% Yes
	Weighted average estimate turnaround time <sup>1</sup> $(A \times B) / (A + C)$	0.0 days	10.8 days

1. The weighted average estimate turnaround time assumes that: (i) online estimates are processed instantaneously; (ii) the volume of online estimates (C) is counted as zero if members cannot apply for retirement online.

## b. Content

Your service score for content was 100 out of 100. This was equal to the peer median.



1. Scoring method		Your Data	Your Score
+ 30	if you clearly address if and how the pension benefit is inflation protected	Yes	30.0
+ 15	if you discuss the effects of social security	Yes	15.0
+ 15	if you discuss alternative scenarios that could improve the pension	Yes	15.0
+ 40	if you model alternative pension payment options	Yes	40.0
Total score			100.0

## b. Content

### 2. Rationale for the scoring method

The more members understand about how their pension is affected by inflation, social security, etc. the better they can plan for retirement. A perfect score requires that you provide all this information in a written pension estimate.

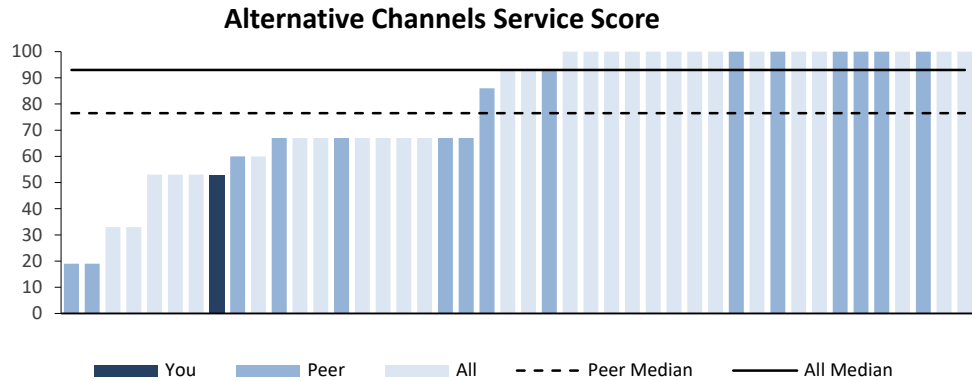
### 3. Survey questions used

		You	Peer Avg
Q75	Do your written pension estimates (including cover letters, etc. sent with the estimate):		
	a) Clearly address if and how the pension is inflation protected (or not protected)?	Yes	56% Yes
	b) If your pension is coordinated with or reduced by social security (or CPP in Canada) is the impact explained?	Yes	75% Yes
	c) Discuss alternative scenarios that could improve the pension such as purchasing service credit or working longer?	Yes	94% Yes
	d) Model alternative retirement payment options?	Yes	94% Yes



### c. Alternative channels

Your service score for alternative channels was 53 out of 100. This was below the peer median of 77.



1. Scoring method		Your Data	Your Score
+ 100	if you offer pension estimates by member statement, the website and call center, otherwise 67 if you offer 2 options, 33 if you offer 1, 0 if you offer none	2 options	67.0
- 7	if you limit the timeframe when members can request pension estimates	Yes	-7.0
- 7	if you place a limit on the number of written pension estimates a member can request	Yes	-7.0
Total score			53.0

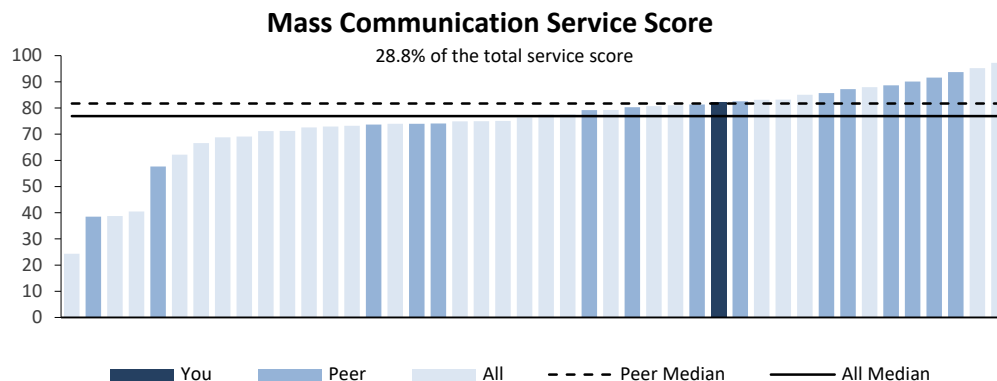
2. Rationale for the scoring method
More choices in obtaining a pension estimate provides greater access and convenience for your members.

### c. Alternative channels

3. Survey questions used		You	Peer Avg
Q44	Do you provide the following information on an immediate real-time basis to members over the phone? [If you do not have real-time access to the information or if your policy is not to give the information over the phone because of security or other concerns then your answer should be 'no'.] a) Estimates of the member's pension at retirement?	No	63% Yes
Q73	Can members request and obtain a written pension estimate at any time during their career? [As opposed to, for example, requiring that the member be within a certain time period of earliest potential retirement before they can request a pension estimate.]	No	63% Yes
Q74	Do you place a limit on the number of written pension estimates that a member can request?	Yes	25% Yes
Q79	Indicate whether the following capabilities are available on your website and provide volumes: a) Benefit calculator in non-secure area?	Yes	56% Yes
	b) Benefit calculator in secure area not linked to member data?	No	25% Yes
	c) Benefit calculator in secure area linked to member's salary and service data?	Yes	81% Yes
Q91	Do your statements for active members include: e) An estimate of the future pension entitlement based on age scenario modeling or assuming the member continues to work until earliest possible retirement?	Yes	75% Yes

## 2F Mass Communication

Your service score for mass communication was 82 out of 100. This was equal to the peer median.

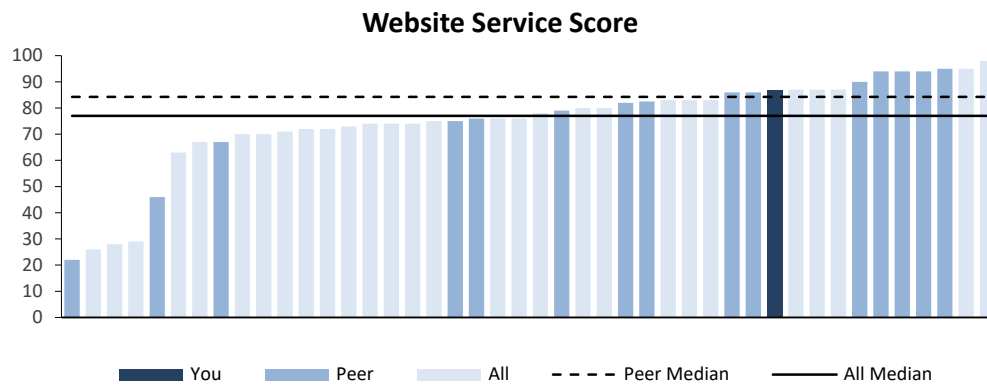


Your service score for 2f mass communication is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Mass Communication Service Score Components		
	Weight	Your Score
a. Website	74%	87.0
b. News and Targeted Communication	10%	53.5
c. Member statements	16%	77.0
Weighted Total	100%	82.1

## a. Website

Your service score for the website was 87 out of 100. This was above the peer median of 84.



## a. Website

1. Scoring method	Your Data	Your Score
<u>Calculators</u>		
+ 10 if you have an interactive calculator on your website	Yes	10.0
+ 20 if the calculator is linked to member data	Yes	20.0
+ 2 if you can calculate the cost of purchasing service credit	Yes	2.0
<u>Salary and service credit</u>		
+ 3 if you offer secure access to both salary and service credit data	Yes	3.0
+ 3 if salary and service credit data is up-to-date to the most recent pay period	Yes	3.0
+ 2 if a complete annual history since employment began of salary and service credit data is available	Yes	2.0
<u>Secure access design</u>		
+ 4 if members can get online immediately upon registering	Yes	4.0
+ 2 if you greet members by name upon log-in	Yes	2.0
- 4 if you force members to acknowledge a disclaimer every time they log-in or use the calculator	No	0.0
+ 1 if inactive members have access to the secure member area	Yes	1.0
+ 2 if you offer a digital file which includes a history of recent correspondence and member documents	No	0.0
<u>Forms</u>		
+ 8 if all forms are available for download (or the transaction or forms can be completed online), 6 if most, 2 if some	All	8.0
<u>Other tools and transactions</u>		
+ 1 register for counseling sessions in real-time	No	0.0
+ 2 if you offer live chat	No	0.0
+ 3 change address	Yes	3.0
+ 2 change beneficiary	Yes	2.0
+ 3 add or change email address	Yes	3.0
+ 1 reset password	Yes	1.0
+ 2 change annuity deposit banking information	Yes	2.0
+ 2 change tax withholding amount	Yes	2.0
+ 3 download or print tax receipts	Yes	3.0
+ 3 view pension payment gross amounts and deductions (payment stubs)	Yes	3.0
+ 3 submit a retirement application online	Yes	3.0
+ 2 if less than 50% of pensions initiated online require follow-up documents or signatures to be mailed in	100%	0.0
+ 1 check status of retirement application	Yes	1.0
+ 3 apply for a transfer-out or refund	No	0.0
+ 2 download member statement	Yes	2.0
+ 3 upload documents in lieu of mailing hardcopies	No	0.0
+ 3 view pensionable earnings and/or service without downloading	Yes	3.0
+ 3 access videos online	Yes	3.0
Total score		87.0

## a. Website

### 2. Rationale for the scoring method

Members visit your website looking for information. The more you can provide, the more tailored and customized to the member, and the easier it is to get online, the better.

### 3. Survey questions used

		You	Peer Avg
	<u>Calculators</u>		
Q79	Indicate whether the following capabilities are available on your website and provide volumes:		
	a) Benefit calculator in non-secure area?	Yes	56% Yes
	b) Benefit calculator in secure area not linked to member data?	No	25% Yes
	c) Benefit calculator in secure area linked to member's salary and service data?	Yes	81% Yes
	d) Service credit purchase calculator?	Yes	88% Yes
	<u>Salary and service credit</u>		
	v) View pensionable earnings and/or service without downloading?	Yes	88% Yes
	v1) Are both salary and service data available?	Yes	93% Yes
	v2) Is online data up-to-date to the most recent pay period?	Yes	86% Yes
	v3) Is a complete annual history from the beginning of employment provided?	Yes	79% Yes
	<u>Secure access design</u>		
Q78	Does your website have a secure member area where members can access their own data?	Yes	94% Yes
	c) If a member wants to register for the first time, does he/she have to wait for a password in the mail?	No	13% Yes
	d) Do you welcome the member by name on the home page of the secure member area?	Yes	93% Yes
	e) Are users required to acknowledge a disclaimer every time they log in?	No	20% Yes
	f) Are users required to acknowledge a disclaimer every time they generate a pension estimate?	No	29% Yes
	g) Do inactive members have access to the secure member area?	Yes	100% Yes
Q79	s) Secure mailbox or digital file including history of recent correspondence and member documents?	No	69% Yes
	<u>Forms</u>		
Q76	Are all, most or some of your forms available online for either completion or downloading?	All	50% All

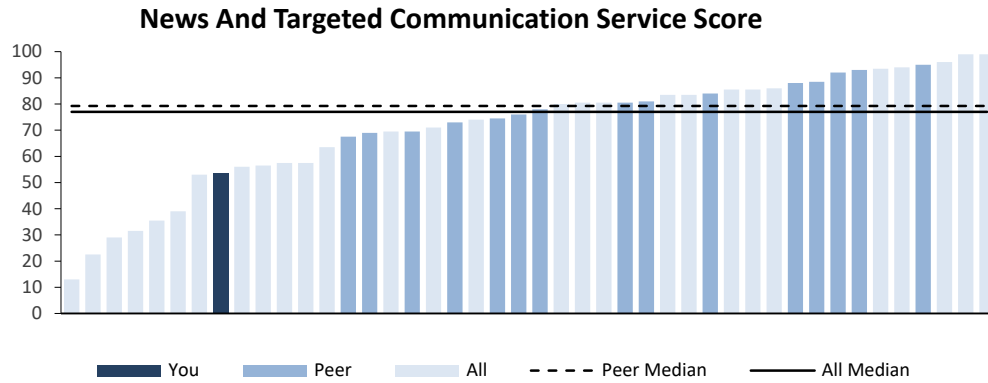
## a. Website

### 3. Survey questions used

		You	Peer Avg
	<u>Other tools and transactions</u>		
Q79	Indicate whether the following capabilities are available on your website and provide volumes:		
	e) Register for 1-on-1 counseling sessions?	Yes	56% Yes
	e1) If yes, does the member have real-time access to available dates and times?	No	89% Yes
	f) Register for presentations?	Yes	87% Yes
	g) Live chat?	No	0% Yes
	h) Change address?	Yes	94% Yes
	i) Change beneficiary?	Yes	81% Yes
	j) Change email address?	Yes	94% Yes
	k) Reset password?	Yes	94% Yes
	l) Change banking information for direct deposit?	Yes	75% Yes
	m) Change tax withholding amount?	Yes	81% Yes
	n) Download or print duplicate tax receipts? [i.e., 1099s in the U.S.]	Yes	88% Yes
	o) View pension payment details? [i.e., gross amounts, deductions]	Yes	88% Yes
	p) Submit a retirement application online?	Yes	63% Yes
	If yes:		
	p1) Does the online application provide an estimate, final value or neither of the annuity payment the member will receive?	Estimate	0% Final
	p2) Approximately what % of retirements submitted online require follow-up documents or signatures to be mailed in?	100.0%	57.1%
	q) View status of online retirement application?	Yes	60% Yes
	r) Apply for a refund or transfer-out?	No	69% Yes
	t) Download member statement? [i.e., Adobe format]	Yes	81% Yes
	u) Upload documents (such as birth certificates)?	No	56% Yes
Q80	Do you have videos that members can access online?	Yes	100% Yes

## b. News and Targeted Communication

Your service score for newsletters was 54 out of 100. This was below the peer median of 79.





## b. News and Targeted Communication

1. Scoring method		Your Data	Your Score
<u>Newsletters</u>			
+ 20	if active members receive a newsletter 2 or more times per year, 14 if 1 time, otherwise 0	3 times	20.0
+ 20	if annuitants receive a newsletter 2 or more times per year. 14 if 1 time, otherwise 0	1 time	14.0
+ 2	if inactive members receive a newsletter at least annually	1 time	2.0
+ 25	if you have different newsletters for 3 or more of the following segments: all members or actives and annuitants, actives or actives and inactive, inactive, annuitants, age based, gender based, employer/employment category, other. 14 if 2 segments, otherwise 0	2	14.0
<u>Other communication</u>			
+ 11	if you issue a 'welcome' kit to new members	No	0.0
	if you send out personalized letters to members:		
+ 2	that are new (this letter could be part of a welcome kit)	n/a	0.0
+ 7.5	approaching eligibility, or becoming eligible, for retirement	No	0.0
+ 2	about to become vested in pension benefits	No	0.0
+ 2	eligible, or likely eligible, to purchase service credit	No	0.0
+ 2	with no beneficiary on file	No	0.0
+ 1	about to become vested for disability benefits	No	0.0
+ 1	whose disability benefits are able to expire (i.e. after exiting employment)	Yes	1.0
+ 1	with no email address on file	No	0.0
+ 1	who have never visited the secure member area	No	0.0
+ 2.5	if you solicit member feedback on your publications through focus groups, or surveys	Yes	2.5
Total score			53.5

## b. News and Targeted Communication

### 2. Rationale for the scoring method

Targeted milestone events, such as joining the system, are good opportunities to communicate the value of the benefit.

Communicating more frequently by newsletter, and delivering personalized, and customized messages for different target audiences is higher service. Actively soliciting feedback on your communication materials should lead to better materials.

### 3. Survey questions used

		You	Peer Avg
Q82	Indicate whether you sent newsletters or news magazines (in either electronic or paper format) last year to any of the following member segments, and if yes, the number of times it was sent:		
		#	#
	a) All members (active, inactive and annuitants)? or c) Active members and annuitants?	No n/a	31% Yes 4
	b) Active and inactive members? or d) Active members only?	Yes 1	63% Yes 3
	e) Inactive members only?	No n/a	13% Yes 1
	f) Annuitants only?	Yes 1	94% Yes 3
	g) Age segments (i.e., under 35, 35-50, 50 plus)?	No n/a	13% Yes 6
	h) Women only or men only?	No n/a	0% Yes n/a
	i) Employer or employment category (i.e., a different newsletter for teachers vs. bus drivers)?	No n/a	31% Yes 10
	j) Other? (describe your other newsletter segments below) n/a	<u>No</u> n/a	<u>31% Yes</u> 8
	Total Segments	2	3.1
Q83	Are new members issued a 'welcome' kit describing their benefits?	No	88% Yes
	If yes:		
	a) If yes, does it include a personalized letter addressing the new member by name?	n/a	64% Yes

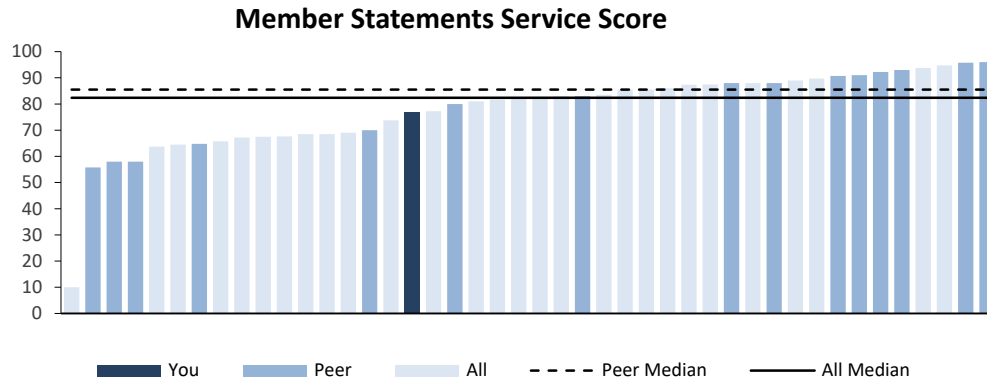
## b. News and Targeted Communication

### 3. Survey questions used

		You	Peer Avg
Q85	Do you automatically send targeted letters or emails addressed to members by name triggered by the following milestones:		
	a) Vested for pension benefits (if member is not vested immediately)?	No	40% Yes
	b) Vested for disability benefits (if member is not vested immediately)?	No	7% Yes
	c) Expiration of disability benefits for inactive members or members that have	Yes	38% Yes
	d) Approaching eligibility, or becoming eligible, for retirement?	No	56% Yes
	e) Eligibility or likely eligibility, to purchase service credit?	No	13% Yes
	f) Missing beneficiary?	No	25% Yes
	g) Missing email address?	No	6% Yes
	h) Never visited the secure member area?	No	7% Yes
	i) Other milestone communication? (describe below)	No	56% Yes
Q86	Do you actively solicit member feedback on your publications through:		
	a) Focus groups?	Yes	38% Yes
	b) Tear out surveys or feedback cards in the publications themselves?	No	0% Yes
	c) Surveys sent to members who request a publication?	No	13% Yes
	d) Other (describe)?	No	56% Yes

## c. Member statements

Your service score for member statements was 77 out of 100. This was below the peer median of 85.



1. Scoring method		Your Data	Your Score
<u>Accuracy and timeliness</u>			
+ 10	if no complaints about data errors, otherwise 10 x (1 - 25 X percent of members that complain about data errors) [Subject to a minimum score of 0]	0.0%	10.0
+ 15	if data is current to 1 month, otherwise 15 - 2 for each month in excess of 1 month out of date [Subject to a minimum score of 0]	5.0 months	7.0
+ 5	if paper member statements mailed directly to the member's home	No	0.0
+ 5	if email or other electronic notice to members that the statement is available in the secure member area	Yes	5.0
+ 5	if sent to inactive members annually or more frequently, otherwise 5 X times per year on average	0 times	0.0
<u>Content</u>			
+ 10	if summarizes service credit	Yes	10.0
+ 10	if provides pensionable earnings	Yes	10.0
+ 5	if provides a historical summary of salary and service credit earned each year	No	0.0
+ 10	if shows refund value if you left at the statement date	Yes	10.0
+ 25	if shows estimate of future pension entitlement	Yes	25.0
Total score			77.0

## c. Member statements

### 2. Rationale for the scoring method

Up-to-date, accurate member statements provide one of your best opportunities to communicate the value of the benefit to members.

Showing an estimate of the future pension entitlement is more important than showing the refund value because the pension entitlement is potentially much more valuable.

Sending member statements directly to active members' homes, via email or other electronic notice, rather than through employers is higher service because the statements are less likely to get lost, and it is more confidential.

### 3. Survey questions used

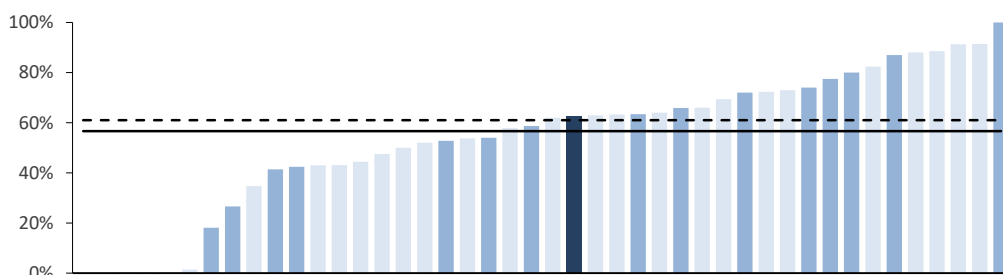
		You	Peer Avg
Q87	How many times per year (annually = 1, every 2nd year = 0.5, every 3 years = 0.33, every 5 years = 0.2) do you send member statements to: a) Active members? b) Inactive members?	1 time 0 times	1.0 time 0.9 times
Q88	Approximately what % of members complain about the accuracy of data in their member statements?	0.0%	0.3%
Q89	Indicate the approximate percentage breakdown of how you send member statements to active members: a) Directed through the employer? b) Mailed directly to members' homes? c) Email or text message to members that the statement is available in the secure member area?	0.0% 0.0% 100.0%	7.2% 37.6% 46.3%
Q90	On average, how current is an active member's data in the statements that the member receives (in months)?	5.0	2 months
Q91	Do your statements for active members include: a) Total accumulated service credit? b) Pensionable earnings? c) A historical summary of salary and service credit earned each year? d) The refund value if you left at the statement date? e) An estimate of the future pension entitlement based on age scenario modeling or assuming the member continues to work until earliest possible retirement?	Yes Yes No Yes Yes	100% Yes 75% Yes 44% Yes 94% Yes 75% Yes

## Digital delivery

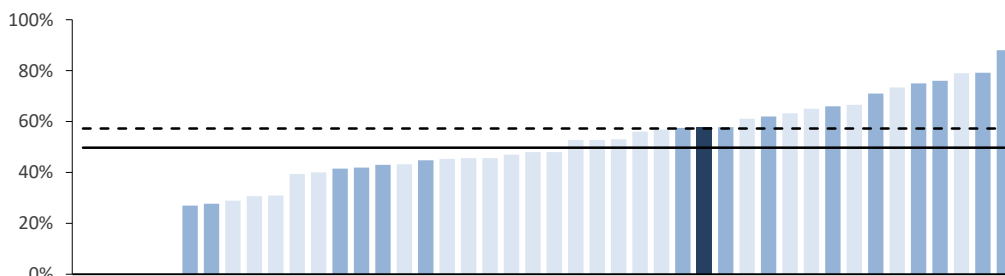
Systems are increasingly looking at cost effective and timely solutions for communicating with members. In particular, more systems are using email and other digital delivery options to deliver newsletters, member statements and other forms of traditional, paper mass communications. CEM's service model captures this change.

The below graphs are indicators of how successful systems have been in gathering member email addresses:

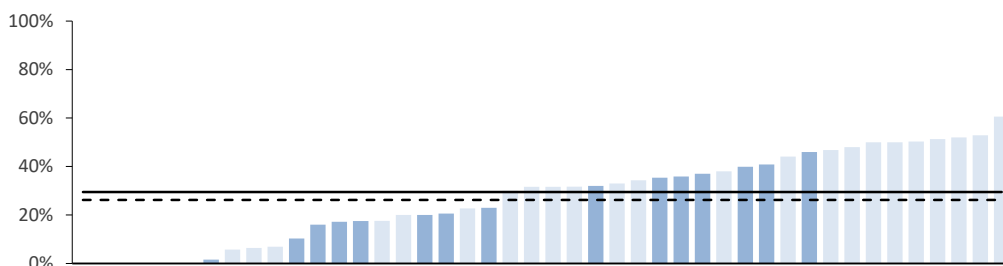
**% Email addresses for active members**



**% Email addresses for annuitants**



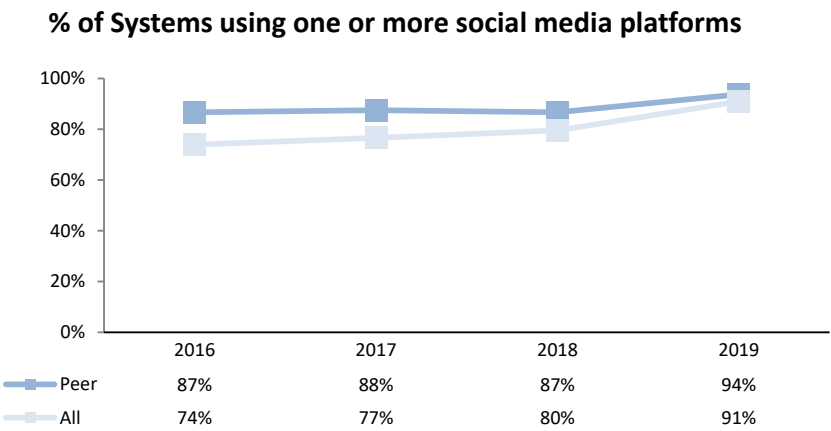
**% Email addresses for inactive members**



■ You   ■ Peer   ■ All Avg   - - - All   — Peer Avg

# Digital delivery

Social media is another method systems use to communicate with members, for both educational and marketing purposes. Social media is not currently included in the service score, but we are tracking these measures and may use them in the future.

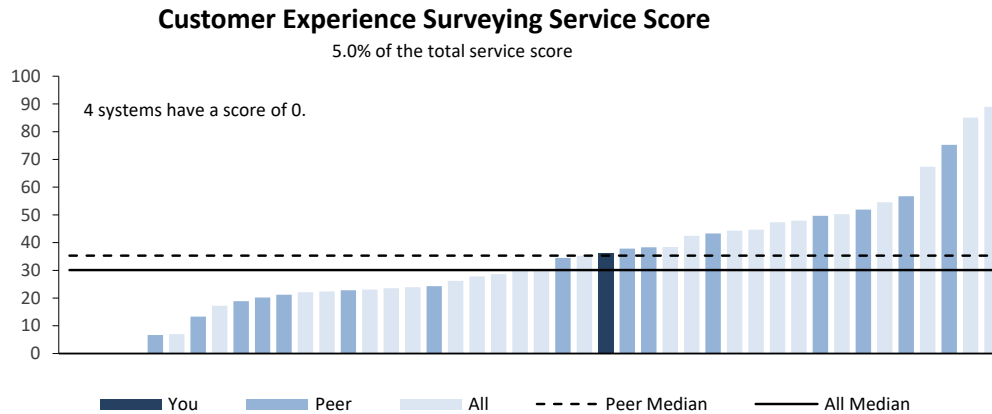


Digital delivery questions		You	Peer Avg	All Avg
Q80	Do you have videos that members can access online?	Yes	100% Yes	98% Yes
	If yes:			
	a) How many different videos do you have for members online?	35	110	57
	b) What was the total number of new views for all streamed videos?	21,723	52,862	26,278
Q92	Do you have:			
	a) Facebook?	Yes	81% Yes	61% Yes
	b) Twitter?	No	69% Yes	52% Yes
	c) YouTube?	Yes	63% Yes	64% Yes
	d) LinkedIn?	No	69% Yes	52% Yes
	e) Pinterest?	No	6% Yes	5% Yes
	f) Instagram?	No	13% Yes	23% Yes
	g) WhatsApp?	No	0% Yes	5% Yes
	h) Blog?	No	31% Yes	18% Yes
	i) Other?	No	6% Yes	16% Yes
Q93	If easily available, provide the following metrics for your most recently ended fiscal year (this does not impact your service score):			
	a) For Facebook, what is your average annual post engagement rate (combined clicks, comments, likes and shares divided by total post reach)?	Unknown	5.7%	6.2%
	b) For Twitter, what is your average tweet engagement rate (combined clicks, retweets, replies, follows, and likes divided by total impressions)?	n/a	0.8%	1.2%
Q94	Approximately how many full time equivalent staff ("FTE") are dedicated to maintaining your social media presence? Include time spent modifying or creating content specifically for social media platforms and time spent monitoring, measuring and responding to comments and questions on social media.	1.0	1.1	0.7
Q95	Do you support private two-way communication with members through any social media platforms?	Yes	75% Yes	43% Yes
Q96	Do you have a mobile app(s)?	No	13% Yes	9% Yes



## Customer Experience Surveying

Your service score for member experience surveying was 36 out of 100. This was above the peer median of 35.



Your service score for customer experience surveying is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Customer Experience Surveying Service Score Components			
	Weight <sup>1</sup>	Do you survey?	Your Score
a. Member satisfaction, Net Promoter Score (NPS) or Engagement (If applicable)			
a1. Active members	5.0%	Yes	100.0
a2. Annuitants	5.0%	Yes	100.0
b. Single-channel touchpoints			
b1. 1-on-1 counseling	7.0%	Yes	95.0
b2. Member presentations	7.0%	Yes	95.0
b3. Member telephone calls	16.0%	Yes	80.0
b4. Website - secure member area	15.0%	No	0.0
b5. Website - public area	8.0%	No	0.0
c. Member Journeys			
c6. Disability	5.0%	No	0.0
c7. Retirement	16.0%	No	0.0
c#. Other member journeys	5.0%	No	0.0
d. Transactions that may be part of a member journey			
d1. Written pension estimates	5.0%	No	0.0
d2. Refunds, Withdrawals, and Transfers-out	1.0%	No	0.0
d3. Purchases and transfers-in	5.0%	No	0.0
<b>Weighted Total</b>	<b>100.0%</b>		<b>36.1</b>

<sup>1</sup> Other systems may have slightly different activity weights than you. Their weights are reflective of the activities that they do.

# - 1. Divorce, 2. Death, 3. Starts a new job, 4. Exits a job, 5. Marries or has children, 8. Takes a leave of absence

## Customer Experience Surveying - Satisfaction, NPS, Engagement

A number of plans have told CEM that measuring and managing the customer experience has become a key strategic priority for them. These plans have adopted a more data-driven, customer-centric service delivery model. Extensive feedback is collected from members and employers so the customer experience can be tailored to the customer's wants and needs.

Plans don't just measure member satisfaction. Plans also survey other aspects of the customer experience. Commonly surveyed metrics are a Net Promoter Score (NPS), customer effort and engagement.

1. Scoring method for member satisfaction, NPS or engagement	Your Data	Your Score
a1. Active members + 100 If you survey satisfaction, NPS or engagement of active members.	Yes	100
a2. Annuitants + 100 If you survey satisfaction, NPS or engagement of annuitants.	Yes	100

## Customer Experience Surveying - Single Channel Touchpoint

1. Scoring method for single-channel touchpoints		Your Data	Your Score
<b>b1. 1-on-1 counseling</b>			
+ 50	if you survey satisfaction or NPS exclusively for 1-on-1 counseling.	Yes	50.0
+ 20	if the greatest length of time between the survey and the 1-on-1 counseling session is 1 day.	1 day	20.0
+ 15	if you can summarize results by service representative.	Yes	15.0
+ 10	if you can summarize results by topic covered.	Yes	10.0
+ 5	if you survey how easy it was for the member to accomplish what they wanted.	n/a	<u>0.0</u>
Total			95.0
<b>b2. Member presentations</b>			
+ 55	if you survey satisfaction or NPS exclusively for member presentations.	Yes	55.0
+ 30	if the greatest length of time between the survey and the member presentations session is 1 day.	1 day	30.0
+ 10	if you can summarize results by service representative.	Yes	10.0
+ 5	if you survey how easy it was for the member to accomplish what they wanted.	n/a	<u>0.0</u>
Total			95.0
<b>b3. Member telephone calls</b>			
+ 35	if you survey satisfaction or NPS exclusively for member telephone calls.	Yes	35.0
+ 25	if the greatest length of time between the survey and the member telephone calls session is 1 day.	1 day	25.0
+ 20	if you survey how easy it was for the member to accomplish what they wanted.	n/a	0.0
+ 10	if you can summarize results by service representative.	Yes	10.0
+ 10	if you can summarize results by topic covered.	Yes	10.0
Total			80.0
<b>b4. Website - secure member area</b>			
+ 20	if you survey satisfaction or NPS exclusively for website - secure member area.	No	0.0
+ 35	if you survey how easy it was for the member to accomplish what they wanted.	n/a	0.0
+ 30	if you can summarize results by topic(s) browsed.	n/a	0.0
+ 15	if the greatest length of time between the survey and the website - secure member area session is 1 day.	n/a	<u>0.0</u>
Total			0.0
<b>b5. Website - public area</b>			
+ 20	if you survey satisfaction or NPS exclusively for website - public area.	No	0.0
+ 35	if you survey how easy it was for the member to accomplish what they wanted.	n/a	0.0
+ 30	if you can summarize results by topic(s) browsed.	n/a	0.0
+ 15	if the greatest length of time between the survey and the website - public area session is 1 day.	n/a	<u>0.0</u>
Total			0.0

## Customer Experience Surveying - Member Journey

A member journey reflects a life event that may result in a single or multiple interaction with the pension plan. For example, the retirement process can result in multiple interactions: A retiring member may visit the website, attend presentations or counseling sessions, request a written estimate and call the pension plan. A survey focused exclusively on the retirement journey asks how members rate the retirement process as a whole.

1. Scoring method for member journeys	Your Data	Your Score
<b>c6. Disability</b>		
+ 40 if you survey member satisfaction or NPS exclusively for the disability process.	No	0.0
+ 35 if you survey whether the disability process was easy.	n/a	0.0
+ 25 if the greatest length of time between the survey and the end of the disability process is 30 days or less.	n/a	<u>0.0</u>
Total		0.0
<b>c7. Retirement</b>		
+ 40 if you survey member satisfaction or NPS exclusively for the retirement process.	No	0.0
+ 35 if you survey whether the retirement process was easy.	n/a	0.0
+ 25 if the greatest length of time between the survey and the end of the retirement process is 30 days or less.	n/a	<u>0.0</u>
Total		0.0
<b>c#. Other member journeys</b>		
+ 40 Member divorce: If you survey satisfaction/NPS and effort, 50% of the score if you survey only satisfaction/NPS, or only effort	None	0.0
+ 40 Member death: If you survey satisfaction/NPS and effort, 50% of the score if you survey only satisfaction/NPS, or only effort	None	0.0
+ 5 Member starts a new job: If you survey satisfaction/NPS and effort, 50% of the score if you survey only satisfaction/NPS, or only effort	None	0.0
+ 5 Member exits a job: If you survey satisfaction/NPS and effort, 50% of the score if you survey only satisfaction/NPS, or only effort	None	0.0
+ 5 Member marries or has children: If you survey satisfaction/NPS and effort, 50% of the score if you survey only satisfaction/NPS, or only effort	None	0.0
+ 5 Member takes a leave of absence: If you survey satisfaction/NPS and effort, 50% of the score if you survey only satisfaction/NPS, or only effort	None	<u>0.0</u>
Total		0.0

## Customer Experience Surveying - Transactions

1. Scoring method for transactions that may be part of a member journey		Your Data	Your Score
d1. Written pension estimates			
+ 40	if you survey member satisfaction or NPS exclusively with written pension	No	0.0
+ 35	if you survey how easy it was for the member to accomplish what they wanted.	n/a	0.0
+ 25	if the greatest length of time between the survey and the receipt of the written pension estimates process is 7 day or less.	n/a	<u>0.0</u>
Total			0.0
d2. Refunds, Withdrawals, and Transfers-out			
+ 40	if you survey member satisfaction or NPS exclusively with refunds, withdrawals, and transfers-out.	No	0.0
+ 35	if you survey how easy it was for the member to accomplish what they wanted.	n/a	0.0
+ 25	if the greatest length of time between the survey and the refunds, withdrawals, and transfers-out process is 7 days or less.	n/a	<u>0.0</u>
Total			0.0
d3. Purchases and transfers-in			
+ 40	if you survey member satisfaction or NPS exclusively with purchases and transfers-	No	0.0
+ 35	if you survey how easy it was for the member to accomplish what they wanted.	n/a	0.0
+ 25	if the greatest length of time between the survey and the purchases and transfers-in process is 7 days or less.	n/a	<u>0.0</u>
Total			0.0

## Customer Experience Surveying

### 2. Rationale for the scoring method

#### Best practice surveying:

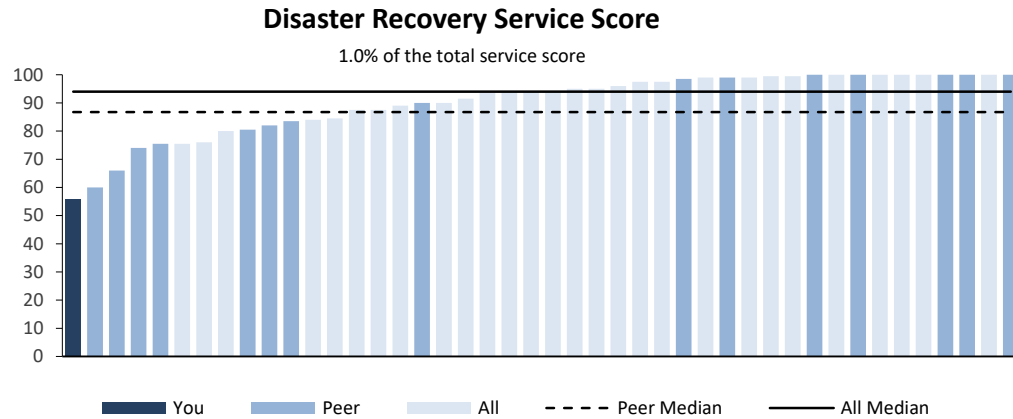
- Focuses on a single customer journey, such as the retirement process, or a single service transaction, such as calls.
- Occurs shortly after the transaction or journey is completed. Immediately after a transaction is optimal for getting the member's impression of the service agent. Any longer and research shows that the member starts to confuse service received from the agent with other interactions that occur in the members daily life (e.g., with airlines, banks, retailers, family, etc.). A day or more after a call or the completion of a journey is better for determining whether the member accomplished what they intended, and/or were happy with the entire process.
- Surveying about activities such as calls, 1-on-1 counseling and presentations can be summarized by the person that provided the service, and the purpose of the call or visit.
- Is performed on a frequent random-sample basis and results are communicated widely.

## Customer Experience Surveying

3. Survey questions used						
Q120	Did you survey satisfaction, NPS or engagement for this activity in your most recently ended fiscal year?	Did you survey member effort?	If yes, for each activity surveyed:			
			What was the longest possible time in days between the activity or journey and the survey?	Can you break down the survey results by service agent?	Can you break down the survey results by topic covered?	
<b>Your Responses</b>						
a. Member satisfaction, Net Promoter Score (NPS) or Engagement (If applicable)						
a1. Active members	Yes					
a2. Annuitants	Yes					
b. Single-channel touchpoints						
b1. 1-on-1 counseling	Yes	n/a	1	Yes		Yes
b2. Member presentations	Yes	n/a	1	Yes		
b3. Member telephone calls	Yes	n/a	1	Yes		Yes
b4. Website - secure member area	No	n/a	n/a			n/a
b5. Website - public area	No	n/a	n/a			n/a
c. Member Journeys						
c6. Disability	No	n/a	n/a			
c7. Retirement	No	n/a	n/a			
c#. Other member journeys						
c1. New Job	No	n/a				
c2. Exit Job	No	n/a				
c3. Leave of Absence	No	n/a				
c4. Married	No	n/a				
c5. Divorce	No	n/a				
c8. Death	No	n/a				
d. Transactions that may be part of a member journey						
d1. Written pension estimates	No	n/a	n/a			
d2. Refunds, Withdrawals, and Transfers-	No	n/a	n/a			
d3. Purchases and transfers-in	No	n/a	n/a			
<b>Peer Responses</b>						
a. Member satisfaction, Net Promoter Score (NPS) or Engagement (If applicable)						
a1. Active members	63% Yes					
a2. Annuitants	50% Yes					
b. Single-channel touchpoints						
b1. 1-on-1 counseling	81% Yes	9% Yes	4	85% Yes		62% Yes
b2. Member presentations	94% Yes	30% Yes	3	93% Yes		
b3. Member telephone calls	69% Yes	9% Yes	7	82% Yes		40% Yes
b4. Website - secure member area	31% Yes	11% Yes	25			100% Yes
b5. Website - public area	13% Yes	n/a	228			100% Yes
c. Member Journeys						
c6. Disability	44% Yes	17% Yes	79			
c7. Retirement	50% Yes	50% Yes	44			
c#. Other member journeys						
c1. New Job	0% Yes					
c2. Exit Job	0% Yes					
c3. Leave of Absence	0% Yes					
c4. Married	0% Yes					
c5. Divorce	0% Yes					
c8. Death	13% Yes					
d. Transactions that may be part of a member journey						
d1. Written pension estimates	50% Yes	20% Yes	77			
d2. Refunds, Withdrawals, and Transfers-	25% Yes	0% Yes	47			
d3. Purchases and transfers-in	38% Yes	25% Yes	39			

## Disaster Recovery

Your service score for disaster recovery was 56 out of 100. This was below the peer median of 87.



1. Scoring method		Your Data	Your Score
+ 20	if you have back-up equipment and premises arranged.	Yes	20.0
+ 35	if you can continue paying annuities in 2 days or less, otherwise 37.5 - 2.5 X days [Subject to a minimum score of 0]	1	35.0
+ 15	if you can return to normal inception volumes in 2 days or less, otherwise 16 - days / 2 [Subject to a minimum score of 0]	30	1.0
+ 10	if you can collect data and money from employers in 2 days or less, otherwise 11 - days / 2 [Subject to a minimum score of 0]	30	0.0
+ 10	if call center at current service levels in 2 days or less, otherwise 11 - days / 2 [Subject to a minimum score of 0]	30	0.0
+ 10	if you have an independent auditor that reviews and tests the disaster recovery	No	0.0
Total score			56.0



## Disaster Recovery

### 2. Rationale for the scoring method

Good service includes planning and preparing for unexpected events and disasters.

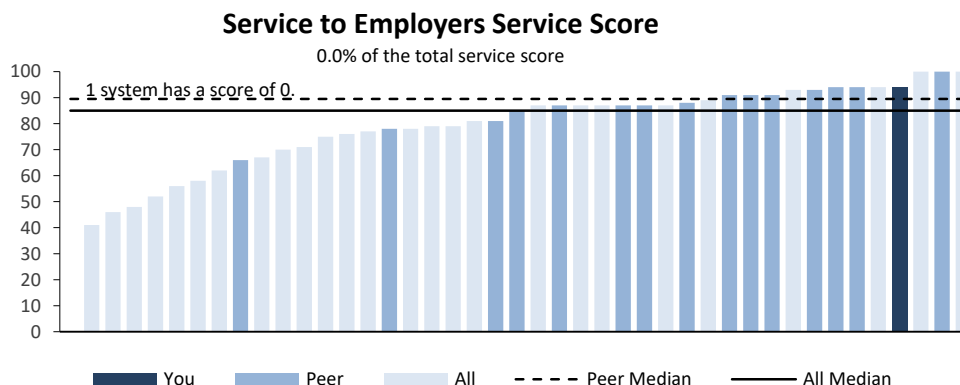
### 3. Survey questions used

		You	Peer Avg
Q116	Do you have back-up equipment and premises arranged for your operations if substantial damage occurs at your principal location?	Yes	100% Yes
Q117	Do you have an independent auditor that reviews and tests the disaster recovery plan?	No	56% Yes
Q118	If your principal location became inoperable due to some disaster (such as fire, tornado, etc), how long would it take, in business days, for you to:		
	a) Continue paying pension payments to retirees?	1	1 day
	b) Begin doing new pension inceptions at normal volumes?	30	11 days
	c) Collect data and money from employers?	30	5 days
	d) Respond to member calls at close to current service levels?	30	10 days

## Employer Service Score

The employer service score is no longer included in the total service score. It was removed because (i) many systems could not provide the necessary data, and, (ii) employer service needs vary widely depending on the number and type of employers. CEM continues with research to provide a better, more meaningful employer service score. The employer service score had only an approximate 4.0% weight in the total service score so the impact of this change on your total service score was small.

Your service score for service to employers was 94 out of 100. This was above the peer median of 90.



1. Scoring method		Your Data	Your Score
<u>Communication</u>			
+ 17	if you have an employer targeted section on your website	Yes	17.0
+ 12	if you have 3 or more different targeted types of presentations for employers, otherwise 4 X number of types	7	12.0
+ 12	if you send newsletters for employers 4 or more times per year, otherwise 3 X newsletter frequency	12	12.0
<u>Satisfaction and service agreements</u>			
+ 7	if you survey employer satisfaction, NPS or engagement	1	7.0
+ 6	if you have service level agreements with your employers	No	0.0
<u>Reporting software</u>			
+ 17	if you maintain either general or customized reporting software	Yes	17.0
+ 12	if the reporting software is web-based	Yes	12.0
+ 8	if the software integrates collections and billing	Yes	8.0
+ 9	if the software provides real time error checking and feedback	Yes	9.0
Total score			94.0

## Employer Service Score

### 2. Rationale for the scoring method

Having staff dedicated to servicing employers, providing generalized and/or customized collections reporting software, an up-to-date employer handbook, website, newsletter and training will help to reduce data errors and misinformation. Ultimately, this improves service to members.

### 3. Survey questions used

		You	Peer Avg
Q108	Do you have an employer targeted section on your website or a separate website for your employers? [Do not include PDF documents.]	Yes	100% Yes
Q110	How many different types of presentations did you give to employers?	7	13
Q111	Do you have a newsletter dedicated to employers that is different from the newsletter for members?	Yes	100% Yes
	a) If yes, how many times did you prepare and send an employer dedicated newsletter last year?	12	12
Q112	Do you have Service Level agreements with your employers that clarifies both your and the employer's service responsibilities and includes measurement and reporting vis-à-vis your responsibilities?	No	25% Yes
Q113	Do you offer and maintain generalized reporting software for your employer collection points?	Yes	100% Yes
	a) Is the application web-based? [i.e., you connect to it through a web browser]	Yes	100% Yes
	b) Can the software integrate both data collection and billing?	Yes	94% Yes
	c) Can it provide real-time error checking and feedback versus data previously submitted by the employer? [For example, can it identify an unusual increase in an employee's salary?]	Yes	69% Yes
Q114	Do you maintain customized reporting software for any of your employer collection points? [For example, you may maintain customized reporting software for your largest employer.]	No	13% Yes
Q120	Did you survey satisfaction regarding this activity in your most recently ended fiscal year?	Yes	56% Yes

## What would you have to do to achieve a perfect service score?

CEM is not recommending these changes. Higher service is not necessarily optimal or cost effective. We include this complete accounting of all changes required to have a perfect service score because many participants want to know what they would have to do to achieve a higher score. Given this context, you could add as much as 26.5 points (from 73.5 to 100) to your Total Service Score if you enhanced service in each activity as follows:

Service Activity	Potential Improvement
<b><u>1B Pension Inceptions (1.38 potential improvement to your total service score)</u></b>	
• 17.4% of your service pension inceptions experienced a cashflow interruption greater than one month. To achieve a perfect service score 100% of your service pensions must be incepted without a cashflow interruption greater than one month.	+ 1.00
• 15.2% of your service pension inceptions are based on estimates which took an average of 6.0 months to finalize. To achieve a perfect service score you must either incept no pensions based on estimates, or if you do incept pensions based on estimates do so on average in less than a month.	+ 0.18
• 24.6% of your survivor pension inceptions experienced a cashflow interruption greater than one month. To achieve a perfect service score, 100% of your survivor pensions must be incepted without a cashflow interruption greater than one month.	+ 0.20
<b><u>1C Refunds, Withdrawals, and Transfers-out (0.13 potential improvement to your total service score)</u></b>	
• You require notarization for transfer-out applications. To achieve a perfect service score, you must not require notarization of transfer-out applications.	+ 0.13
<b><u>1D Purchases and Transfers-in (0.16 potential improvement to your total service score)</u></b>	
• On average, you provide a service credit purchase in 3 days. To achieve a perfect service score, you must be able to provide a service credit purchase estimate in 1 day or less.	+ 0.16
<b><u>1E Disability (0.34 potential improvement to your total service score)</u></b>	
• On average, you return a decision on a disability application in 2.0 months. To achieve a perfect service score, you must return a decision on a disability application in 1 month or less.	+ 0.34
<b><u>2A Call Center (9.83 potential improvement to your total service score)</u></b>	
• 11.6% of your incoming calls resulted in undesired outcomes (e.g., busy signals, messages, hang-ups). To achieve a perfect service score, members must experience no undesired call outcomes.	+ 1.96
• Your call center is open 47.5 hours per week. To achieve a perfect service score, your call center must be open 50 or more hours a week.	+ 0.05
• On average, members calling your call center reach a knowledgeable person in 133 seconds. To achieve a perfect service score, members must reach a knowledgeable person on the phone in 60 seconds or less.	+ 1.53
• On average, your response time to member emails is 2.0 days. To achieve a perfect service score, members' emails must be responded to in 0.5 days or less.	+ 0.25
• You have 4 menu layers on your telephone tree. To achieve a perfect service score you must have one or fewer menu layers.	+ 2.10
• You are unable to provide an estimate of the member's pension at retirement on an immediate real-time basis over the phone. To achieve a perfect service score, you must be able to provide an estimate of the member's pension at retirement over the phone.	+ 0.74

- You are unable to provide an estimate that is linked to the member's actual account data on an immediate real-time basis over the phone. To achieve a perfect service score, you must be able to provide an estimate that is linked to the member's actual account data over the phone. + 0.88
- You are unable to model alternate annuity payment scenarios on an immediate real-time basis over the phone. To achieve a perfect service score, you must be able to model alternate annuity payment scenarios over the phone. + 0.51
- You are unable to estimate the cost to purchase service credit on an immediate real-time basis over the phone. To achieve a perfect service score, you must be able to estimate the cost to purchase service credit over the phone. + 0.51
- You are unable to change an address over the phone. To achieve a perfect service score, you must be able to change an address over the phone. + 0.51
- You are unable to change banking information over the phone. To achieve a perfect service score, you must be able to change banking information over the phone. + 0.51
- An unknown percentage of your calls are satisfied by their first contact. To achieve a perfect service score, 100% of calls must be satisfied by their first contact. + 0.57

#### **2C 1-on-1 Counseling (4.71 potential improvement to your total service score)**

- 0.6% of your active members received 1-on-1 counseling. To achieve a perfect service score, members counseled 1-on-1 must be 0.9% or more. + 0.75
- You do not provide freely available 1-on-1 counseling without limitations. To achieve a perfect service score, 1-on-1 counseling must be freely available and without limitation. + 0.93
- You do not provide 1-on-1 counseling outside of normal working hours. To achieve a perfect service score, 1-on-1 counseling must be available outside of normal working hours. + 0.19
- 0.0% of your total 1-on-1 sessions were located in the field. To achieve a perfect service score, the number of 1-on-1 sessions located in the field must be 25% or more. + 1.04
- 0.0% of your 1-on-1 field sessions are held at locations separate from the employer. To achieve a perfect service score, 75% or more of your 1-on-1 field sessions must be held at locations separate from employer. + 0.44
- Your wait time for pre-scheduled in-house counseling sessions was 5 days. To achieve a perfect service score there must be no wait time for pre-scheduled in-house counseling sessions. + 0.09
- Your average wait time for walk-in counseling was n/a minutes. To achieve a perfect service score there must be no wait time for walk-in counseling. + 0.37
- n/a of your walk-ins requesting a counseling session were turned away due to long wait times. To achieve a perfect service score, no walk-ins requesting a counseling session can be turned away because the wait was too long. + 0.37
- You do not provide new written estimates during all of 1-on-1 counseling sessions. To achieve a perfect service score, you must be able to provide a new written estimate during each of walk-in, pre-schedule in-house and in-the-field sessions. + 0.37
- You do not provide accurate service credit purchase cost estimates during all of your 1-on-1 counseling sessions. To achieve a perfect service score, you must be able to provide accurate service credit purchase cost estimates during each of walk-in, pre-schedule in-house and in-the-field sessions. + 0.07
- You do not provide closed door, private office counseling during all of your 1-on-1 counseling sessions. To achieve a perfect service score you must provide closed door, private office 1-on-1 counseling during each of walk-in, pre-scheduled in-house and in-the-field session. + 0.10

#### **2D Member Presentations (0.33 potential improvement to your total service score)**

- You do not offer presentations outside of normal working hours. To achieve a perfect service score you must offer presentations outside of normal working hours. + 0.33

#### **2E Written Pension Estimates (0.88 potential improvement to your total service score)**

- You offer estimates through member statements and website. To achieve a perfect service score you must offer estimates via member statement, website and call center. + 0.62
- You limit the timeframe when members can request estimates. To achieve a perfect service score you cannot place a limit on the timeframe when members can request an estimate. + 0.13
- You place a limit on the number of written estimates a member can request. To achieve a perfect service score there must be no limits on the number of written estimates a member can request. + 0.13

#### **2F Mass Communication - Website (2.77 potential improvement to your total service score)**

- You do not offer a digital file which includes a history of recent correspondence and member documents on your website. To achieve a perfect score you must offer a digital file which includes a history of recent correspondence and member documents on your website. + 0.43
- Members cannot register for 1-on-1 counseling sessions in real-time online. To achieve a perfect score members must be able to register for 1-on-1 counseling sessions in real-time online. + 0.21
- You do not offer live chat on your website. To achieve a perfect score you must offer live chat on your website. + 0.43
- 100.0% of pensions initiated online require follow-up documents or signatures to be mailed in. To achieve a perfect score pensions initiated online requiring follow-up documents must be less than + 0.43
- Members cannot apply for a transfer-out or refund online. To achieve a perfect score members must be able to apply for a transfer-out or refund online. + 0.64
- Members cannot upload documents online in lieu of mailing hardcopies. To achieve a perfect score members must be able to upload documents online in lieu of mailing hardcopies. + 0.64

#### **2F Mass Communication - Newsletters (1.33 potential improvement to your total service score)**

- You send newsletters to annuitants 1 time per year. To achieve a perfect service score you must send newsletters to annuitants 2 or more times per year. + 0.17
- You have different newsletters for 2 segments. To achieve a perfect service score you must send different newsletters to 3 or more segments. + 0.31
- You do not issue a 'welcome' kit to new members. To achieve a perfect service score you must issue a 'welcome' kit to new members. + 0.31
- You do not send out personalized letters to members that are new. To achieve a perfect service score you must send out personalized letters to members that are new. + 0.06
- You do not send out personalized letters to members approaching eligibility, or becoming eligible, for retirement. To achieve a perfect service score you must send out personalized letters to members approaching eligibility, or becoming eligible, for retirement. + 0.21
- You do not send out personalized letters to members about to become vested in pension benefits. To achieve a perfect service score you must send out personalized letters to members about to become vested in pension benefits. + 0.06
- You do not send out personalized letters to members eligible, or likely eligible, to purchase service credit. To achieve a perfect service score you must send out personalized letters to members eligible, or likely eligible, to purchase service credit. + 0.06
- You do not send out personalized letters to members with no beneficiary on file. To achieve a perfect service score you must send out personalized letters to members with no beneficiary on file. + 0.06
- You do not send out personalized letters to members about to become vested for disability benefits. To achieve a perfect service score you must send out personalized letters to members about to become vested for disability benefits. + 0.03
- You do not send out personalized letters to members with no email address on file. To achieve a perfect service score you must send out personalized letters to members with no email address on file. + 0.03
- You do not send out personalized letters to members who have never visited the secure member area. To achieve a perfect service score you must send out personalized letters to members who have never visited the secure member area. + 0.03

- To achieve a perfect service score you must publish member statements, your annual report, newsletters, website and brochures in a language other than English. + 0.03

## **2F Mass Communication - Member Statements (1.08 potential improvement to your total service score)**

- Your member statement data is current to 5 months. To achieve a perfect service score your member statement data must be current to one month or less. + 0.38
- You do not send member statements directly to the member's home. To achieve a perfect service score member statements must be sent directly to the member's home. + 0.23
- You send member statements to inactive members 0 times per year. To achieve a perfect service score member statements must be sent to inactive members annually or more frequently. + 0.23
- Your member statements do not contain a summary of salary and service credit earned each year. To achieve a perfect service score member statements must contain a summary of salary and service credit earned each year. + 0.23

## **Customer Experience Surveying (3.20 potential improvement to your total service score)**

### **b1. 1-on-1 counseling (0.02 potential improvement to your total service score)**

- You did not do all the customer experience surveying for member who had 1-on-1 counselling about their experience during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which is: (i) effort. + 0.02

### **b2. Member presentations (0.02 potential improvement to your total service score)**

- You only surveyed satisfaction/NPS, but not customer effort, for members who attended group presentations about their experience during the fiscal year covered in this benchmarking report. + 0.02

### **b3. Member telephone calls (0.16 potential improvement to your total service score)**

- You only surveyed satisfaction/NPS, but not customer effort, for members who contacted the call center about their experience during the fiscal year covered in this benchmarking report. + 0.16

### **b4. Website - secure member area (0.75 potential improvement to your total service score)**

- You only surveyed customer effort, but not satisfaction/NPS, for members who visited their secure member web area about their experience during the fiscal year covered in this benchmarking report. + 0.15
- You only surveyed satisfaction/NPS, but not customer effort, for members who visited the web site about their experience during the fiscal year covered in this benchmarking report. + 0.26
- The greatest length of time between a member visiting website - secure member area and your customer experience survey for the member visiting website - secure member area was n/a days. To achieve a perfect service score the greatest length of time between the survey and the member visiting website - secure member area must be 1 days or less. + 0.11
- You are unable to summarize member visiting website - secure member area customer experience survey results by topic covered. To achieve a perfect service score you must be able to summarize member visiting website - secure member area customer experience survey results by topic covered. + 0.23

### **b5. Website - public area (0.40 potential improvement to your total service score)**

- You only surveyed customer effort, but not satisfaction/NPS, for members who visited the public area in the web site about their experience during the fiscal year covered in this benchmarking report. + 0.08
- You only surveyed satisfaction/NPS, but not customer effort, for members who visited the public area in the web site about their experience during the fiscal year covered in this benchmarking report. + 0.14
- The greatest length of time between a member visiting website - public area and your customer experience survey for the member visiting website - secure member area was n/a days. To achieve a perfect service score the greatest length of time between the survey and the member visiting website - secure member area must be 1 days or less. + 0.06
- You are unable to summarize member visiting website - public area customer experience survey + 0.12

results by topic covered. To achieve a perfect service score you must be able to summarize member visiting website - secure member area customer experience survey results by topic covered.

c6. Disability (0.25 potential improvement to your total service score)

- You only surveyed customer effort, but not satisfaction/NPS, for disability applicants about their disability-retirement process experience during the fiscal year covered in this benchmarking report. + 0.10
- You only surveyed satisfaction/NPS, but not customer effort, for disability applicants about their disability-retirement process experience during the fiscal year covered in this benchmarking report. + 0.09
- The greatest length of time between a disability and your customer experience survey for the disability was n/a days. To achieve a perfect service score the greatest length of time between the survey and the disability must be 30 days or less. + 0.06

c7. Retirement (0.80 potential improvement to your total service score)

- You only surveyed customer effort or satisfaction/NPS, but not both, for recently retired members about their retirement process experience during the fiscal year covered in this benchmarking report. + 0.32
- You only surveyed satisfaction/NPS, but not customer effort, for recently retired members about their retirement process experience during the fiscal year covered in this benchmarking report. + 0.28
- The greatest length of time between a retirement and your customer experience survey for the retirements was n/a days. To achieve a perfect service score the greatest length of time between the survey and the retirements must be 30 days or less. + 0.20

c#. Other member journeys (0.25 potential improvement to your total service score)

- You did not do all customer experience surveying during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which is: (i) satisfaction and (ii) Net Promoter Score (NPS) and (iii) effort. + 0.10
- You did not do all customer experience surveying during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which is: (i) satisfaction and (ii) Net Promoter Score (NPS) and (iii) effort. + 0.10
- You did not do all customer experience surveying during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which is: (i) satisfaction and (ii) Net Promoter Score (NPS) and (iii) effort. + 0.01
- You did not do all customer experience surveying during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which is: (i) satisfaction and (ii) Net Promoter Score (NPS) and (iii) effort. + 0.01
- You did not do all customer experience surveying during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which is: (i) satisfaction and (ii) Net Promoter Score (NPS) and (iii) effort. + 0.01
- You did not do all customer experience surveying during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which is: (i) satisfaction and (ii) Net Promoter Score (NPS) and (iii) effort. + 0.01

d1. Written pension estimates (0.25 potential improvement to your total service score)

- You only surveyed customer effort, but not satisfaction/NPS, for members who requested written estimates about their experience during the fiscal year covered in this benchmarking report. + 0.10
- You only surveyed satisfaction/NPS, but not customer effort, for members who requested written estimates about their experience during the fiscal year covered in this benchmarking report. + 0.09
- The greatest length of time between a written pension estimates and your customer experience survey for the written pension estimates was n/a days. To achieve a perfect service score the greatest length of time between the survey and the written pension estimates must be 1 days or less. + 0.06



**d2. Refunds, Withdrawals, and Transfers-out (0.05 potential improvement to your total service score)**

- You only surveyed customer effort, but not satisfaction/NPS, for members who requested refunds, withdrawals or transfers-out about their experience during the fiscal year covered in this benchmarking report. + 0.02
- You only surveyed satisfaction/NPS, but not customer effort, for members who requested refunds, withdrawals or transfers-out about their experience during the fiscal year covered in this benchmarking report. + 0.02
- The greatest length of time between a refunds, withdrawals and transfers-out and your customer experience survey for the refunds, withdrawals and transfers-out was n/a days. To achieve a perfect service score the greatest length of time between the survey and the refunds, withdrawals and transfers-out must be 7 days or less. + 0.01

**d3. Purchases and transfers-in (0.25 potential improvement to your total service score)**

- You only surveyed customer effort, but not satisfaction/NPS, for members who requested service credit purchases or transfers-in about their experience during the fiscal year covered in this benchmarking report + 0.10
- You only surveyed satisfaction/NPS, but not customer effort, for members who requested service credit purchases or transfers-in about their experience during the fiscal year covered in this benchmarking report + 0.09
- The greatest length of time between a purchases and transfers-in and your customer experience survey for the purchases and transfers-in was n/a days. To achieve a perfect service score the greatest length of time between the survey and the purchases and transfers-in must be 7 days or less. + 0.06

**Disaster Recovery (0.44 potential improvement to your total service score)**

- Following a disaster, you can return to normal inception volumes in 30 days. To achieve a perfect service score you must be able to return to normal inception volumes in 2 days or less. + 0.14
- Following a disaster, you can collect data and money from employers in 30 days. To achieve a perfect service score you must be able to collect data and money from employers in 2 days or less. + 0.10
- Following a disaster, your call center can return to normal service levels in 30 days. To achieve a perfect service score the call center must be able to return to normal service levels in 2 days or less. + 0.10
- You do not have an independent auditor that reviews and tests the disaster recovery plan. To achieve a perfect service score an independent auditor must review and test your disaster recovery plan. + 0.10

# 8

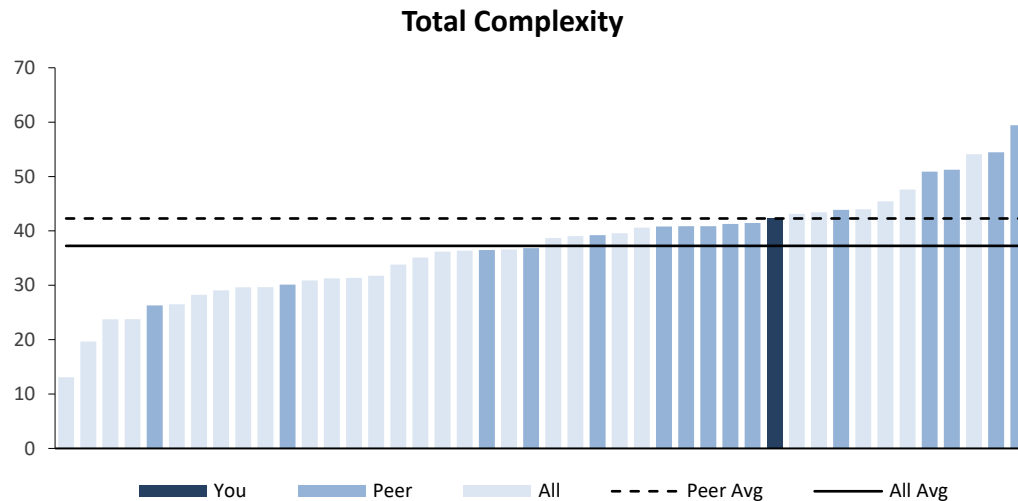
## Plan Complexity

This section:

- Identifies causes of retirement system complexity
- Compares your system's complexity to your peers and other retirement systems

## Your complexity was equal to the peer average.

Your total complexity score was 42. This was above the peer median of 41.

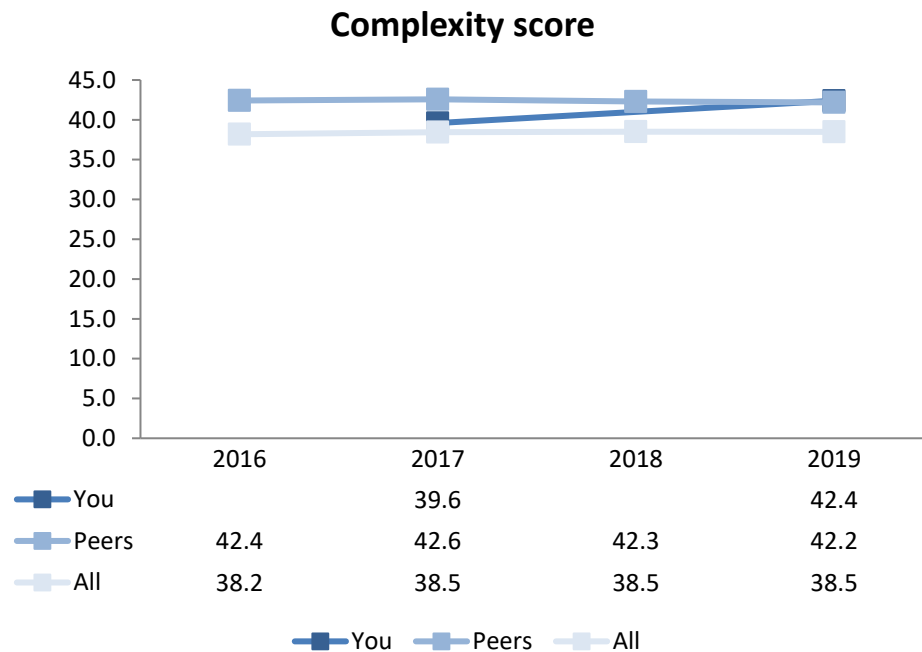


Your total complexity score is the weighted average of your complexity scores by the cause. The causes of complexity are summarized in the table below:

Complexity Scores by Cause				
Cause	Weight	Complexity Score		
		You	Peer Avg	All Avg
A Pension Payment Options	15.0%	41	40	36
B Customization Choices	20.0%	30	18	15
C Multiple Plan Types and Overlays	13.0%	15	31	25
D Multiple Benefit Formula	16.0%	64	57	49
E External Reciprocity	3.0%	0	21	22
F COLA Rules	4.0%	4	28	28
G Contribution Rates	3.0%	46	43	35
H Variable Compensation	4.0%	85	85	78
I Service Credit Rules	3.0%	40	47	42
J Divorce Rules	3.0%	55	75	67
K Purchase Rules	6.0%	49	60	59
L Refund Rules	4.0%	73	43	44
M Disability Rules	6.0%	71	70	56
Weighted Average	100.0%	42	42	37

## Trends in Complexity

The total complexity score of your peers that participated for 4 consecutive years have grown at a compound annual rate of -0.2% between 2016 and 2019. Your growth rate for the same period is unavailable.



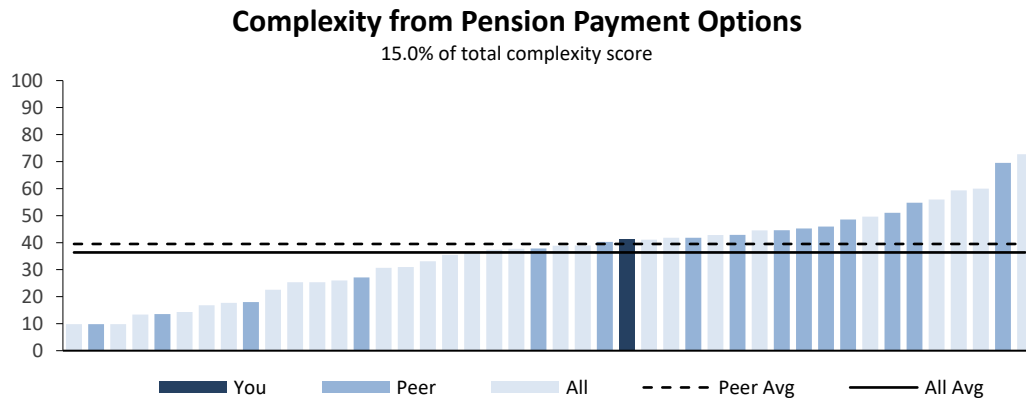
1. Trend analysis is based on systems that have participated for 4-consecutive years (13 peers and 33 World systems). This ensures that trends are not caused by changes in the composition of the participants.

### Complexity scoring methodology

CEM's complexity scoring methodology changed in 2018, from a relative measure to absolute. The benefit of using an absolute measure is that your score is only impacted by changes in your plan rules.

Several of the formulas used to calculate complexity use the function  $\ln(\# \text{ of rule sets})$ . Using  $\ln(\# \text{ of rule sets})$  means that every doubling in the number of rule sets results in the same increment in complexity. For example, increasing the number of rules sets for qualifying for retirement from 1 to 2 is assumed to cause the same increment in complexity as increasing from 2 to 4, or from 4 to 8, and so on.

## A. Pension Payment Options Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
10%	<p><b>Q137</b> Do you have a designer option where members can design virtually any actuarially sound cash flow they choose? [Designer options need to be custom priced by an actuary.] <i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	6% Yes 6	9% Yes 9
30%	<p><b>Q132</b> Do you offer "joint and survivor" options that are:</p> <p>a) Reduced to Beneficiary Only? [For example, If the beneficiary dies first, then the retiree's pension continues at the same level. However if the retiree dies first then the beneficiary receives a reduced pension (such as 70% for spouse).]</p> <p>b) Reduced to Last Survivor? [For example, if either the retiree or beneficiary dies the survivor receives a reduced pension (such as 70%, etc.).]</p> <p>c) "Reversion" or "Pop-up"? [For example, if the beneficiary dies first, the retiree's pension increases to an unmodified level. However, if the retiree dies first the pension does not increase for the surviving beneficiary (and it may decrease).]</p> <p><i>Complexity: 100 if all 3 types (yes to a, b and c), 85 if both reduced to spouse and reduced to last (yes to a and b), 75 if reversion and either reduced to spouse or reduced to last (yes to c and either a or b), otherwise 0.</i></p>	Yes  No  Yes	75% Yes 31% Yes 88% Yes	75% Yes 25% Yes 66% Yes
10%	<p><b>Q133</b> Do you limit the number of Joint and Beneficiary or Survivor percentages (i.e., 100% Survivor, 50% Survivor, etc.)? If you permit an unlimited number of percentages, then your response should be no.</p> <p>a) How many percentages do you permit? <i>Complexity: 100 if unlimited, 0 if none, otherwise <math>12.7 + 18.3 \times \ln(\text{number of percentages you permit})</math> subject to a maximum of 100. i.e., 1 = 12.7, 2 = 25.3, 4 = 38.0, 8 = 50.6, etc. <sup>1</sup></i></p>	Yes 2  25	1 12 62	1 7 56

<sup>1</sup> The logarithmic (ln) function is used extensively in this section to calculate complexity because complexity is not linear. Increasing from 100 to 101 rule sets is a much smaller jump in complexity than increasing from 1 to 2. In effect, the (ln) function says that every doubling in the number of rule sets results in the same increase in complexity. The constant and the coefficient were selected for each rule type such that the maximum number of rule sets reported in 2018 resulted in a complexity score of approximately 95.

## A. Pension Payment Options Complexity

page 2 of 3

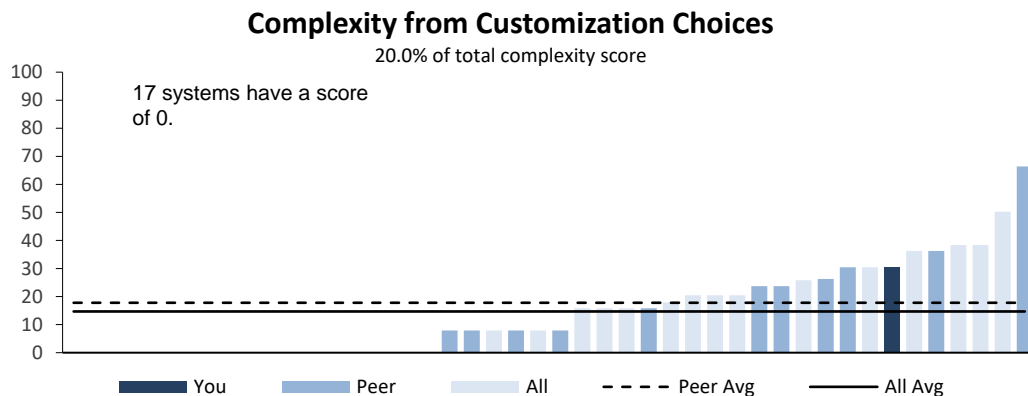
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
10%	Q142 How many mortality tables do you keep track of for determining joint and survivor or beneficiary options? <i>Complexity: 0 if none, otherwise <math>10.5 + 15.1 \times \ln(\text{number of mortality tables})</math>. i.e., 1 = 10.5, 2 = 20.9, 4 = 31.4, 8 = 41.8, etc.</i>	1	20	10
		10	27	24
10%	Q134 Do any of your retirement formula for members explicitly subtract estimated Social Security (or CPP in Canada) when determining the benefit? a) If yes, is this true for all of your members or are some pensions reduced to reflect Social Security and others not? b) If yes, do you have a "Level Income" option for early retirees that pays a higher benefit to members prior to age 65 and then reduces the benefit at age 65 when social security (or CPP in Canada) starts to be paid? <i>Complexity: 50 if you adjust for social security + 25 if you adjust for some members but not all + 25 if you have a level income for early retirees.</i>	Yes	25% Yes	50% Yes
		Some	0% All	32% All
		Yes	75% Yes	91% Yes
		100	23	45
5%	Q135 Do you have "High/ Low" or "Low/High" options that are not tied to social security? [For example, a retiree might want higher payments for 10 years until a mortgage obligation is repaid, followed by lower payments.] <i>Complexity: 100 if yes, otherwise 0.</i>	No	13% Yes	7% Yes
		0	13	7
5%	Q136 Do you offer "Annuity Certain" options? [For example, Annuity Certain options provide the annuitant with a monthly benefit for life. If the annuitant dies before a set guarantee period, monthly benefits continue to be paid to a beneficiary for the balance of the guarantee period.] <i>Complexity: 100 if yes, otherwise 0.</i>	No	50% Yes	50% Yes
		0	50	50
5%	Q138 Can a member choose between a COLA protected and a non-COLA pension? [The only example we have seen provides a much higher FAS salary base for the non-COLA pension.] <i>Complexity: 100 if yes, otherwise 0.</i>	Yes	6% Yes	7% Yes
		100	6	7

## A. Pension Payment Options Complexity

page 3 of 3

Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
5%	<p>Q139 Do you have a Deferred Retirement Option Plan ("DROP")? [This option allows eligible employees to receive payment of retirement benefits while continuing to work. These payments are usually deposited into a separate account, and the total accumulated value of this account is paid via lump sum to the employee on actual retirement.]</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	19% Yes 19	20% Yes 20
5%	<p>Q140 At retirement, can a member convert:</p> <p>a) Part of his benefit into a partial lump sum payment?</p> <p>b) All of his benefit into a lump sum or commuted value payment? [That can be rolled over to another fund, or investment account, etc.]</p> <p><i>Complexity: 100 if yes to a or b, 0 if no.</i></p>	No 0	50% Yes 31% Yes 69	43% Yes 25% Yes 59
5%	<p>Q141 Are members permitted to retire mid-month (in which case they receive a partial pension payment for the remainder of the month) or are they always assumed to retire on a set day (usually the first or the last day) of the month?</p> <p><i>Complexity: 100 if any day, otherwise 0.</i></p>	Set Day 0	31% Any 31	39% Any 39
100%	Weighted Average	41	40	36

## B. Customization Choices Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
Q173	Can either existing employers, or a new employer joining your system, choose:			
	a) Whether they offer early retirement, or a window of early retirement?	No	25% Yes	20% Yes
	b) Whether or not part-time employees are eligible?	No	13% Yes	9% Yes
	c) Whether employee contributions are paid pre or post tax?	Yes	50% Yes	23% Yes
	d) Whether they pay for employee contributions themselves, or not?	No	44% Yes	27% Yes
	e) Position coverage based on predetermined rule sets? [For example, employers can choose from a list of pre-determined rules sets such as 1.5% X FAS for General and 2.5% X FAS for Law Enforcement. Employers may have flexibility to determine eligibility for each group.]	No	25% Yes	9% Yes
	f) Contribution levels and/ or match rates? [For example, at Texas MRS, employers can choose employee deposit rates of 5%, 6% or 7% and employer match rates of 1 to 1, 1.5 to 1 or 2 to 1. We think this only applies to money match and DC plans because for DB plans the promised benefit determines the contribution.]	No	19% Yes	14% Yes
	g) To pay for one-time improvements in retiree or member benefits? [For example, one fund's employers can elect to pay to improve the money purchase entitlement of their members.]	No	19% Yes	16% Yes

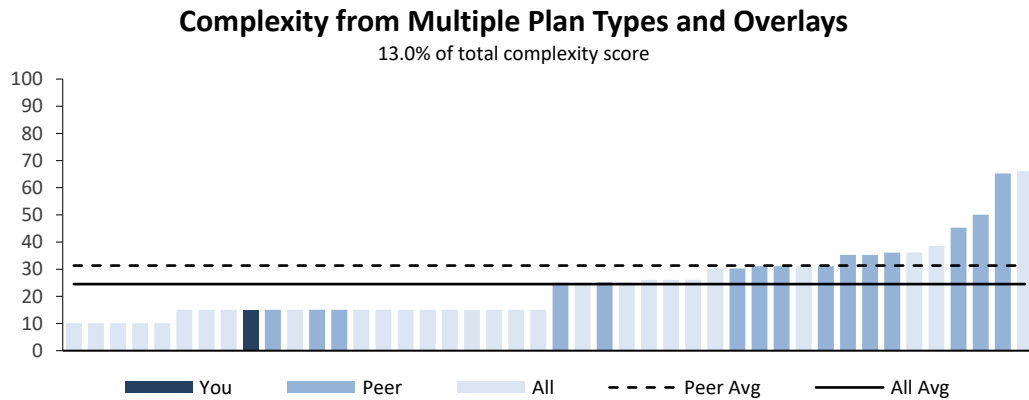


## B. Customization Choices Complexity

page 2 of 2

Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	<p>Q174 When new employers join your system, do they have the flexibility to customize any of the following items: If yes, indicate the number of standard choices for that item.</p> <p>a) Benefit program multipliers? [i.e., 2% per year of service, 2.5% per year of service, etc.]</p> <p>b) Final salary definition? [i.e., Sick Leave in or out, Final 1 year, Highest 5 consecutive years, etc]</p> <p>c) Retirement eligibility rules? [i.e., age and/or years of service required to retire]</p> <p>d) Cost of living adjustment rules? [i.e., CPI capped at 2%, CPI uncapped, etc]</p> <p>e) Vesting period?</p> <p>f) Service credit purchase categories?</p> <p>g) Death benefit coverage? [i.e., one system has 3 choices: none, \$5,000 and \$10,000]</p> <p>h) Disability coverage rules?</p> <p>i) Choice as to whether and how contributions and benefits are coordinated with social security?</p> <p>j) Other (describe)?</p> <p>Total Customization Choices [Sum of 1 for each yes in Q173 + sum of # of choices in Q174]</p> <p><i>Complexity: 0 if none, otherwise <math>8.8 + 12.7 \times \ln(\text{number of customization choices})</math>. i.e., 1 = 8.8, 2 = 17.6, 4 = 26.4, 8 = 35.1, etc.</i></p>	<p>n/a</p> <p>n/a</p> <p>n/a</p> <p>n/a</p> <p>n/a</p> <p>n/a</p> <p>2</p> <p>n/a</p> <p>n/a</p> <p>n/a</p> <p>3</p> <p>23</p>	<p>5</p> <p>2</p> <p>n/a</p> <p>4</p> <p>n/a</p> <p>6</p> <p>4</p> <p>4</p> <p>3</p> <p>2</p> <p>30</p> <p>6</p> <p>17</p>	<p>5</p> <p>2</p> <p>n/a</p> <p>4</p> <p>n/a</p> <p>4</p> <p>3</p> <p>3</p> <p>2</p> <p>6</p> <p>14</p>
90%				
	<p>Q175 Can an existing employer change any of the choices (per question 178 above), effectively creating a new or altered rule set, at any time?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	<p>Yes</p> <p>100</p>	<p>25% Yes</p> <p>25</p>	<p>26% Yes</p> <p>25</p>
10%				
100%	Weighted Average	30	18	15

## C. Multiple Plan Types and Overlays Complexity



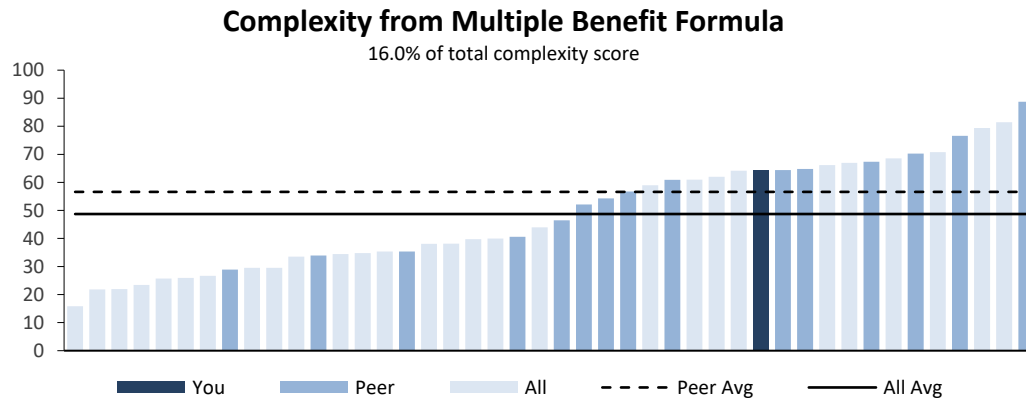
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
45%	Q122 Which of the following descriptions best describes the non-optional benefit plans that you administer for each of your member groups:			
	a) Traditional Defined Benefit ("DB")?	Yes	94% Yes	95% Yes
	b) DB Cash Balance (aka Money Purchase)?	No	13% Yes	7% Yes
	c) Hybrid DB/ DC Cash Balance?	No	6% Yes	5% Yes
	d) Hybrid DB/ Money Match?	No	6% Yes	5% Yes
	e) DROP savings?	No	6% Yes	9% Yes
	f) Defined Contribution ("DC")?	No	25% Yes	16% Yes
	g) Hybrid DB/ DC?	No	44% Yes	27% Yes
	h) Other (describe)?	No	0% Yes	7% Yes
	Total number of different plan types. Hybrid plans count as 2 types.	1.0	2.5	2.1
	Complexity: 0 if none, otherwise $22.4 + 32.4 \times \ln(\text{number of non-optional benefit plans})$ . i.e., 1 = 22.4, 2 = 44.8, 4 = 67.3, 8 = 89.7, etc.	22	47	39

## C. Multiple Plan Types and Overlays Complexity

page 2 of 2

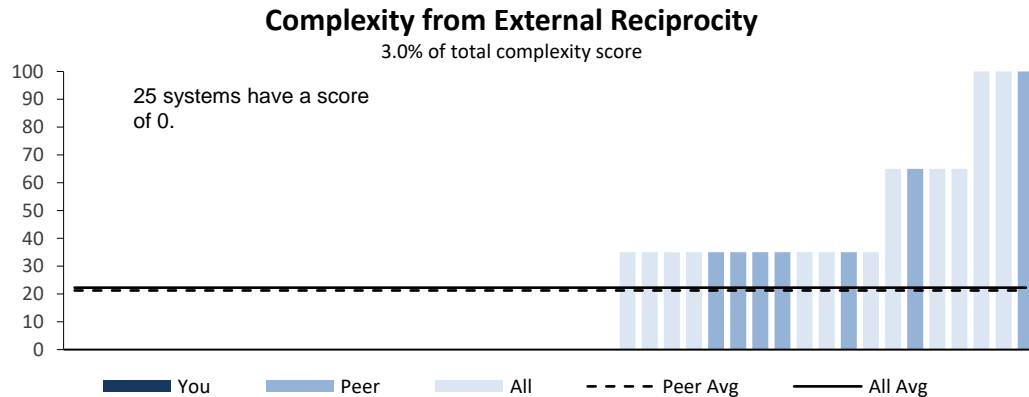
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	<p>Q123 Do members in any of your defined benefit plan(s) have the option of electing: [These questions are not applicable for DC plans or the DC portion of hybrid DB/DC plans]</p> <p>a) A 'variable investment option' that can increase or decrease the value of a member's future DB pension depending on the investment performance of a 'variable fund'?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p> <p>b) A 'pension savings overlay'? [Some Dutch systems have this option. The additional contributions are converted into an annuity at retirement. Interest is based on a fixed percentage or on the performance of the pension fund.]</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p> <p>c) To change their contribution rate in order to get either more money at retirement or earlier eligibility to retire?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>			
30%		No 0	13% Yes 13	7% Yes 7
10%		No 0	25% Yes 25	11% Yes 11
10%		No 0	0% Yes 0	2% Yes 2
	<p>Q124 Do you have a Highly Compensated Employee replacement benefit program for employees that exceed legal or contractual limits of maximum pensionable earnings?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	Yes 100	81% Yes 81	68% Yes 68
5%				
100%	Weighted Average	15	31	25

## D. Multiple Benefit Formula Complexity



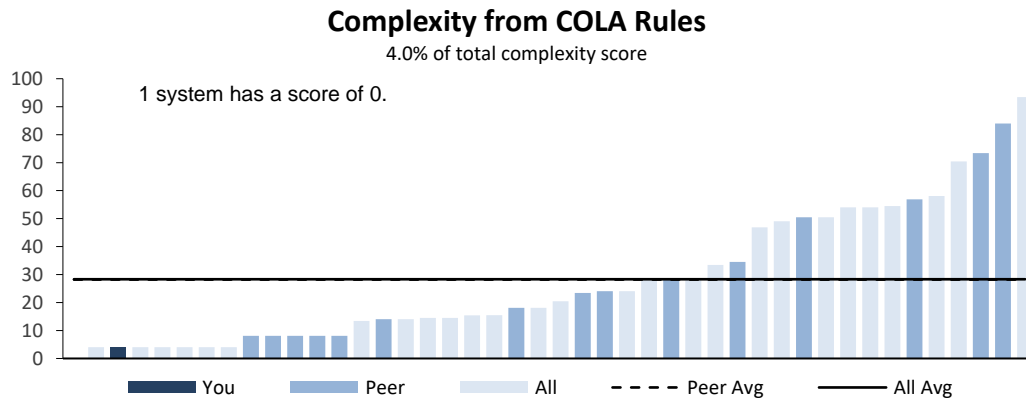
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
30%	<p>Q146 How many different rule sets do you have that apply to member groups or subsets of a member group for qualifying for an unreduced retirement formula? Complexity: 0 if none, otherwise <math>12.7 + 18.3 \times \ln(\text{number of rule sets})</math>. i.e., 1 = 12.7, 2 = 25.3, 4 = 38.0, 8 = 50.6, etc.</p>	9	14	10
		53	53	46
5%	<p>Q147 Can members retire earlier than the age required for an unreduced retirement formula? Complexity: 100 if yes, 0 if no</p>	Yes 100	100% Yes 100	98% Yes 98
20%	<p>Q148 How many different salary definitions could apply in retirement formula calculations? Complexity: 0 if none, otherwise <math>19.4 + 27.9 \times \ln(\text{number of salary definitions})</math>. i.e., 1 = 19.4, 2 = 38.7, 4 = 58.1, 8 = 77.4, etc.</p>	5	6	5
		64	60	53
25%	<p>Q149 How many different 'formula percentage' rule sets could apply in unreduced retirement formulas? Complexity: 0 if none, otherwise <math>12.7 + 18.3 \times \ln(\text{number of 'formula percentage' rule sets})</math>. i.e., 1 = 12.7, 2 = 25.3, 4 = 38.0, 8 = 50.6, etc.</p>	5	12	9
		42	46	39
	<p>Q150 Do you have different employers with different benefit formula? If yes, which of the following happens when a member moves from one employer that you administer to another with a different benefit formula? [For example, moves from PERS to Law Enforcement.]</p> <p>a) Each system uses its own formula and salary data to determine the benefit.</p> <p>b) Each system applies its own formula but uses either the salary earned in the last system, or the highest salary (or salaries) in either system.</p> <p>c) The highest formula will apply.</p> <p>d) The formula of the plan where the member works last will apply.</p> <p>e) Other (describe).</p> <p>Complexity: 100 if b or c apply, 80 if d or e, 60 if a, otherwise 0.</p>	Yes	69% Yes	55% Yes
		Yes	45% Yes	54% Yes
		Yes	45% Yes	42% Yes
		No	9% Yes	8% Yes
		Yes	36% Yes	38% Yes
		No	9% Yes	21% Yes
20%		100	61	48
100%	Weighted Average	64	57	49

## E. External Reciprocity Complexity



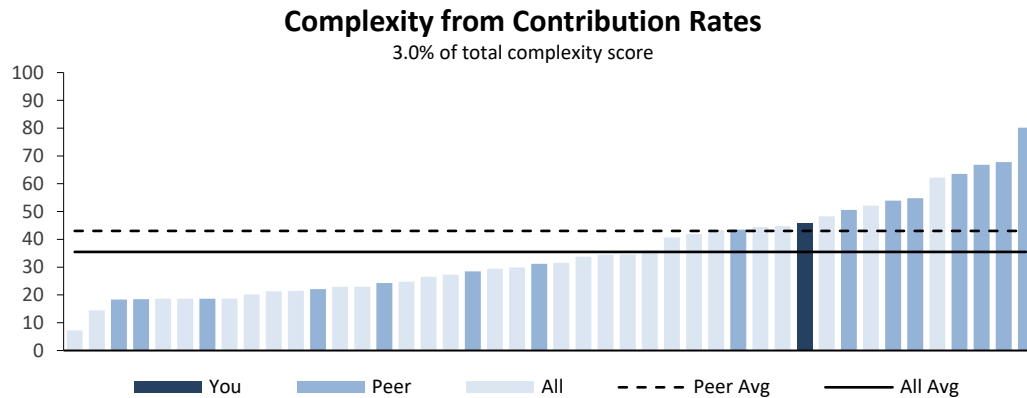
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
35%	<p>Q151 Do you have agreements with external systems where you both agree to use the member's final salary from the system where the member worked immediately prior to retirement in the benefit calculation? [Otherwise, each system pays the "dual" member a pension benefit based on its own rules for determining the benefit. Neither credit nor money are transferred between systems.]</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	38% Yes 38	34% Yes 34
65%	<p>Q152 Do you have agreements with external Systems where the member may combine internal and external credit to form one joint account?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	13% Yes 13	16% Yes 16
100%	Weighted Average	0	21	22

## F. COLA Rules Complexity



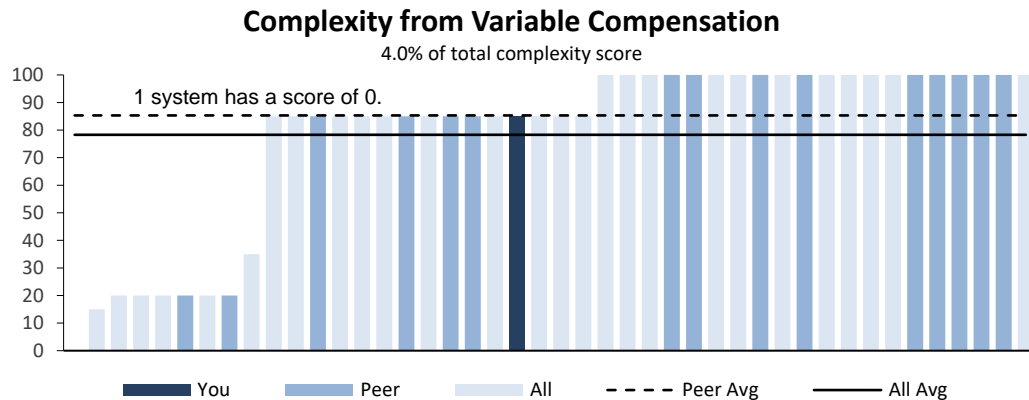
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
20%	<p>Q143 How many different cost of living adjustment ("COLA") rule sets do you have for retired, and if applicable, inactive members? (These rule sets may be either contractual or legislated.)</p> <p><i>Complexity: 0 if none, otherwise <math>20.2 + 29.2 \times \ln(\text{number of COLA rule sets})</math>. i.e., 1 = 20.2, 2 = 40.4, 4 = 60.6, 8 = 80.8, etc.</i></p>	1 20	4 49	3 44
40%	<p>Q144 Do you have:</p> <p>a) Cost of living adjustment ("COLA") clauses that carry forward inflation that exceeds a cap (versus no cap or no carry forward or no COLA etc.)?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	25% Yes 25	27% Yes 27
10%	<p>b) Conditional COLA based on the level of funding?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	25% Yes 25	27% Yes 27
20%	<p>c) Umbrella legislation that guarantees the purchasing power of an annuitants' pension will not fall below a certain level? [An example of such legislated protection is the PPPA in California.]</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	25% Yes 25	18% Yes 18
5%	<p>Q145 Do you have COLA clauses that increase the base pensionable earnings of inactive members?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	13% Yes 13	25% Yes 25
5%	<p>a) If yes, are these COLA increases the same as they are for annuitants?</p> <p><i>Complexity: 100 if yes, otherwise 0.</i></p>	n/a 0	50% Yes 6	73% Yes 18
100%	Weighted Average	4	28	28

## G. Contribution Rates Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
40%	<p>Q176 How many different contribution percentages do you collect from:</p> <p>a) Employers? [For example, single member group systems may have only one contribution percentage whereas some multi-plan systems may collect numerous different contribution rates from various participating employers.]  <i>Complexity: 0 if none, otherwise <math>7.3 + 10.5 \times \ln(\text{number of contribution percentages collected from employers})</math>. i.e., 1 = 7.3, 2 = 14.6, 4 = 21.9, 8 = 29.2, etc.</i></p>	117	666	287
40%	<p>b) Members?  <i>Complexity: 0 if none, otherwise <math>10.8 + 15.5 \times \ln(\text{number of contribution percentages collected from members})</math>. i.e., 1 = 10.8, 2 = 21.5, 4 = 32.3, 8 = 43.0, etc.</i></p>	57	45	34
17%	<p>Q177 Which of the following payment methods for employee contributions occur in the plans that you administer:</p> <p>a) No employee contributions? Yes</p> <p>b) Employer pays his part and also the employee contributions? No</p> <p>c) Employer withholds employee contributions pre-tax from his salary? Yes</p> <p>d) Employer withholds employee contributions post-tax from his salary? Yes</p> <p><i>Complexity: 100 if all 4 methods are possible, 66 if 3 methods, 33 if 2 methods, 0 if 1 method.</i></p>	2 22 66	11 35 56	12 34 40
3%	<p>Q178 Do you have any other contributions in addition to the regular employee and employer contributions? [For example, Ohio SERS collects a surcharge for members who earn less than a minimum compensation amount.]  <i>Complexity: 100 if yes, otherwise 0.</i></p>	100	44	48
100%	Weighted Average	46	43	35

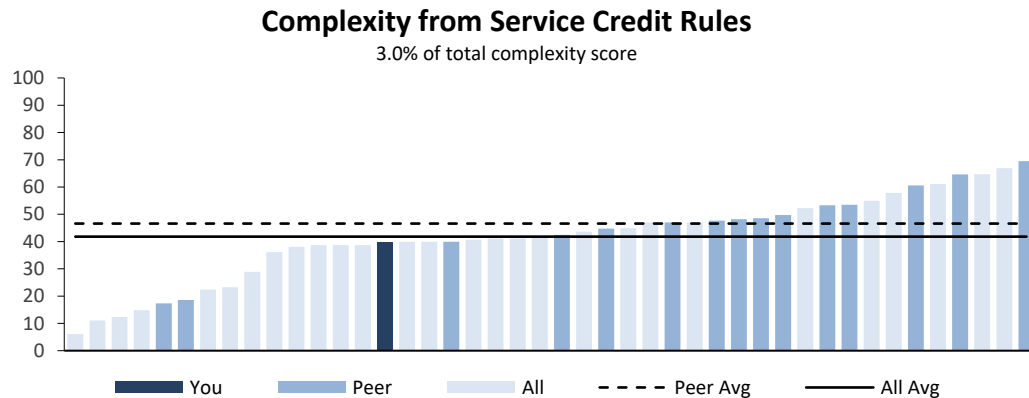
## H. Variable Compensation Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
20%	Q171 Indicate which of the following forms of variable compensation are paid in your system. And, if paid, indicate whether all, some or none of that type of variable compensation is included in pensionable earnings.			
	a) Bonuses?	Yes	81% Yes	82% Yes
	b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance?	Yes	88% Yes	86% Yes
	c) Overtime pay?	Yes	94% Yes	86% Yes
	d) Commissions or similar payments such as fees paid to sheriffs for process serving?	No	31% Yes	39% Yes
	<i>Complexity: 100 if variable compensation is paid in your system, otherwise 0.</i>	100	100	95
65%	If yes, is all, some or none of it included in pensionable earnings?			
	a) Bonuses?	Some	16% All	17% All
	b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance?	Some	8% All	16% All
	c) Overtime pay?	All	74% All	53% All
	d) Commissions or similar payments such as fees paid to sheriffs for process serving?	n/a	41% All	36% All
	<i>Complexity: 100 if some types of variable compensation paid are included and some are not (i.e., either any of the above is 'some' or there is a mix of 'all' and 'none'), otherwise 0.</i>	100	88	80
15%	Q172 When determining a member's pensionable earnings does a cap on salary increases apply?	No	56% Yes	50% Yes
	<i>Complexity: 100 if yes, 0 if no</i>	0	56	50
100%	Weighted Average	85	85	78

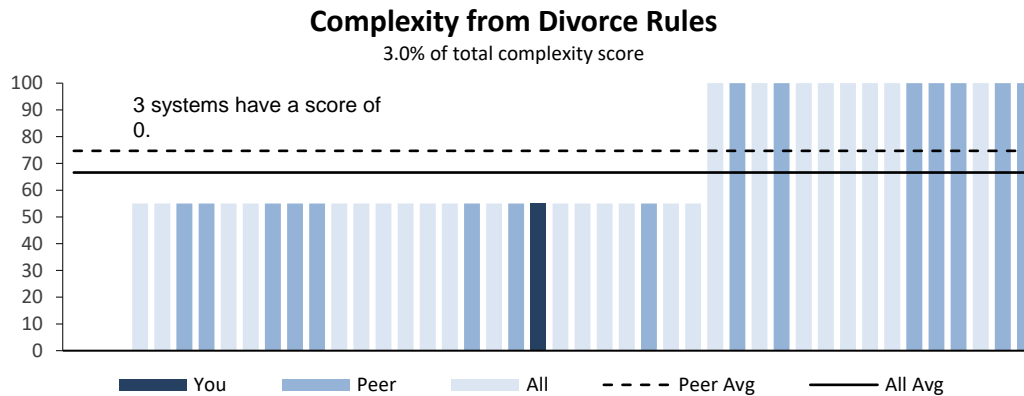


## I. Service Credit Rules Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
30%	Q153 How many different definitions do you have for a "full year" of service credit? <i>Complexity: 0 if none, otherwise <math>12.4 + 17.9 \times \ln(\text{number of 'full year' service credit definitions})</math>. i.e., 1 = 12.4, 2 = 24.9, 4 = 37.3, 8 = 49.7, etc.</i>	5	4	7
		41	35	31
30%	Q154 Does your system have more than one payroll year for determining service credit? a) If yes, how many different payroll years exist in your system? <i>Complexity: 0 if none, otherwise <math>16.1 + 23.2 \times \ln(\text{number of payroll years})</math>. i.e., 1 = 16.1, 2 = 32.2, 4 = 48.2, 8 = 64.3, etc.</i>	Yes 9	31% Yes 6	34% Yes 6
		67	15	16
5%	Q155 How many different vesting periods do you have that apply to active members? [Your answer should be 0 if you have immediate vesting. Most North American systems have only one.] <i>Complexity: 0 if none, otherwise <math>23.8 + 34.3 \times \ln(\text{number of vesting periods})</math>. i.e., 1 = 23.8, 2 = 47.5, 4 = 71.3, 8 = 95.0, etc.</i>	2	3	2
		48	48	42
30%	Q156 b) Casual/ temporary/ intermittent/ seasonal employees to be members? [An example of a "temporary" employee is an infrequent substitute teacher.] <i>Complexity: 100 if yes, otherwise 0.</i>	No 0	81% Yes 81	70% Yes 70
5%	Q157 Are you sometimes asked by employers to determine the eligibility of members? <i>Complexity: 100 if yes, otherwise 0.</i>	Yes 100	94% Yes 94	91% Yes 91
100%	Weighted Average	40	47	42

## J. Divorce Rules Complexity

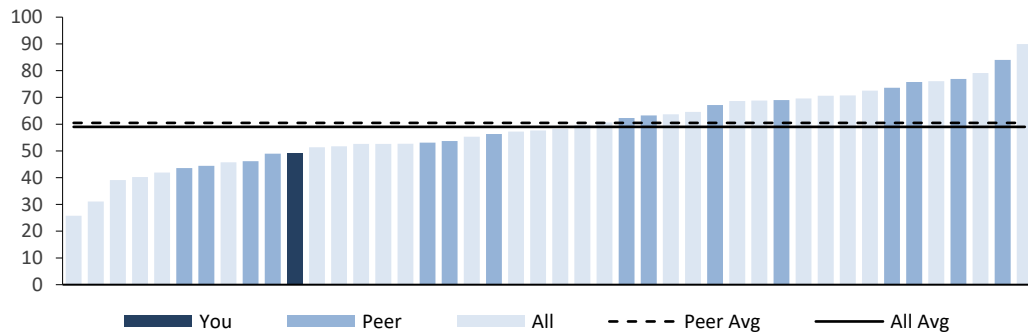


Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	<p><b>Q184</b> Choose the statement that best describes how divorce settlements for active members (or divorce decrees or QDROS, or QILDROS, or Division of Benefit Orders, etc.) impact your system. If you have different rules for different plans, choose the statement that applies to the largest number of cases.</p> <p>a) Minimal impact. Law prevents you from paying the pension to anybody except the member and the member's specified beneficiaries.</p> <p>b) Minimal impact unless children are involved. With children you may be required to redirect payment.</p> <p>c) A portion of the pension is paid to the ex-spouse, but ONLY when the member begins receiving benefits.</p> <p>d) A portion of the pension is paid to the ex-spouse. The ex-spouse can initiate the pension at a time different than the member provided that eligibility conditions are met.</p> <p>e) Other (describe)</p>			
100%	<p><i>Complexity: 100 if yes to d, 55 if yes to c or e, 5 if yes to b, otherwise 0.</i></p>	<p>No</p> <p>No</p> <p>Yes</p> <p>No</p> <p>No</p> <p>55</p>	<p>6% Yes</p> <p>0% Yes</p> <p>63% Yes</p> <p>44% Yes</p> <p>13% Yes</p> <p>75</p>	<p>9% Yes</p> <p>0% Yes</p> <p>55% Yes</p> <p>34% Yes</p> <p>14% Yes</p> <p>67</p>
100%	Weighted Average	55	75	67

## K. Purchase Rules Complexity

### Complexity from Purchases Rules

6.0% of total complexity score

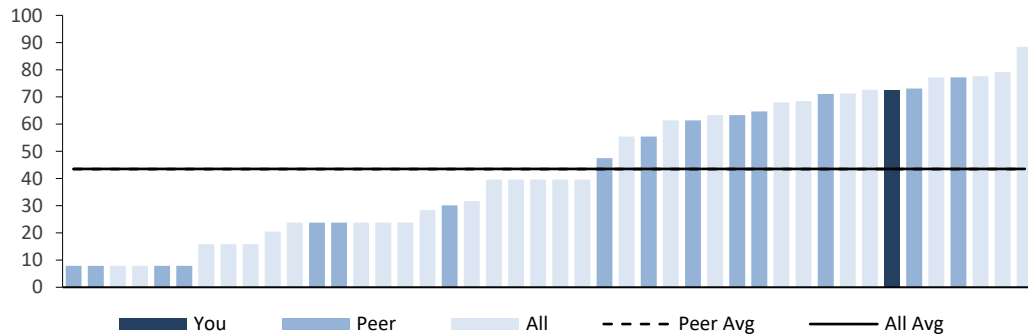


Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
25%	<p>Q158 Indicate each of the payment methods you permit for service credit purchases and upgrades:</p> <p>a) Rollover from tax qualified plans such as 401(a) or 401(k) or Conduit IRA or KEOGH in the US; or RRSP plans in Canada?</p> <p>b) Lump sum payments from members?</p> <p>c) Installment payments direct from members?</p> <p>d) Installment payments via payroll deduction through employers?</p> <p><i>Complexity: 10 if rollover + 10 if lump sum direct from member + 40 if installment direct from member + 40 if installment through payroll deduction.</i></p>	<p>Yes</p> <p>Yes</p> <p>No</p> <p>No</p> <p>20</p>	<p>100% Yes</p> <p>100% Yes</p> <p>56% Yes</p> <p>56% Yes</p> <p>65</p>	<p>100% Yes</p> <p>100% Yes</p> <p>67% Yes</p> <p>59% Yes</p> <p>70</p>
25%	<p>Q159 How many different service credit purchase categories do you have with different definitions and/or eligibility requirements?</p> <p><i>Complexity: 0 if none, otherwise <math>14.1 + 20.3 \times \ln(\text{number of service credit purchase categories})</math>. i.e., 1 = 14.1, 2 = 28.1, 4 = 42.2, 8 = 56.3, etc.</i></p>	<p>18</p> <p>73</p>	<p>16</p> <p>66</p>	<p>14</p> <p>63</p>
25%	<p>Q160 How many different service credit purchase calculation formula or methodologies do you have?</p> <p><i>Complexity: 0 if none, otherwise <math>18.1 + 26.1 \times \ln(\text{number of service credit purchase formulas})</math>. i.e., 1 = 18.1, 2 = 36.2, 4 = 54.3, 8 = 72.4, etc.</i></p>	<p>4</p> <p>54</p>	<p>6</p> <p>64</p>	<p>6</p> <p>62</p>
25%	<p>Q161 Are your service credit purchase rules (category definitions, eligibility requirements and calculation methodologies):</p> <p>a) Essentially identical for all your members?</p> <p>b) Similar for all member groups, albeit with some differences?</p> <p>c) Very different for different member groups?</p> <p><i>Complexity: 100 if very different for all member groups, 50 if some differences between member groups, otherwise 0.</i></p>	<p>No</p> <p>Yes</p> <p>No</p> <p>50</p>	<p>20% Yes</p> <p>69% Yes</p> <p>13% Yes</p> <p>47</p>	<p>40% Yes</p> <p>50% Yes</p> <p>16% Yes</p> <p>41</p>
100%	Weighted Average	49	60	59

## L. Refund Rules Complexity

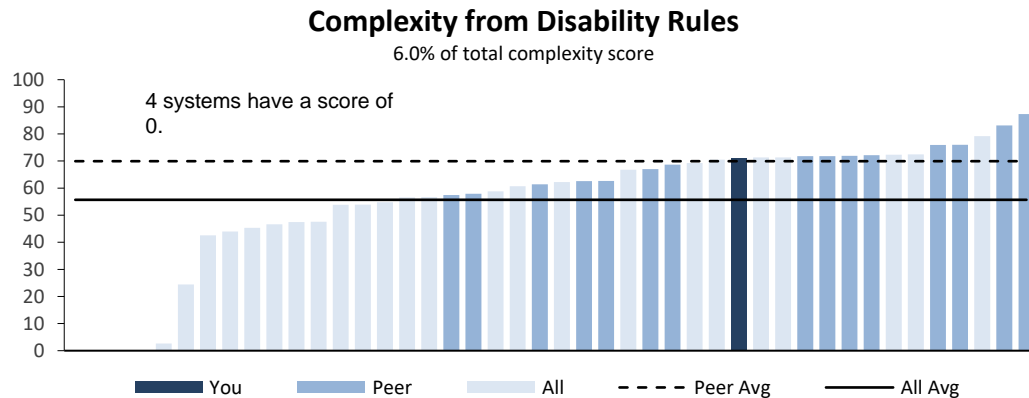
### Complexity from Refund Rules

4.0% of total complexity score



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	Q162 Do you pay a one-time death payment when a member, retiree or the retiree's beneficiary dies (separate from the survivor pension)?	Yes	56% Yes	64% Yes
	a) If yes, how many different one-time death payment rule sets do you have? [i.e., \$5,000, \$2,000 etc.]	6	4	4
67%	Complexity: 0 if none, otherwise $23.8 + 34.3 \times \ln(\text{number of one-time death payment rule sets})$ . i.e., 1 = 23.8, 2 = 47.5, 4 = 71.3, 8 = 95.0, etc.	85	39	41
	Q163 How many different refund formulas do you have?	2	3	3
33%	Complexity: 0 if none, otherwise $23.8 + 34.3 \times \ln(\text{number of refund formulas})$ . i.e., 1 = 23.8, 2 = 47.5, 4 = 71.3, 8 = 95.0, etc.	48	53	49
100%	Weighted Average	73	43	44

## M. Disability Rules Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
20%	<p>Q28 Do you administer: a) Long-term disability/ disability pensions? <i>Complexity: 100 if you administer, otherwise 0.</i></p>	Yes 100	100% Yes 100	89% Yes 89
10%	<p>Q169 How many different rule sets with different definitions or benefits do you have that apply to member groups or subsets of a member group for: a) Long-term disability/ disability pensions? <i>Complexity: 0 if none, otherwise <math>13.3 + 19.2 \times \ln(\text{number of long-term disability/disability pension rule sets})</math>. i.e., 1 = 13.3, 2 = 26.6, 4 = 39.9, 8 = 53.1, etc.</i></p>	7 51	11 43	7 33
	<p>Q28 Do you administer: b) Short-term disability?</p>	No	19% Yes	9% Yes
5%	<p>Q169 How many different rule sets with different definitions or benefits do you have that apply to member groups or subsets of a member group for: b) Short-term disability (if you administer it yourself)? <i>Complexity: 0 if none, otherwise <math>19.8 + 28.5 \times \ln(\text{number of short-term disability rule sets})</math>. i.e., 1 = 19.8, 2 = 39.5, 4 = 59.3, 8 = 79.0, etc.</i></p>	n/a 0	2 6	1 4
10%	<p>Q30 Do you cover non-occupational disability? [Some systems only cover disabilities that happen at work.] a) If yes, does either the amount paid or the taxation of the disability benefit vary depending on whether the disability is occupational versus non-occupational? <i>Complexity: 100 if you have to determine whether or not the disability occurred at work and you have an independent decision process, otherwise 0.</i></p>	Yes No 0	100% Yes 63% Yes 63	100% Yes 51% Yes 45

## M. Disability Rules Complexity

page 2 of 3

Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
10%	<p>Q131 b) Check income of disabled members after they have started receiving disability payments? <i>Complexity: 100 if yes, otherwise 0.</i></p>	Yes 100	94% Yes 94	68% Yes 64
10%	<p>Q165 Will you pay a disabled member that returns to work at a salary lower than he previously earned: a) The difference between his old salary (or his old disability benefit) and his new lower salary? b) An amount that is potentially greater than the difference between his old salary and his new lower salary? <i>Complexity: 100 if yes to b, 80 if yes to a, otherwise 0.</i></p>	Yes  No 80	31% Yes  6% Yes 26	19% Yes  5% Yes 15
15%	<p>Q166 How do you determine whether a member qualifies for long-term disability/ disability pension: c) Process independent of social security, worker's compensation and employer decisions? [For example, many systems use independent internal processes or medical review boards or medical consultants.] <i>Complexity: 100 if yes, otherwise 0.</i></p>	Yes 100	100% Yes 100	97% Yes 86
10%	<p>Q167 Which of the following descriptions best describes the MINIMUM level of disability necessary to be eligible for a long-term disability/ disability pension: [If you have different plans with different definitions, choose the definition that applies to the largest number of cases.] a) Disabling injury or illness that prevents you from performing your current job duties (even though you might be able to perform other jobs) and expected to be permanent (or for some systems - persist longer than 6 or 12 months)? b) Disabling injury or illness that prevents the member from performing current and 'other' jobs that he/she is qualified for and/or can become qualified to do in a reasonable period of time and expected to be permanent (or for some systems - persist longer than 6 or 12 months)? [Sometimes but not always the 'other job' is defined as not able to earn a certain level (i.e., 75%) of pre-disability earnings.] c) Totally and permanently incapacitated and member is not reasonably expected to recover from disabling medical condition or not expected to ever work again? d) Other (describe)? <i>Complexity: If your decision process is independent (i.e., yes to c), then 100 if yes to b, 90 if yes to a, 50 if yes to c, 25 if yes to d, otherwise 0.</i></p>	Yes  No  No No 90	50% Yes  25% Yes  25% Yes 6% Yes 83	60% Yes  18% Yes  29% Yes 11% Yes 69

## M. Disability Rules Complexity

page 3 of 3

Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	<p>Q168 If you administer short-term disability:</p> <p>a) Are the short-term and long-term disability/ disability pension processes closely entwined? [i.e., difficult to distinguish between costs of long-term/disability pensions and short term disability, same staff do both, similar approval processes]</p> <p>b) Are the disability definitions, other than the expected duration of disability, the same for both long-term and short-term disability? [For example, the only difference between the definition of long-term/ disability pensions and short-term disability at some systems is the disabling injury or illness is expected to last longer than 12 months for long-term.]</p> <p>c) Are there materially different approval processes for short-term and long-term disability/ disability pensions?</p>	n/a	50% Yes	57% Yes
		n/a	0% Yes	29% Yes
		n/a	75% Yes	43% Yes
5%	<p><i>Complexity: 100 if different definitions and approval processes (i.e., no to b and yes to c), 75 if approval processes or definitions are very different (either no to b or yes to c), otherwise 0.</i></p>	0	19	7
	<p>Q170 Do you reduce payments if the member qualifies or receives:</p> <p>a) Disability social security?</p> <p>b) Worker's compensation?</p> <p>c) Other public funds (i.e., federal military disability)?</p> <p>d) Income protection plans/other disability insurance?</p> <p>e) Employer sick leave and annual leave pay?</p> <p>f) Unemployment compensation?</p> <p>g) Income from other employment?</p> <p>h) Other (describe)?</p> <p>Total yes responses for disability coordination</p>	Yes	56% Yes	33% Yes
		Yes	69% Yes	51% Yes
		Yes	25% Yes	10% Yes
		No	25% Yes	10% Yes
		Yes	44% Yes	21% Yes
		No	31% Yes	15% Yes
		Yes	69% Yes	49% Yes
		No	25% Yes	21% Yes
		5	3	2
5%	<p><i>Complexity: 0 if none, otherwise <math>25.0 + 36.1 \times \ln(\text{number of disability coordination categories})</math>. i.e., 1 = 25.0, 2 = 50.0, 4 = 75.0, 8 = 100.0, etc.</i></p>	83	58	35
100%	Weighted Average	71	70	56

# 9

## IT and Major Projects

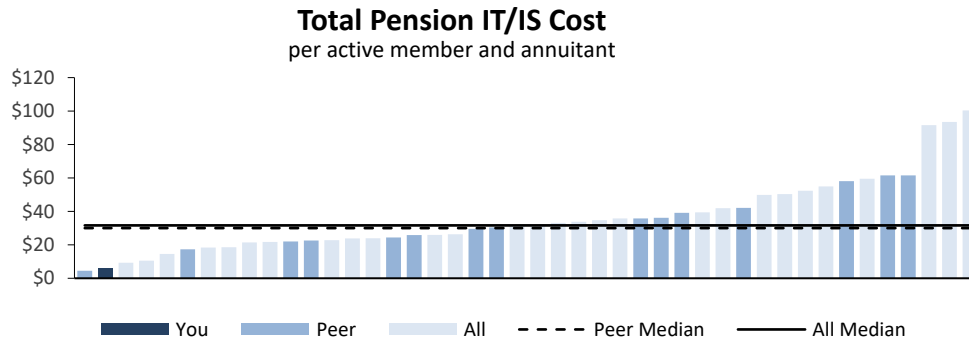
This section contains comparisons to your peers and all participants of:

- Total IT/IS costs and trends
- Total major project costs and trends
- Indicators of CRM (Customer Relationship Management) capability
- Attributions of IT/IS and Major Projects to the other administration activities

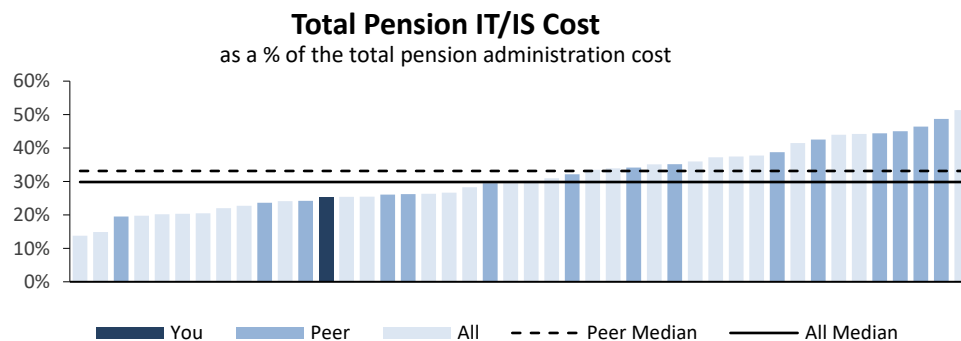


## IT/IS costs

Your IT/IS cost was \$5.89 per active member and annuitant. This was below the peer median of \$30.00.



Your IT/IS cost as a percent of total pension administration cost was 25%. This was below the peer median of 33%.

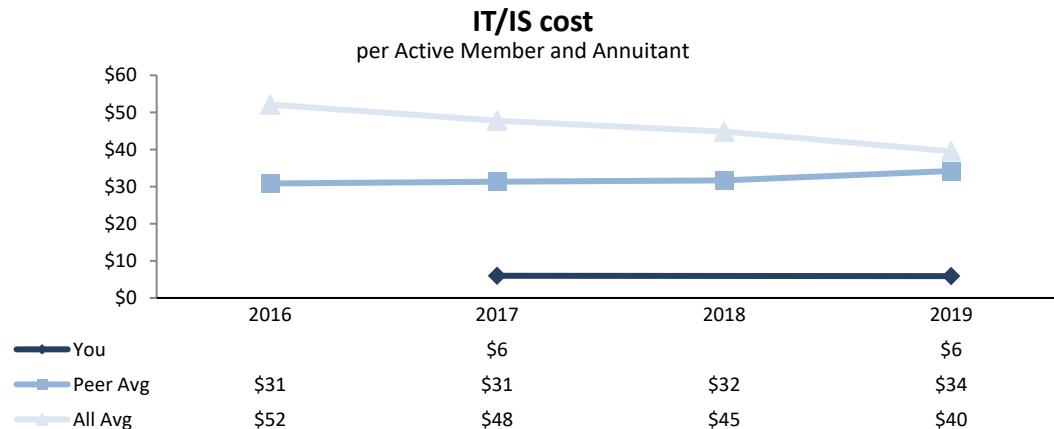


IT/IS Cost by Category									
Activity	Cost in \$000s	Cost per Active Member and Annuitant					Cost as a % of Total IT/IS Cost		
			Peer	Peer	All			Peer	
	You	You	Median	Avg	Median	All Avg	You	Avg	All Avg
5c. Amortization of IT Major Projects	0	0.00	0.00	2.24	0.05	3.33	0%	6%	9%
5d. IT Major Projects (if you don't capitalize)	0	0.00	1.43	3.68	1.50	4.80	0%	11%	13%
6a. IT Strategy, Database Management and Applications (excl. major projects)	3,931	4.95	12.51	18.58	17.08	19.36	82%	53%	52%
6b. IT Desktop, Networks, Telecom	<u>744</u>	<u>0.94</u>	<u>9.04</u>	<u>7.80</u>	<u>7.45</u>	<u>8.61</u>	<u>16%</u>	<u>22%</u>	<u>23%</u>
<b>Total Pension IT/IS cost (excludes below)</b>	4,675	5.89	30.00	32.30	31.62	36.10	98%	92%	97%
IT/IS Attributions to: <sup>1</sup>									
1f. Healthcare Administration	73	0.09	0.61	1.51	0.00	0.72	2%	4%	2%
1g. Optional and Third Party Administered Benefits	17	0.02	0.62	1.16	0.00	0.56	0%	3%	2%
<b>Total Administration IT/IS cost</b>	4,765	6.00	32.62	34.96	32.81	37.38	100%	100%	100%

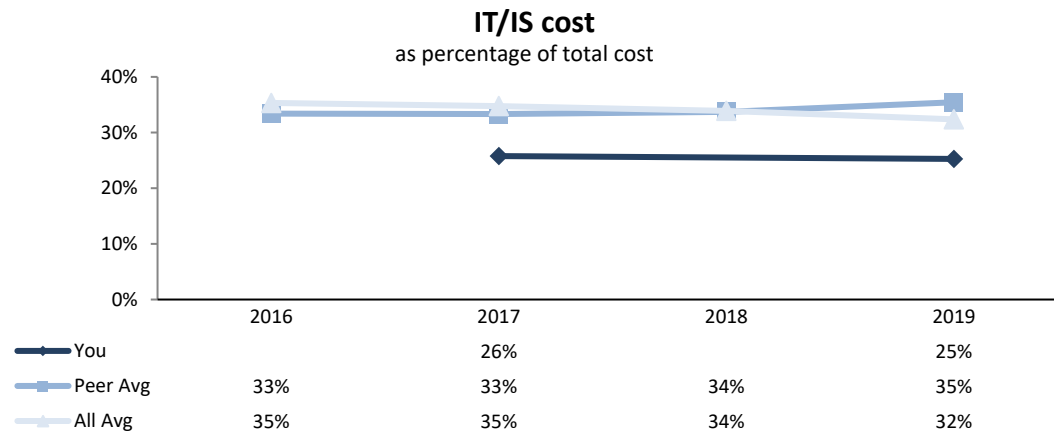
1. Attributions of total administration IT/IS to non-pension activities 1f and 1g includes: (i) pro-rata share of Major Project attribution (5a - 5d) weighted by activity 5c and 5d's contribution to total Major Project cost; (ii) total attribution of activity 6a to 1f and 1g; (iii) pro-rata share of optional attribution (6b, 7a - 7f) to activities 1f and 1g weighted by activity 6b's contribution to total attribution. See section 4 - 'Activity Costs' for details.

## IT/IS cost trend

IT/IS cost per member of your peers that have participated for 4 consecutive years has grown at a compound annual rate of 3.5% between 2016 and 2019. The all participant average is -8.8%. Your growth rate over the same period is unavailable per annum.



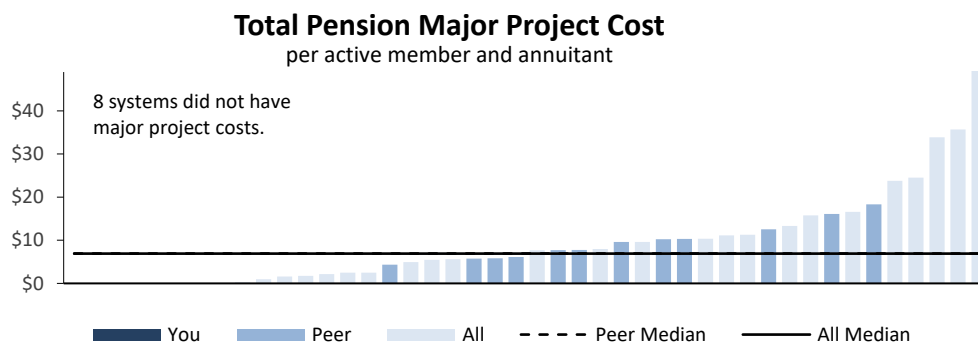
IT/IS cost as a percentage of total cost of your peers that have participated for 4 consecutive years has grown at a compound annual rate of 2.0% between 2016 and 2019. The all participant average is -2.9%. Your growth rate over the same period is unavailable per annum.



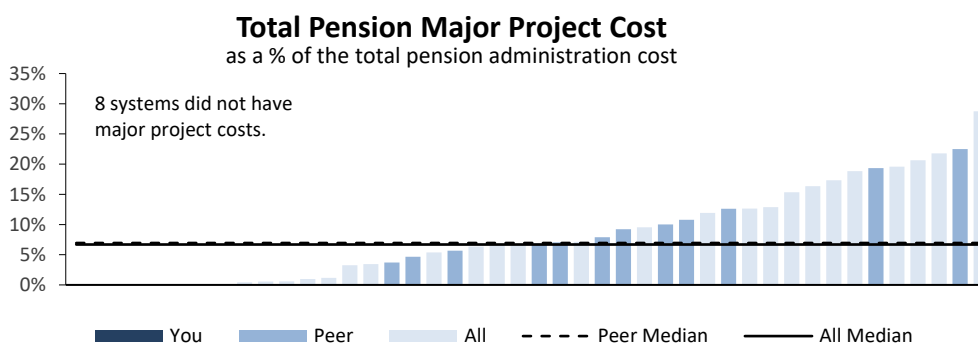
Trend analysis is based on systems that have provided 4 consecutive years of data.

## Major project costs

Your major project cost was \$0.00 per active member and annuitant. This was below the peer median of \$6.92.



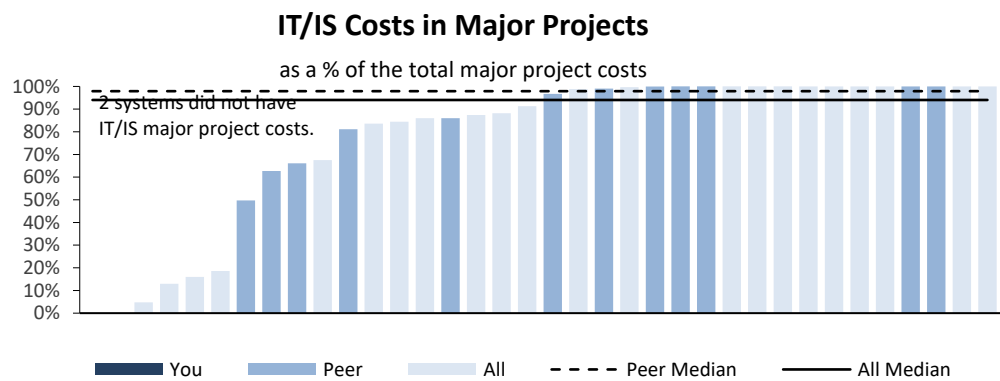
Your major project cost as a percent of total cost was 0%. This was below the peer median of 7%.



Major Project Cost by Category									
Activity	Cost in\$000	Cost per Active Member and Annuitant					Cost as a % of Total Major Project Cost		
	You	You	Peer Median	Peer Avg	All Median	All Avg	You	Peer Avg	All Avg
5a. Amortization of non-IT Major Projects	0	0.00	0.00	0.00	0.00	0.20	n/a	0%	2%
5b. Non-IT Major Projects (if you don't capitalize)	0	0.00	0.00	1.25	0.00	1.53	n/a	16%	15%
5c. Amortization of IT Major Projects	0	0.00	0.00	2.24	0.05	3.33	n/a	29%	33%
5d. IT Major Projects (if you don't capitalize)	0	0.00	1.43	3.68	1.50	4.80	n/a	48%	47%
<b>Total Pension Major Project cost (excludes below)</b>	0	0.00	6.92	7.17	6.91	9.86	0%	93%	97%
Major Project Attributions to:									
1f. Healthcare Administration	0	0.00	0.00	0.22	0.00	0.10	n/a	3%	1%
1g. Optional and Third Party Administered Benefits	0	0.00	0.02	0.35	0.00	0.17	n/a	5%	2%
<b>Total Administration Major Project cost</b>	0	0.00	7.37	7.74	7.34	10.12	0%	100%	100%

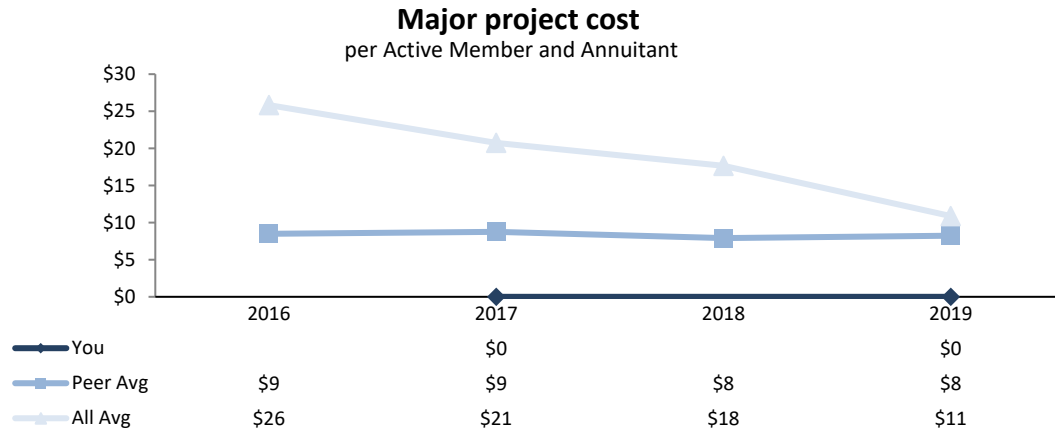
# IT/IS cost included in major project costs

Your total major project costs were 0. The peer median for IT/IS major project costs as a percent of total major project costs was 98%.

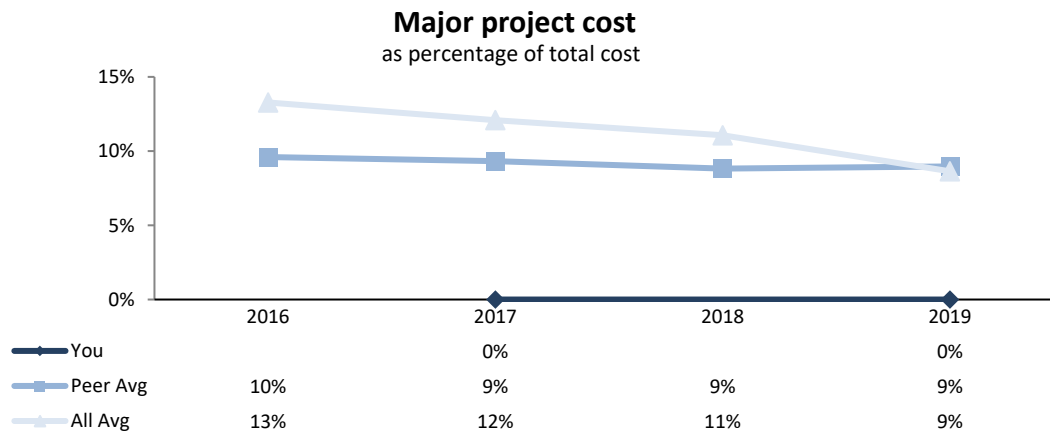


## Major project cost trend

Major project cost per member for your peers that have participated for 4 consecutive years has grown at a compound annual rate of -1.1% between 2016 and 2019. The all participant average is -25.0%. Your growth rate over the same period is unavailable per annum.



Major project cost as a percentage of total cost of your peers that have participated for 4 consecutive years has grown at a compound annual rate of -2.3% between 2016 and 2019. The all participant average is -13.3%. Your growth rate over the same period is unavailable per annum.



Trend analysis is based on systems that have provided 4 consecutive years of data.

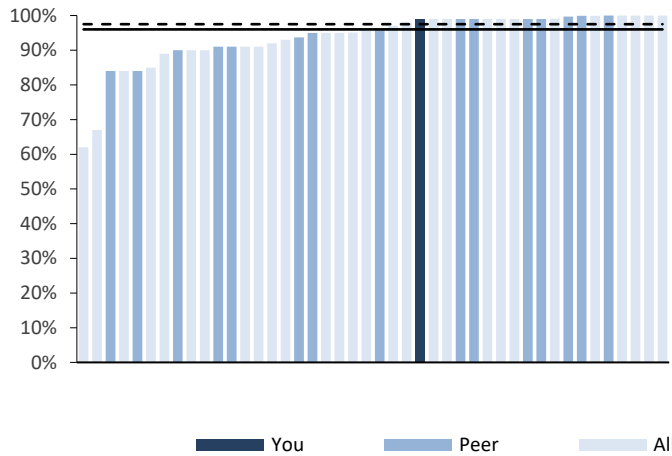
## IT and major project attributions by activity

Activity	6a. IT Strategy, Database Management and Applications (excl. major projects)						Total Major Projects (5a. through 5d.)					
	\$s per Active Member and Annuitant			As a % of total			\$s per Active Member and Annuitant			As a % of total		
	Peer			Peer			Peer			Peer		
	You	Avg	All	You	Avg	All	You	Avg	All	You	Avg	All
1. Member Transactions												
a. Pension Payments	0.22	1.03	1.24	4%	6%	6%	0.00	0.39	0.76	n/a	6%	6%
b. Pension Inceptions	0.73	1.80	2.08	15%	10%	11%	0.00	0.59	1.00	n/a	9%	11%
c. Refunds, Withdrawals, and Transfers-	0.45	0.80	1.24	9%	5%	6%	0.00	0.27	0.58	n/a	4%	6%
d. Purchases and Transfers-in	0.09	0.69	1.43	2%	4%	6%	0.00	0.22	0.89	n/a	4%	6%
e. Disability	<u>0.45</u>	<u>0.80</u>	<u>0.60</u>	<u>9%</u>	<u>4%</u>	<u>3%</u>	<u>0.00</u>	<u>0.30</u>	<u>0.22</u>	<u>n/a</u>	<u>4%</u>	<u>3%</u>
	1.94	5.12	6.57	39%	29%	32%	0.00	1.77	3.47	0%	26%	31%
2. Member Communication												
a. Call Center	1.57	3.99	3.02	32%	22%	17%	0.00	1.72	1.51	n/a	22%	17%
b. Mail Room, Imaging	0.20	0.76	0.93	4%	4%	5%	0.00	0.31	0.44	n/a	5%	5%
c. 1-on-1 Counseling	0.12	0.94	0.82	2%	4%	4%	0.00	0.40	0.37	n/a	5%	4%
d. Member Presentations	0.12	0.66	0.51	2%	3%	3%	0.00	0.25	0.24	n/a	3%	3%
e. Written Pension Estimates	0.08	0.60	0.69	2%	4%	4%	0.00	0.18	0.42	n/a	3%	4%
f. Mass Communication	<u>0.11</u>	<u>0.94</u>	<u>0.93</u>	<u>2%</u>	<u>5%</u>	<u>5%</u>	<u>0.00</u>	<u>0.37</u>	<u>0.51</u>	<u>n/a</u>	<u>5%</u>	<u>5%</u>
	2.20	7.88	6.92	44%	43%	38%	0.00	3.22	3.49	0%	43%	38%
3. Collections and Data Maintenance												
a. Data and Money from Employers	0.43	1.77	1.82	9%	9%	9%	0.00	0.85	0.88	n/a	13%	10%
b. Service to Employers	0.17	1.21	0.96	4%	6%	5%	0.00	0.53	0.51	n/a	7%	5%
c. Data Not from Employers	<u>0.10</u>	<u>0.56</u>	<u>0.68</u>	<u>2%</u>	<u>3%</u>	<u>3%</u>	<u>0.00</u>	<u>0.22</u>	<u>0.33</u>	<u>n/a</u>	<u>3%</u>	<u>3%</u>
	0.70	3.53	3.46	14%	18%	17%	0.00	1.59	1.72	0%	23%	19%
4. Governance and Financial Control												
a. Financial Administration and Control	0.02	1.20	1.40	0%	5%	7%	0.00	0.37	0.65	n/a	5%	7%
b. Board, Strategy, Policy	0.03	0.59	0.73	1%	3%	4%	0.00	0.16	0.38	n/a	2%	3%
c. Government and Public Relations	<u>0.06</u>	<u>0.43</u>	<u>0.36</u>	<u>1%</u>	<u>2%</u>	<u>2%</u>	<u>0.00</u>	<u>0.09</u>	<u>0.17</u>	<u>n/a</u>	<u>1%</u>	<u>2%</u>
	0.11	2.22	2.49	2%	10%	13%	0.00	0.62	1.21	0%	9%	12%
Total Pension Administration	4.95	18.75	19.44	100%	100%	100%	n/a	7.20	9.88	n/a	100%	100%

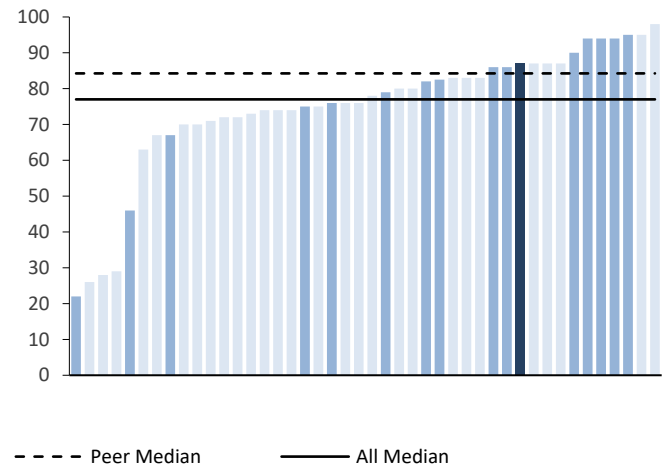
## Key measures of CRM/IT capability

### On-Line Records

% of on-line records that are complete and accurate

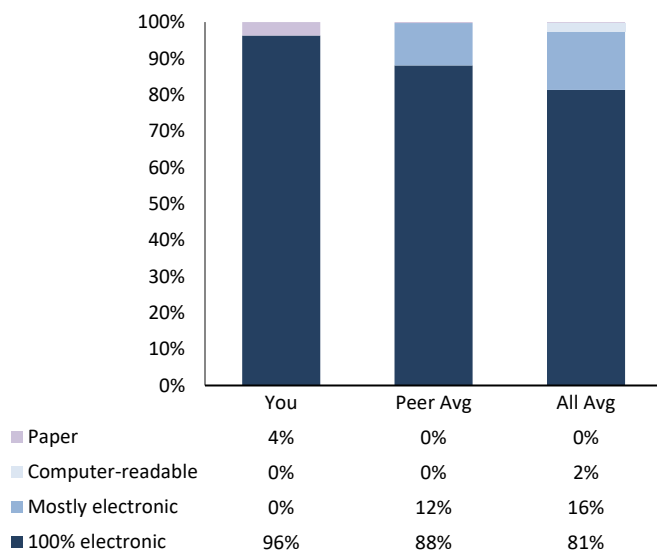


### Member Website Capability Score



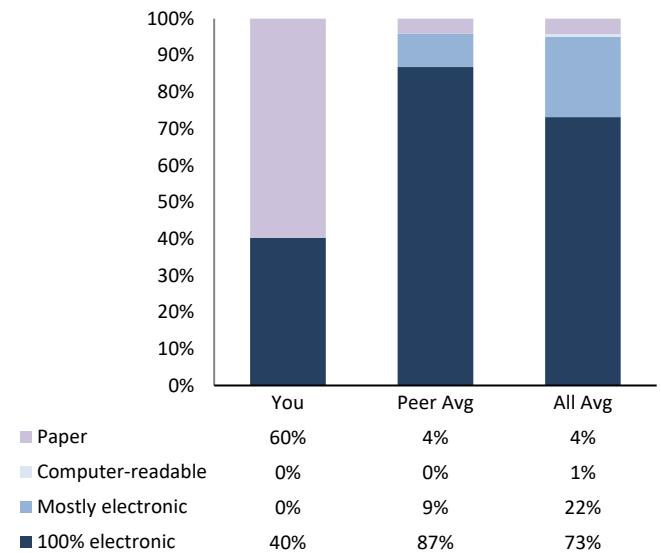
### Active Member Data

% by data format

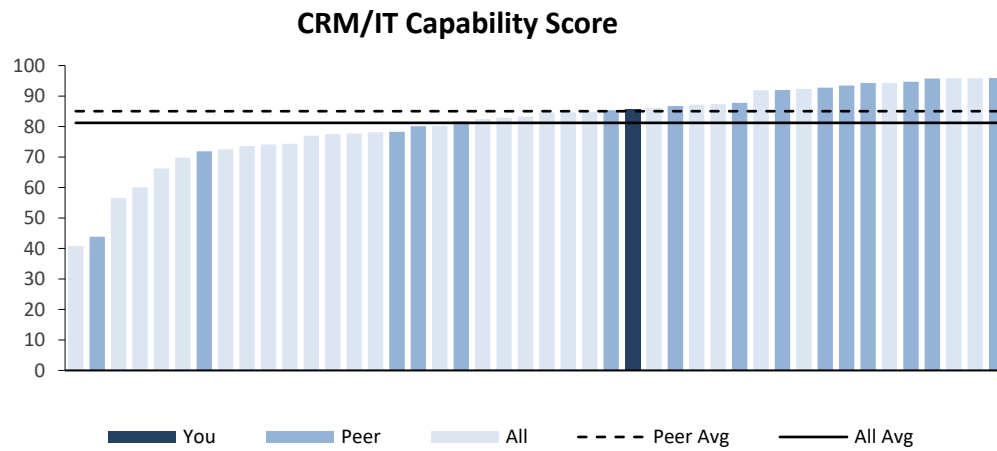


### Collection Points

% by data format



**Your CRM/IT Capability score was 86 out of 100. This was above the peer average of 85.**



## Calculation of your CRM/IT capability score

Weight	Relevant Questions and Scoring	You	Peer Avg	All Avg
	<u>CRM/ Call Capability</u>			
	Q42 When a member calls in, do you have immediate computer access to the following member data:			
	a) Record of the member's previous calls to the system?	Yes	88% Yes	77% Yes
	b) Copies of recent correspondence online?	Yes	100% Yes	98% Yes
	c) Knowledge based on-line help system available for use by the service representative?	Yes	94% Yes	89% Yes
15%	Score: 100 if all available, otherwise 33.3 for each yes	100	94	88
	Q42 When a member calls in, do you have immediate computer access to the following member data:			
	d) Most recent member statement?	Yes	100% Yes	100% Yes
	e) Beneficiary information?	Yes	100% Yes	100% Yes
4%	Score: 100 if all available, otherwise 50 for each yes	100	100	100



## CRM/IT capability score

page 2 of 3

Weight	Relevant Questions and Scoring	You	Peer Avg	All Avg
10%	Q44 Do you provide the following information on an immediate real-time basis to members over the phone? [If you do not have real-time access to the information or if your policy is not to give the information over the phone because of security or other concerns then your answer should be 'no'.] a) Estimates of the member's pension at retirement?	No	63% Yes	64% Yes
	a1) Can you easily model and provide alternate annuity payment scenarios? [i.e., joint and 50% survivor, joint and 70% survivor, etc.]	n/a	67% Yes	66% Yes
	a2) Is the estimate based on an interactive benefit calculator linked to the member's actual account data?	n/a	67% Yes	68% Yes
	Score: 20 if yes to a1, 80 if yes to a2, otherwise 0	0	63	63
6%	Q44 b) Refund or transfer value assuming the member exited employment	Yes	94% Yes	89% Yes
	c) Pensionable salary?	Yes	94% Yes	95% Yes
	d) Service credit history including gaps?	Yes	88% Yes	91% Yes
	Score: 100 if all available, otherwise 33.3 for each yes	100	92	92
5%	Q47 Do you have and use tools to help you project call volumes? Score: 100 if yes, otherwise 0	Yes 100	94% Yes 94	91% Yes 91
5%	Q33 c) Incoming calls satisfied by self-serve options, if any? Score: 100 if yes, otherwise 0	Yes 100	69% Yes 69	45% Yes 45
5%	<u>Document Imaging</u> Q52 Do you use imaging technology?	Yes	100% Yes	100% Yes
	a) Do you keep images of ALL incoming member correspondence and submitted forms?	Yes	94% Yes	98% Yes
	c) Have all historical documents also been imaged?	Yes	88% Yes	80% Yes
	Score: 60 if you use imaging, 20 if you keep images of all incoming correspondence and forms, 20 if all historical documents are imaged	100	96	95
5%	<u>Data Collection</u> Q101 What is the breakdown of 'collection points' providing you with payroll data between the following formats and what is the total number of active members covered by each format?			
	a) 100% electronic	96%	88%	81%
	b) Mostly electronic	0%	12%	16%
	c) Computer-readable	0%	0%	2%
5%	d) Paper	4%	0%	0%
	Score: 100 X % of data collected 100% electronically, + 90 X % of data collected mostly electronically, + 80 X % of data collected via computer readable, otherwise 0	96	99	98

## CRM/IT capability score

page 3 of 3

Weight	Relevant Questions and Scoring	You	Peer Avg	All Avg
	<u>Online Data Quality</u>			
	Q103 What % of your active and inactive member on-line records are complete and accurate?	99%	95%	94%
5%	<i>Score: 100 X % of online records that are complete and accurate</i>	99	95	94
	<u>Diagnostic Software</u>			
	Q105 Do you have a diagnostic software system for detecting and correcting contribution errors?	Yes	94% Yes	84% Yes
5%	<i>Score: 100 if yes, otherwise 0</i>	100	94	84
	<u>Integration</u>			
	Q106 When you get an address change, how many systems do you need to update?	1	1	1
5%	<i>Score: 100 if 1, otherwise 0</i>	100	88	89
	<u>Website</u>			
30%	Member website capability score [Refer to section 7 Service Levels: Mass communication - website for details.]	87	78	75
100%	Total CRM/ IT Capability Score - Average	86	85	81
	Total CRM/ IT Capability Score- Median	86	87	84

# 10

## Appendices

### Appendix A - Survey responses

- Member status changes
- Costs and FTE by activity
- Service and plan design

### Appendix B - Foreign currency conversion

### Appendix C - Activity definitions

### Appendix D - Defaults

### Appendix E - Service model changes

## Appendix A - Survey responses: Member status changes

North Carolina RS

5. Complete the 'non-blank' boxes in the table below. Enter all values as positive numbers. Enter 0 if not applicable.

Changes in Member Status						
	2019			2018		
	Active Members	Inactive Members	Annuitants (Service, Disabled, Survivor)	Active Members	Inactive Members	Annuitants (Service, Disabled, Survivor)
<b>Total members</b>						
a. Members at end of fiscal year 2018	469,676	201,937	313,331			
b. Members at end of fiscal year 2019	471,958	195,131	322,227			
Increase/-decrease to be explained	2,282	-6,806	8,896			
<b>Decreases</b>						
c. Full withdrawals/refunds/commuted value payments	0	16,361				
d. Transfers-out to external pension systems	0	2,059				
e. Annuity inceptions: service retirement	14,457	1,952				
f. Annuity inceptions: disability retirement	441	0				
g. Active members leaving to inactive status	32,642					
h. Re-hired inactives and annuitants (if annuity stops)		2,087	149			
i. Deaths	862	1,870	8,159			
j. Non-death stops of pensions (i.e., dependent no longer eligible)			0			
k. Other decreases.	0	0	0			
<b>Increases</b>						
l. New active members	52,720					
m. Annuity inceptions: survivor, partner, ex-partner,			459			
n. Annuity inceptions: service retirement			16,409			
o. Annuity inceptions: disability retirement			441			
p. Active members leaving to inactive status		32,642				
q. Re-hired inactives and annuitants (if annuity stops)	2,236					
r. Other increases.	0	0	0			
Explained increases/-decreases	6,554	8,313	9,001			
Unexplained increases/-decreases	-4,272	-15,119	-105			

## Appendix A - Survey responses: Cost by activity

North Carolina RS

	Your Response	
	2019	2018
6. Complete the table below:		
a. Total administrative expenses per your financial statements (CAFR in the U.S.)	18,918.9	(\$000s)
Less (if included in administrative expenses):		
b. Investment administration costs	0.0	(\$000s)
Plus, if not included in administrative expenses:		
c. Amortization and depreciation of administrative assets	0.0	(\$000s)
d. Actuarial fees and costs	0.0	(\$000s)
e. Other costs and professional fees relating to pension administration	0.0	(\$000s)
f. Total benefit administration costs	18,918.9	(\$000s)

## Appendix A - Survey responses: Cost and FTE by activity - 2019

North Carolina RS

7. Complete the table below. Instructions and definitions are provided on the pages below the table.

Activity	Direct full time equivalents (# FTE)	Direct Costs		
		Salaries and Benefits (\$000s)	Third Party and Other Direct (\$000s)	Total (\$000s)
<b>1. Member Transactions</b>				
a. Pension Payments	7.5	405.5	152.8	558.3
b. Pension Inceptions	25.3	1,306.8	19.4	1,326.2
c. Refunds, Withdrawals, and Transfers-out	15.5	817.7	31.7	849.4
d. Purchases and Transfers-in	3.1	166.4	19.7	186.1
e. Disability	15.6	846.8	19.8	866.6
f. Healthcare Administration	2.6	140.3	19.8	160.1
g. Optional and Third Party Administered Benefits	0.6	56.5	19.7	76.2
<b>2. Member Communication</b>				
a. Call Center	54.3	2,818.2	19.7	2,837.9
b. Mail Room, Imaging	7.0	359.7	55.7	415.4
c. 1-on-1 Counseling	4.0	209.2	19.7	228.9
d. Member Presentations	4.0	212.8	31.0	243.8
e. Written Pension Estimates	2.7	147.6	19.7	167.3
f. Mass Communication	3.8	229.0	38.1	267.1
<b>3. Collections and Data Maintenance</b>				
a. Data and Money from Employers	14.8	816.8	19.7	836.5
b. Service to Employers	6.0	338.2	19.7	357.9
c. Data Not from Employers	3.5	178.0	19.7	197.7
<b>4. Governance and Financial Control</b>				
a. Financial Administration and Control	0.8	165.2	1,518.2	1,683.4
b. Board, Strategy, Policy	1.0	206.5	22.4	228.9
c. Government and Public Relations	2.0	232.9	46.7	279.6
<b>5. Major Projects</b>				
a. Amortization of non-IT Major Projects	n/a	n/a	0.0	0.0
b. Non-IT Major Projects (if you don't capitalize)	0.0	0.0	0.0	0.0
c. Amortization of IT Major Projects	n/a	n/a	0.0	0.0
d. IT Major Projects (if you don't capitalize)	0.0	0.0	0.0	0.0
<b>6. Information Technology</b>				
a. IT Strategy, Database Management and Applications (excl. major projects)	3.4	296.8	3,709.3	4,006.1
b. IT Desktop, Networks, Telecom	1.1	57.8	700.9	758.7
<b>7. Support Services and Other</b>				
a. Building and Utilities	0.0	0.0	201.0	201.0
b. Human Resources	0.0	0.0	192.0	192.0
c. Actuarial	0.6	54.7	292.8	347.5
d. Legal and Rule Interpretation	1.9	204.7	571.1	775.8
e. Internal and External Audit	0.9	74.9	372.9	447.8
f. Pay-as-you-go Benefits for Retired Staff	n/a	0.0	n/a	0.0
g. Other Support Services	4.3	218.4	204.3	422.7
<b>Total Administration (includes 1f, 1g)</b>	<b>186.3</b>	<b>10,561.4</b>	<b>8,357.5</b>	<b>18,918.9</b>
FTE relating to major projects capitalized, if any, during this fiscal year.	14.0			
<b>Total Administration FTE</b>	<b>200.3</b>			

## Appendix A - Survey responses: Service and plan design

### North Carolina RS

Survey Question		Your Response			Peers 2019				All Participants 2019					
		2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
<b>Start</b>														
1	North Carolina Retirement Systems													
2	Main survey contact: Cristin Conner Metrics Specialist cristin.conner@nctreasurer.com 919 814 4191													
3	What is the month of your fiscal year-end? [All questions in this survey are for your most recently completed fiscal year.]	June		June										
4	What was the end of fiscal year value of your pension fund assets (in billions)?	\$102.0		\$93.9										
8	What percentage of your total salary and benefits costs relates to benefits?	26.4%		23.2%	46.9%	27.2%	25.0%	30.8%	16	52.0%	26.6%	15.8%	28.2%	44
<b>Service</b>														
<b>Activity 1a - Pension Payments</b>														
10	Do you administer annuity pensions? If no, skip to question 21	Yes		Yes	100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44
11	Were any of your pension payrolls late vis-à-vis your normal payment cycle? [For example, a payroll might be late because of IT system problems, etc.] If yes: a) How many payrolls were late? b) On average, how many days late were they?	No		No	0% Yes / 100% No / 0% n/a				16	0% Yes / 100% No / 0% n/a				44
		n/a		n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
		n/a		n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
12	What percentage of pensioners are paid by check [as opposed to Electronic Funds Transfer ("EFT")]?	2.0%		2.0%	7.5%	1.5%	0.0%	2.6%	16	98.4%	1.3%	0.0%	4.7%	44
13	Do you send out payment advices (i.e., gross/ net specifications) in paper format to members receiving EFT payments? If yes: a) How frequently do you send payment advices with your EFT payments detailing the gross payment and deductions?	Yes		Yes	81% Yes / 19% No / 0% n/a				16	89% Yes / 11% No / 0% n/a				44
		Every Time Amount Changes		Every Time Amount Changes	12	6	2	6	13	12	6	1	6	39

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
b) Can you comply with a member's request not to send them payment advices?	Yes		Yes	38% Yes / 44% No / 19% n/a				13	32% Yes / 57% No / 11% n/a				39
Activity 1b - Pension Inceptions													
14 How many changes in gross amount of annuity pensions paid occurred as a result of changes in an individual annuitant's personal circumstances? For example: <ul style="list-style-type: none"><li>When the spouse of an annuitant dies "last survivor" options result in decreases, and "pop-up" or "reversion" options result in increases. [Exclude annuitant deaths that result in new pensions paid to spouses.]</li><li>When an annuitant or their beneficiary becomes eligible for social security, it often results in a reduction of the gross pension paid.</li><li>Redesign of the payment option, appeal decisions, high low options shifting to low, etc.</li></ul>	988		1,076	5,798	861	0	1,139	16	23,393	550	0	1,972	44
15 How many formal appeals (non-disability) of pension inceptions did you have?	0		0	165	10	0	31	16	165	1	0	15	44
16 What percentage of annuity inceptions for: a) Retiring active members are paid without an interruption of cash flow greater than 1 month between the final pay check and the first pension check? b) Survivors are paid without an interruption of cash flow between the pensioner's final pension check and the survivor's first pension check?	82.6%		91.1%	100.0%	97.8%	6.2%	90.8%	16	100.0%	97.6%	6.2%	91.3%	44
	75.4%		88.6%	100.0%	84.6%	23.0%	80.4%	16	100.0%	84.6%	0.0%	69.9%	44
17 Will you initiate a service retirement pension based on existing data or estimates, recognizing that you will have to finalize the payments later after you get final data? a) If yes, what proportion of your service retirement inceptions to retiring active members was based on existing data or estimates?  b) On average, how long did it take to finalize service retirement inceptions based on estimates? (in months)	Yes		Yes	94% Yes / 6% No / 0% n/a				16	75% Yes / 25% No / 0% n/a				44
	15.2%		23.2%	100.0%	84.3%	0.5%	74.6%	15	100.0%	66.6%	0.0%	53.2%	33
	6.0		12.0	18.0	1.5	0.0	3.7	15	18.0	1.3	0.0	2.9	33
18 Do you require birth certificates and/or marriage certificates before incepting a pension?	No		No	44% Yes / 56% No / 0% n/a				16	68% Yes / 32% No / 0% n/a				44
19 Do you require notarization of normal or early retirement applications? If some, describe those that require versus those that do not: n/a Activity 1c - Refunds, Transfers-out, Withdrawals	No		No	25% Yes / 44% No / 31% Some / 0% n/a				16	27% Yes / 59% No / 14% Some / 0% n/a				44



Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
20 How many written estimates for refunds/ terminations/ transfer-outs did you prepare in response to member requests? [Include all estimates whether they result in a refund or not.]	249	347		34,418	6,442	6	9,929	13	34,418	5,000	0	7,648	37
21 How long does it take on average for you to issue a refund check, including any required wait period, beginning from the time of the initial request by the member (in days)?	10	25		120	18	2	24	16	132	23	2	31	44
a) Are you legislated to have a wait period before you can effect a refund?	Yes	Yes		56% Yes / 44% No / 0% n/a				16	39% Yes / 61% No / 0% n/a				44
If yes:													
b) How long is the wait period? (in days)	60	60		63	30	10	40	9	120	31	10	49	17
c) Can the wait period be waived?	No	No		19% Yes / 38% No / 44% n/a				9	9% Yes / 30% No / 61% n/a				17
22 How long does it take on average for you to complete an individual transfer-out to an external system, including delays caused by external parties, beginning from the time of initial request by the member (in business days)?	10	25		120	10	1	23	14	372	30	1	57	39
23 Do you require notarization of refund or transfer-out applications? (yes, some, no)	Yes	Yes		13% Yes / 31% No / 56% Some				16	23% Yes / 45% No / 32% Some				44
a) If some, describe those that require versus those that do not: n/a													
Activity 1d - Purchases and Transfers-in													
24 Number of actual:													
a) Service credit purchases such as for prior refunded service, military service, etc.?	2,564	1,832		22,418	1,383	85	3,306	16	119,248	1,753	8	7,088	44
b) Upgrades or 'Top-ups' where members can improve their pensionable salary (but not service credit)?	n/a	n/a		95	0	0	7	14	201	0	0	8	36
c) Upgrades where members can pay to upgrade from an older retirement formula to a new retirement formula?	n/a	n/a		1,329	0	0	98	14	2,852	0	0	186	36
d) Individual transfers-in from external defined benefit systems? [For example, many systems have reciprocal agreements with 'sister' systems that permit members to transfer-in credit from the external System when they join their System and vice versa? Do not include collective transfers-in.]	n/a	n/a		930	0	0	166	14	1,926	5	0	251	40
25 How many written purchase, upgrade, or transfer-in estimates did you prepare in response to member requests? [Include all estimates whether these result in a purchase or not.]	5,318	3,781		21,466	3,233	0	4,451	16	120,127	3,528	0	8,409	44
26 On average, how many business days does it take from the date of first request to provide a written service credit purchase cost?	3	4		220	6	1	21	15	220	6	1	23	43
27 How long does it take on average for you to do individual transfers-in? [Include any delays caused by external parties.]	n/a	1		2	1	1	1	13	13	2	0	3	32

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
Activity 1e - Disability													
28 Do you administer:													
a) Long-term disability/ disability pensions?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	89% Yes / 11% No / 0% n/a				44
b) Short-term disability?	No		No	19% Yes / 81% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
If you do not administer either short-term or long-term disability, or disability pensions skip to question 35.													
29 Number of:													
a) Applications for disability pensions/ long-term disability?	2,404		2,598	2,735	598	84	805	16	4,993	186	0	517	44
b) Members receiving long-term disability or a disability pension?	9,607		10,736	56,549	8,399	146	12,060	16	56,549	3,686	48	6,965	39
c) Applications for short-term disability (if you administer)?	n/a		n/a	2,422	0	0	270	14	2,422	0	0	112	36
d) Members receiving short-term disability (if you administer)?	n/a		n/a	2,457	834	0	1,031	4	2,457	464	0	918	5
e) Independent medical examinations for disability application assessment or reassessment paid for by you, if any?	0		0	1,550	12	0	246	15	1,550	7	0	151	43
f) New members that you reviewed the health status of? [For example, ESSS conducts Medical Classification Reviews on their new members. A Medical classification may reduce a member's entitlement to disability and/or death benefits.]	n/a		n/a	533	0	0	58	14	1,247	0	0	55	38
g) Formal appeals of disability decisions?	0		0	263	18	0	47	16	263	1	0	22	44
h) Recertifications of disabled members? [For example, Arizona SRS requires an annual opinion from a physician to continue on disability.]	702		1,123	3,366	447	0	789	15	3,582	104	0	651	32
30 Do you cover non-occupational disability? [Some systems only cover disabilities that happen at work.]	Yes		Yes	100% Yes / 0% No / 0% n/a				16	89% Yes / 0% No / 11% n/a				39
a) If yes, does either the amount paid or the taxation of the disability benefit vary depending on whether the disability is occupational versus non-occupational?	No		No	63% Yes / 38% No / 0% n/a				16	45% Yes / 43% No / 11% n/a				39
b) If yes to 'a' immediately above: Number of occupational disability applications?	n/a		n/a	1,632	36	9	253	11	1,632	36	0	207	21
31 How many months, on average, does it take to return a decision on a disability application from:													
a) date of initial request from a member?	2.0		2.0	15.0	3.0	0.3	3.2	16	15.0	2.0	0.3	2.9	39
b) date of receipt of all necessary documentation to complete an application?	1.0		1.0	8.0	1.0	0.0	1.6	16	8.0	1.0	0.0	1.4	39
32 Do you require notarization of disability applications?	No		No	25% Yes / 69% No / 6% Some / 0% n/a				16	20% Yes / 61% No / 7% Some / 11% n/a				39
a) If some, describe those that require versus those that do not: n/a													
Activity 2a - Call Center													
Volumes													
33 What were your volumes of:													

Survey Question		Your Response			Peers 2019				All Participants 2019					
		2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
a) Incoming calls that reach and are responded to by a knowledgeable service representative (i.e., exclude messages, etc.)?		274,330		255,503	722,185	200,096	96,176	262,151	16	722,185	157,110	14,009	185,290	44
b) Outgoing calls from service representatives responding to messages (voice mail, receptionist, etc.) or following-up on previous calls?		Unknown		51,624	30,691	4,018	0	8,107	16	49,654	8,782	0	11,274	44
c) Incoming calls satisfied by self-serve options, if any?		32,590		25,593	693,458	8,228	0	67,019	15	693,458	25	0	40,770	40
d) Email queries from members?		24,936		26,044	66,880	21,843	6,213	24,343	16	104,954	15,742	0	20,951	44
Before Reaching a Service Rep														
34	In the table below, indicate whether or not each described outcome can occur when a member calls into your system seeking a knowledgeable person during business hours, and if yes, indicate the volume of occurrences.													
	a) Busy signal, never enters the system?	No		No	25% Yes / 75% No / 0% n/a				16	20% Yes / 80% No / 0% n/a				44
	b) Caller gets pre-recorded 'call another time' message during business hours?	Yes		Yes	44% Yes / 56% No / 0% n/a				16	36% Yes / 64% No / 0% n/a				44
	c) Voice mail takes a message during business hours?	No		Yes	13% Yes / 88% No / 0% n/a				16	34% Yes / 66% No / 0% n/a				44
	d) Abandoned calls in a menu (i.e., caller hangs-up before reaching the end of a self-serve menu branch that can answer his/her question or before reaching a queue)?	Yes		Yes	81% Yes / 19% No / 0% n/a				16	73% Yes / 27% No / 0% n/a				44
	e) Abandoned calls in a queue or on hold (i.e., caller hangs-up)?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	98% Yes / 2% No / 0% n/a				44
	f) System hangs up on caller after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	No		No	6% Yes / 94% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44
	g) System sends the caller back to the main menu after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	No		No	6% Yes / 94% No / 0% n/a				16	2% Yes / 98% No / 0% n/a				44
	h) Busy signal after navigating an automated attendant menu, or after being transferred by a receptionist?	No		No	13% Yes / 88% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44
	i) Call rings unanswered during business hours?	No		Yes	6% Yes / 94% No / 0% n/a				16	2% Yes / 98% No / 0% n/a				44
	If yes: volume													
	a) # Busy signal, never enters the system?	n/a		n/a	6,494	1,056	0	2,151	4	10,986	1,611	0	3,021	9
	b) # Caller gets pre-recorded 'call another time' message during business hours?	Unknown		Unknown	85,605	15,129	0	28,411	7	85,605	7,640	0	20,867	16
	c) # Voice mail takes a message during business hours?	n/a		Unknown	3,972	2,733	1,494	2,733	2	6,385	998	25	1,710	15
	d) # Abandoned calls (i.e., caller hangs-up while in a menu)?	Unknown		Unknown	92,133	9,217	207	18,077	13	92,133	6,944	207	13,049	32
	e) # Abandoned calls (i.e., caller hangs-up while in a queue or on hold)?	8,503		30,457	108,315	18,635	1,471	28,102	16	108,315	8,503	118	17,793	43
	f) # System hangs up on caller (or sends the caller back to the main menu) after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	n/a		n/a	4	4	4	4	1	4	3	1	3	2

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
g) # System sends the caller back to the main menu after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	n/a	n/a		490	490	490	490	1	490	490	490	490	1
h) # Busy signal after navigating an automated attendant menu, or after being transferred by a receptionist?	n/a	n/a		174,982	93,108	11,234	93,108	2	174,982	93,108	11,234	93,108	2
i) # Call rings unanswered during business hours?	n/a	1,327		181	181	181	181	1	181	181	181	181	1
If volume is unknown, estimate the % of total calls that this outcome represents													
a) % Busy signal, never enters the system?	n/a	n/a		1.0%	1.0%	1.0%	1.0%	1	1.0%	1.0%	1.0%	1.0%	3
b) % Caller gets pre-recorded 'call another time' message during business hours?	Unknown	Unknown		0.0%	0.0%	0.0%	0.0%	1	2.0%	1.1%	0.0%	1.0%	4
c) % Voice mail takes a message during business hours?	n/a	Unknown		n/a	n/a	n/a	n/a	0	3.0%	1.0%	1.0%	1.7%	3
d) % Abandoned calls (i.e., caller hangs-up while in a menu)?	Unknown	Unknown		n/a	n/a	n/a	n/a	0	6.0%	2.0%	0.9%	2.7%	7
e) % Abandoned calls (i.e., caller hangs-up while in a queue or on hold)?	n/a	n/a		n/a	n/a	n/a	n/a	0	14.9%	2.0%	1.0%	6.0%	3
f) % System hangs up on caller (or sends the caller back to the main menu) after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	n/a	n/a		n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
g) % System sends the caller back to the main menu after he/she has waited in the queue longer than a pre-set time or if the queue becomes full?	n/a	n/a		n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
h) % Busy signal after navigating an automated attendant menu, or after being transferred by a receptionist?	n/a	n/a		n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
i) % Call rings unanswered during business hours?	n/a	n/a		n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
35 Do you have a menu system that callers negotiate before speaking to someone?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	86% Yes / 14% No / 0% n/a				44
If yes:													
a) What is the average number of menu layers that must be navigated before a caller can speak to a live person? [Count each and every time a caller must select a menu option by pressing a button on the phone as a menu layer. Use the volume-weighted average number of menu layers if callers must negotiate different numbers of menu layers to reach a service representative on some menu-tree branches than on others.]	4	8		4	2	1	2	15	7	2	1	2	38
b) What is the average time in seconds that it would take a caller to negotiate the menu and listen to menu options before the caller is forwarded to a live person (or queue for a live person)?	75	152		218	49	15	64	15	218	51	6	55	38
c) Is the menu system by-passed if a service representative is available?	No	No		0% Yes / 94% No / 6% n/a				15	0% Yes / 86% No / 14% n/a				38
c1) If yes, what percentage of calls is the menu system by-passed?	n/a	n/a		n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
36 When a member calls in, is the first point of human contact usually a receptionist(s) who transfers a high proportion of calls elsewhere in the organization? (indicate no if most calls go directly to a call center)	No	No		0% Yes / 100% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44
If yes:													
a) Do you have a queue for the receptionist(s)?	n/a	n/a		0% Yes / 0% No / 100% n/a				0	2% Yes / 2% No / 95% n/a				2
a1) If yes, what is the average wait time in seconds in the queue for the receptionist(s)?	n/a	n/a		n/a	n/a	n/a	n/a	0	20	20	20	20	1
b) Approximately what percentage of callers are:													
b1) Satisfied by the receptionist without forwarding?	n/a	n/a		n/a	n/a	n/a	n/a	0	5.0%	5.0%	5.0%	5.0%	2
b2) Forwarded by the receptionist to a queue for service representatives?	n/a	n/a		n/a	n/a	n/a	n/a	0	85.0%	42.5%	0.0%	42.5%	2
b3) Forwarded by the receptionist to specific people or departments?	n/a	n/a		n/a	n/a	n/a	n/a	0	93.0%	51.5%	10.0%	51.5%	2
b4) Receptionist takes a message?	n/a	n/a		n/a	n/a	n/a	n/a	0	2.0%	1.0%	0.0%	1.0%	2
37 Do you have a queue for service representatives? [The entry to the queue could be a recorded message, a menu system or a receptionist.]	Yes	Yes		100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44
If yes:													
a) Average wait time in seconds in queue for a service representative?	58	145		671	153	19	178	16	2,267	86	3	201	44
b) Are calls automatically sent to voice mail when the queue exceeds a set wait time (i.e., callers are not given the option to wait)?	No	No		6% Yes / 94% No / 0% n/a				16	11% Yes / 89% No / 0% n/a				44
38 Does your system notify the caller of the expected wait time, or their place in the queue, for reaching a knowledgeable service representative if the expected wait exceeds a certain threshold?	Yes	Yes		75% Yes / 25% No / 0% n/a				16	55% Yes / 45% No / 0% n/a				44
39 Do you have a callback feature on your phone system? [i.e., the caller's telephone number is placed in a queue for callback when their turn comes up]	Yes	No		50% Yes / 50% No / 0% n/a				16	41% Yes / 59% No / 0% n/a				44
If yes:													
a) What was the total volume of callbacks?	2,517	n/a		185,309	9,395	162	47,180	8	185,309	15,299	104	32,460	18
b) Are callbacks made as soon as the caller's turn in the queue comes up or at a later, designated time?	Both	n/a		38% Queue/6% Designated Time/6% Both/50% n/a				8	34% Queue/5% Designated Time/2% Both/59% n/a				18
b1) If callbacks are made as soon as the caller's turn in the queue comes up, what is the average time between when the caller hangs up and when they are called back?	Unknown	n/a		1,435	468	167	635	4	2,000	525	100	752	8
c) Does the caller have the option of either leaving his number for callback or choosing to remain on the line?	Yes	n/a		50% Yes / 0% No / 50% n/a				8	39% Yes / 2% No / 59% n/a				18
d) What is the callback completion rate (i.e., what percentage of callers that chose to be called back, were actually reached)?	82.0%	n/a		98.8%	93.7%	82.0%	91.7%	8	98.8%	92.1%	64.4%	90.2%	18
After Reaching a Service Rep													

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
40 What was the:													
a) % of callers transferred after first contact? (exclude receptionists)	Unknown		19.1%	8.5%	2.1%	0.0%	3.5%	15	28.0%	2.1%	0.0%	5.0%	40
b) % of callers you called back because their needs were not fully satisfied at first contact?	Unknown		20.2%	10.0%	2.1%	0.4%	3.0%	13	15.4%	2.6%	0.2%	3.6%	34
c) % of calls satisfied by the first contact?	Unknown		60.7%	99.5%	95.7%	85.8%	94.1%	14	99.5%	93.6%	64.6%	91.3%	38
41 If available, what was the:													
a) Average talk time? [Do not include: hold or queuing time prior to a member reaching a knowledgeable person, or hold time after a member has reached a knowledgeable person.]	331		251	431	343	190	325	16	572	331	145	318	43
b) Average after call work time when service representative is unavailable to take another call?	87		115	226	70	5	92	15	240	68	0	97	39
c) Average occupancy %? [time spent handling calls, including after call work, as a percentage of total available time to answer calls.]	73.6%		79.6%	90.7%	79.0%	60.1%	77.0%	15	95.0%	78.6%	0.0%	71.0%	37
42 When a member calls in, do you have immediate computer access to the following member data:													
a) Record of the member's previous calls to the system?	Yes		Yes	88% Yes / 13% No				16	77% Yes / 23% No				44
b) Copies of recent correspondence online?	Yes		Yes	100% Yes / 0% No / 0% Some				16	98% Yes / 2% No / 0% Some				44
c) Knowledge based on-line help system available for use by the service representative?	Yes		Yes	94% Yes / 6% No				16	89% Yes / 11% No				44
d) Most recent member statement?	Yes		Yes	100% Yes / 0% No				16	100% Yes / 0% No				44
e) Beneficiary information?	Yes		Yes	100% Yes / 0% No				16	100% Yes / 0% No				44
43 Do your service representatives have real-time access to a workflow system that lets them know the status of open items?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44
44 Do you provide the following information on an immediate real-time basis to members over the phone? [If you do not have real-time access to the information or if your policy is not to give the information over the phone because of security or other concerns then your answer should be 'no'.]													
a) Estimates of the member's pension at retirement?	No		No	63% Yes / 38% No				16	64% Yes / 36% No				44
If yes:													
a1) Can you easily model and provide alternate annuity payment scenarios? [i.e., joint and 50% survivor, joint and 70% survivor, etc.]	n/a		n/a	63% Yes / 31% No				15	61% Yes / 32% No				41
a2) Is the estimate based on an interactive benefit calculator linked to the member's actual account data?	n/a		n/a	63% Yes / 31% No				15	64% Yes / 30% No				41
b) Refund or transfer value assuming the member exited employment at the time of the call?	Yes		Yes	94% Yes / 6% No				16	89% Yes / 11% No				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
c) Pensionable salary?	Yes		Yes	94% Yes / 6% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44
d) Service credit history including gaps?	Yes		Yes	88% Yes / 13% No / 0% n/a				16	91% Yes / 9% No / 0% n/a				44
e) Cost to purchase service credit?	No		No	56% Yes / 38% No / 6% n/a				15	70% Yes / 27% No / 2% n/a				43
f) If you administer a DC plan:													
f1) Current value of the DC account?	n/a		n/a	38% Yes / 0% No / 63% n/a				6	25% Yes / 0% No / 75% n/a				11
f2) Estimate of the value of the DC account at retirement?	n/a		n/a	19% Yes / 19% No / 63% n/a				6	16% Yes / 9% No / 75% n/a				11
f3) History of account transactions?	n/a		n/a	31% Yes / 6% No / 63% n/a				6	23% Yes / 2% No / 75% n/a				11
45 Can members calling in perform the following transactions over the phone:													
a) Change address?	No		Yes	81% Yes / 19% No / 0% n/a				16	75% Yes / 25% No / 0% n/a				44
b) Add or change email address?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	84% Yes / 16% No / 0% n/a				44
c) Change payment instructions? [i.e., bank account]	No		No	25% Yes / 75% No / 0% n/a				16	34% Yes / 66% No / 0% n/a				44
d) If you administer a DC plan, switches to investment options?	n/a		n/a	19% Yes / 19% No / 63% n/a				6	11% Yes / 11% No / 77% n/a				10
Quality and Other													
46 Do you review your staff's responses to member calls for coaching purposes on a regular basis? [As opposed to intermittent or only while training new service representatives, etc.]	Yes		Yes	94% Yes / 6% No / 0% n/a				16	86% Yes / 14% No / 0% n/a				44
If yes:													
a) How many calls per agent per month (on average) do you monitor?	4		8	18	5	1	6	15	30	5	1	7	38
b) Are you listening in on a live call or a recording?	Recording		Recording	56% Recording / 6% Live / 31% Both / 6% n/a				15	34% Recording / 14% Live / 39% Both / 14% n/a				38
47 Do you have and use tools to help you project call volumes?	Yes		No	94% Yes / 6% No				16	91% Yes / 9% No				44
48 Do you have a toll free number (or a number where members are only charged the cost of a local call no matter where they are located) that members can call to get a real person (not just an info line)?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	98% Yes / 2% No / 0% n/a				44
49 How many hours per week is your 'call center' operational?	47.5		47.5	55.0	45.0	38.0	46.0	16	62.5	45.0	36.5	46.7	44
50 Can members communicate questions using email?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44
a) If yes, what is the average time (in business days) to respond to an email query? Do not include auto-responses or confirmation of email receipt.	2.0		9.0	3.8	1.0	0.4	1.4	16	5.0	1.0	0.4	1.8	42
<b>Activity 2b - Mail Room, Imaging</b>													
51 What were your volumes of:													
a) Incoming mail?	285,402		293,720	888,990	209,242	42,612	241,033	16	888,990	90,872	5,007	151,335	44

Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
b) Outgoing mail?	381,797		407,733	6,167,836	1,005,028	94,700	1,526,708	16	6,167,836	352,394	14,840	765,479	44	
52 Do you use imaging technology? If yes: a) Do you keep images of ALL incoming member correspondence and submitted forms? b) If not all, describe the member documents you do keep images of below: n/a c) Have all historical documents also been imaged?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44	
a) Do you keep images of ALL incoming member correspondence and submitted forms?	Yes		Yes	94% Yes / 6% No / 0% n/a				16	98% Yes / 2% No / 0% n/a				44	
b) If not all, describe the member documents you do keep images of below: n/a														
c) Have all historical documents also been imaged?	Yes		Yes	88% Yes / 13% No / 0% n/a				16	80% Yes / 20% No / 0% n/a				44	
Activity 2c - 1-on-1 Member Counseling														
53 Do you provide 1-on-1 counseling? If you do not offer 1-on-1 counseling skip to question 65.	Yes		Yes	100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44	
54 Provide the number of members counseled 1-on-1 that were: a) Pre-scheduled and/or walk-in counseled in-house? [Include only if the member actually sees a counselor. Exclude 'walk-through' traffic (i.e., picking up brochures or forms) where needs can be met by the receptionist.] b) In the field at locations separate from the member's place of employment? c) At the member's place of employment? d) Via teleconference? [These are pre-scheduled counseling sessions that cover materials sent to the member in advance of the session.] (Total counseled 1-on-1)	2,805		1,557	19,438	4,186	1,310	6,309	16	37,345	3,143	0	5,446	44	
a) Pre-scheduled and/or walk-in counseled in-house? [Include only if the member actually sees a counselor. Exclude 'walk-through' traffic (i.e., picking up brochures or forms) where needs can be met by the receptionist.]	0		n/a	59,914	1,621	0	7,277	16	59,914	343	0	3,515	44	
b) In the field at locations separate from the member's place of employment?	0		n/a	3,274	0	0	521	15	9,053	2	0	513	43	
c) At the member's place of employment?														
d) Via teleconference? [These are pre-scheduled counseling sessions that cover materials sent to the member in advance of the session.]	134		n/a	11,092	187	0	1,043	16	104,078	0	0	3,535	44	
(Total counseled 1-on-1)	2,939		1,557	80,935	7,464	2,939	15,118	16	104,078	5,231	385	12,997	44	
55 Is 1-on-1 retirement counseling a freely available option for most members? [If the only 1-on-1 counseling you do is for VIPs, disability, exceptions and emergencies then your answer should be no.]	Yes		Yes	100% Yes / 0% No / 0% n/a				16	98% Yes / 2% No / 0% n/a				44	
56 Do you limit 1-on-1 counseling by: a) Requiring that members be within a certain time period of earliest possible retirement? b) Placing a limit on the number of counseling sessions a member can request? c) Indicating that members should contact their employers or unions first for counseling? d) Other (describe)? n/a	Yes		Yes	13% Yes / 88% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44	
a) Requiring that members be within a certain time period of earliest possible retirement?	No		No	6% Yes / 94% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44	
b) Placing a limit on the number of counseling sessions a member can request?	Yes		No	6% Yes / 94% No / 0% n/a				16	2% Yes / 98% No / 0% n/a				44	
c) Indicating that members should contact their employers or unions first for counseling?	No		No	0% Yes / 100% No / 0% n/a				16	2% Yes / 98% No / 0% n/a				44	
d) Other (describe)? n/a														



Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
57 Do you provide counseling for walk-in traffic? If yes: a) On average, how long does a walk-in member that requests a counseling session typically have to wait till they can meet with a counselor? (minutes) b) Approximately what percentage of walk-in members requesting a counseling session are turned away, or scheduled for another time, or leave with their needs unsatisfied because they decide the wait was too long?	No	Yes		81% Yes / 19% No / 0% n/a				16	86% Yes / 14% No / 0% n/a				44
	n/a	5		35	6	0	10	13	35	5	0	8	38
	n/a	1.0%		3.0%	0.0%	0.0%	0.5%	13	99.0%	0.0%	0.0%	2.9%	38
58 Do you offer prescheduled 1-on-1 counseling? a) If yes, how long does a member that requests a pre-scheduled counseling session typically have to wait, in business days, before he can meet with a counselor for an in-house 1-on-1 counseling session?	Yes	Yes		88% Yes / 13% No / 0% n/a				16	91% Yes / 9% No / 0% n/a				44
	5	60		48	2	0	8	14	48	1	0	4	40
59 Do you offer 1-on-1 counseling sessions after normal working hours, such as evenings and/or weekends?	No	No		63% Yes / 38% No / 0% n/a				16	50% Yes / 50% No / 0% n/a				44
60 For 1-on-1 counseling sessions that are walk-ins, prescheduled in-house and in the field: a) Do almost all sessions take place in a private office with a door (versus a cubicle, etc.)? a1) Walk-in traffic in-house? a2) Pre-scheduled in-house? a3) In-the-field? b) Do you have real-time access to the member's data (i.e., salary, service credit, refund value, beneficiaries, etc.)? b1) Walk-in traffic in-house? b2) Pre-scheduled in-house? b3) In-the-field? c) Do you provide new written estimates on a real-time basis for anybody that wants one? c1) Walk-in traffic in-house? c2) Pre-scheduled in-house? c3) In-the-field? d) Do you provide an accurate cost to purchase service credit on a real-time basis for anybody that wants one? d1) Walk-in Traffic In-house?													
	n/a	Yes		63% Yes / 19% No / 19% n/a				13	70% Yes / 16% No / 14% n/a				38
	Yes	Yes		81% Yes / 6% No / 13% n/a				14	77% Yes / 14% No / 9% n/a				40
	No	n/a		44% Yes / 38% No / 19% n/a				13	50% Yes / 23% No / 27% n/a				32
	n/a	Yes		81% Yes / 0% No / 19% n/a				13	86% Yes / 0% No / 14% n/a				38
	Yes	Yes		81% Yes / 6% No / 13% n/a				14	89% Yes / 2% No / 9% n/a				40
	Yes	n/a		69% Yes / 13% No / 19% n/a				13	64% Yes / 9% No / 27% n/a				32
	n/a	No		63% Yes / 19% No / 19% n/a				13	66% Yes / 20% No / 14% n/a				38
	No	No		69% Yes / 19% No / 13% n/a				14	77% Yes / 14% No / 9% n/a				40
	No	n/a		50% Yes / 31% No / 19% n/a				13	52% Yes / 20% No / 27% n/a				32
	n/a	No		63% Yes / 19% No / 19% n/a				13	61% Yes / 25% No / 14% n/a				38

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
d2) pre-scheduled In-house?	No		No	56% Yes / 31% No / 13% n/a				14	68% Yes / 23% No / 9% n/a				40
d3) In-the-field?	No		n/a	38% Yes / 44% No / 19% n/a				13	43% Yes / 30% No / 27% n/a				32
e) If you administer a DC plan, can you provide future retirement income and/ or account balance projections based on the member's account information and various market scenarios?													
e1) Walk-in Traffic In-house?	n/a		n/a	31% Yes / 6% No / 63% n/a				6	14% Yes / 11% No / 75% n/a				11
e2) pre-scheduled In-house?	n/a		n/a	31% Yes / 13% No / 56% n/a				7	14% Yes / 11% No / 75% n/a				11
e3) In-the-field?	n/a		n/a	19% Yes / 13% No / 69% n/a				5	9% Yes / 9% No / 82% n/a				8
61 Do you review 1-on-1 counseling sessions for coaching purposes on a regular basis? [As opposed to intermittent or only while training new counselors, etc.]	Yes		Yes	69% Yes / 31% No / 0% n/a				16	66% Yes / 34% No / 0% n/a				44
Activity 2d - Member Presentations and Group Retirement Counseling													
62 Do you offer member presentations (including group counseling)?	Yes		Yes	100% Yes / 0% No				16	98% Yes / 2% No				44
If you do not offer member presentations skip to question 72.													
63 How many benefit fairs did you host or participate in?	3		4	464	65	3	93	16	464	16	0	50	44
64 How many presentations (including group counseling sessions) for members or annuitants [exclude presentations to employers] did you do that took place:													
a) In-house?	69		0	229	44	0	63	16	229	5	0	33	44
b) In the field?	162		165	2,912	325	23	581	16	2,912	170	0	405	44
c) Via live webinar? [i.e., a real-time, online presentation that allows two-way communication between the presenter and audience]	69		48	237	16	0	51	16	237	12	0	30	43
(Total Presentations)	300		213	3,147	462	27	695	16	3,147	250	0	468	44
65 What was the total number of attendees at all of the presentations per question 67 above? [Exclude benefit fair attendees per question 66]	13,745		8,062	38,677	15,181	1,994	17,364	16	38,677	9,052	968	12,279	43
66 Did you do specific presentations for members, in the past fiscal year, targeted solely for:													
a) New members?	Yes		Yes	88% Yes / 13% No / 0% n/a				16	77% Yes / 20% No / 2% n/a				43
b) Members in mid career?	Yes		Yes	81% Yes / 19% No / 0% n/a				16	80% Yes / 18% No / 2% n/a				43
c) Members approaching retirement or ready to retire?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	95% Yes / 2% No / 2% n/a				43
d) Healthcare?	No		No	56% Yes / 44% No / 0% n/a				16	36% Yes / 61% No / 2% n/a				43
e) Changes to benefits?	No		No	44% Yes / 56% No / 0% n/a				16	39% Yes / 59% No / 2% n/a				43
f) Other? (Please describe)	No		No	63% Yes / 38% No / 0% n/a				16	55% Yes / 43% No / 2% n/a				43

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
n/a													
67 Do you offer presentations after normal working hours such as evenings and/or weekends?	No	No		94% Yes / 6% No / 0% n/a				16	93% Yes / 5% No / 2% n/a				43
68 Do you review presenters for coaching purposes on a regular and recurring basis? [As opposed to intermittent or only while training new presenters, etc.] <a href="#">Activity 2e - Written Pension Estimates</a>	Yes	Yes		88% Yes / 13% No / 0% n/a				16	84% Yes / 14% No / 2% n/a				43
69 Do you offer written pension estimates to members? If no, go directly to question 79.	Yes	Yes		100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44
70 How many written pension estimates did you mail out pursuant to individual member requests? [Exclude estimates prepared during counseling sessions and not mailed in advance.]	3,173	5,518		259,137	17,919	1,432	35,283	16	259,137	8,877	327	22,651	44
71 When a member requests multiple different estimate scenarios, do you count each scenario as an 'estimate' or do you count the 'multiple request' as a single estimate?  a) If you count each scenario, what is the approximate average number of scenarios per request by a member?	Single Estimate  n/a	Single Estimate  n/a		69% Each Scenario / 31% Single Estimate				16	59% Each Scenario / 41% Single Estimate				44
				23	2	1	4	11	23	2	1	3	26
72 On average, how many business days does it take to provide a written pension estimate from the time of initial request from a member? [Exclude time in the mail.] a) Is this a number you regularly measure and track (versus an estimate)?	3.0  Regular	6.2  Regular		65.0 7.8 0.0 14.3				16	65.0 5.0 0.0 11.3				44
				100% Regular / 0% Estimate				16	93% Regular / 7% Estimate				44
73 Can members request and obtain a written pension estimate at any time during their career? [As opposed to, for example, requiring that the member be within a certain time period of earliest potential retirement before they can request a pension estimate.]  a) If no: describe the time constraint? We encourage members to wait until they are at least 1 year from potential retirement.	No	No		63% Yes / 38% No / 0% n/a				16	77% Yes / 23% No / 0% n/a				44
74 Do you place a limit on the number of written pension estimates that a member can request? a) If yes, describe the limit? 3 pension estimate requests per year.	Yes	Yes		25% Yes / 75% No / 0% n/a				16	20% Yes / 80% No / 0% n/a				44
75 Do your written pension estimates (including cover letters, etc. sent with the estimate):													

Survey Question	Your Response			Peers 2019					All Participants 2019					
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
a) Clearly address if and how the pension is inflation protected (or not protected)?	Yes		Yes	56% Yes / 44% No / 0% n/a				16	59% Yes / 41% No / 0% n/a				44	
b) If your pension is coordinated with or reduced by social security (or CPP in Canada) is the impact explained?	Yes		Yes	38% Yes / 13% No / 50% n/a				8	55% Yes / 14% No / 32% n/a				30	
c) Discuss alternative scenarios that could improve the pension such as purchasing service credit or working longer?	Yes		Yes	94% Yes / 6% No / 0% n/a				16	84% Yes / 16% No / 0% n/a				44	
d) Model alternative retirement payment options?	Yes		Yes	94% Yes / 6% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44	
Activity 2f Mass Communication: (i) Website														
76 Are all, most or some of your forms available online for either completion or downloading?	All		All	50% All / 6% Some / 44% Most				16	43% All / 2% Some / 55% Most				44	
77 Intentionally omitted.														
78 Does your website have a secure member area where members can access their own data? If yes:	Yes		Yes	94% Yes / 6% No				16	93% Yes / 7% No				44	
a) How many unique members accessed the secure member area? [Count a member only once even if he visited multiple times.]	328,456		Unknown	573,397	172,625	65,134	200,945	15	1,103,170	116,309	6,941	162,053	41	
b) How many total visits were there by members to the secure member area? [Count each visit even if the same member visits multiple times.]	704,889		989,943	4,254,756	862,348	250,815	1,291,602	15	4,254,756	457,490	26,992	864,296	41	
c) If a member wants to register for the first time, does he/she have to wait for a password in the mail?	No		No	13% Yes / 81% No / 6% n/a				15	7% Yes / 86% No / 7% n/a				41	
d) Do you welcome the member by name on the home page of the secure member area?	Yes		Yes	88% Yes / 6% No / 6% n/a				15	89% Yes / 5% No / 7% n/a				41	
e) Are users required to acknowledge a disclaimer every time they log in?	No		No	19% Yes / 75% No / 6% n/a				15	9% Yes / 84% No / 7% n/a				41	
f) Are users required to acknowledge a disclaimer every time they generate a pension estimate?	No		No	25% Yes / 63% No / 13% n/a				14	32% Yes / 59% No / 9% n/a				40	
g) Do inactive members have access to the secure member area?	Yes		Yes	94% Yes / 0% No / 6% n/a				15	82% Yes / 11% No / 7% n/a				41	
79 Indicate whether the following capabilities are available on your website and provide volumes:														
a) Benefit calculator in non-secure area?	Yes		Yes	56% Yes / 44% No / 0% n/a				16	52% Yes / 48% No / 0% n/a				44	
b) Benefit calculator in secure area not linked to member data?	No		No	25% Yes / 75% No / 0% n/a				16	20% Yes / 80% No / 0% n/a				44	
c) Benefit calculator in secure area linked to member's salary and service data?	Yes		Yes	81% Yes / 19% No / 0% n/a				16	86% Yes / 14% No / 0% n/a				44	
d) Service credit purchase calculator?	Yes		Yes	88% Yes / 13% No / 0% n/a				16	77% Yes / 23% No / 0% n/a				44	
e) Register for 1-on-1 counseling sessions?	Yes		Yes	56% Yes / 44% No / 0% n/a				16	41% Yes / 57% No / 2% n/a				43	

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
e1) If yes, does the member have real-time access to available dates and times?	No	No		50% Yes / 6% No / 44% n/a				9	36% Yes / 2% No / 61% n/a				17
f) Register for presentations?	Yes	No		81% Yes / 13% No / 6% n/a				15	70% Yes / 23% No / 7% n/a				41
g) Live chat?	No	No		0% Yes / 100% No / 0% n/a				16	2% Yes / 95% No / 2% n/a				43
h) Change address?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	91% Yes / 9% No / 0% n/a				44
i) Change beneficiary?	Yes	Yes		81% Yes / 19% No / 0% n/a				16	66% Yes / 34% No / 0% n/a				44
j) Change email address?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	91% Yes / 9% No / 0% n/a				44
k) Reset password?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	91% Yes / 9% No / 0% n/a				44
l) Change banking information for direct deposit?	Yes	Yes		75% Yes / 25% No / 0% n/a				16	55% Yes / 45% No / 0% n/a				44
m) Change tax withholding amount?	Yes	Yes		81% Yes / 19% No / 0% n/a				16	70% Yes / 30% No / 0% n/a				44
n) Download or print duplicate tax receipts? [i.e., 1099s in the U.S.]	Yes	Yes		88% Yes / 13% No / 0% n/a				16	82% Yes / 18% No / 0% n/a				44
o) View pension payment details? [i.e., gross amounts, deductions]	Yes	Yes		88% Yes / 13% No / 0% n/a				16	86% Yes / 14% No / 0% n/a				44
p) Submit a retirement application online?	Yes	No		63% Yes / 38% No / 0% n/a				16	45% Yes / 55% No / 0% n/a				44
If yes:													
p1) Does the online application provide an estimate, final value or neither of the annuity payment the member will receive?	Estimate	n/a		0% Final / 31% Neither / 31% Estimate / 38% n/a				10	2% Final / 25% Neither / 18% Estimate / 55% n/a				20
p2) Approximately what % of retirements submitted online require follow-up documents or signatures to be mailed in?	100.0%	n/a		100.0%	60.0%	5.0%	57.1%	9	100.0%	41.0%	0.0%	54.2%	17
q) View status of online retirement application?	Yes	No		56% Yes / 38% No / 6% n/a				15	36% Yes / 52% No / 11% n/a				39
r) Apply for a refund or transfer-out?	No	No		69% Yes / 31% No / 0% n/a				16	27% Yes / 70% No / 2% n/a				43
s) Secure mailbox or digital file including history of recent correspondence and member documents?	No	No		69% Yes / 31% No / 0% n/a				16	50% Yes / 48% No / 2% n/a				43
t) Download member statement? [i.e., Adobe format]	Yes	Yes		81% Yes / 19% No / 0% n/a				16	89% Yes / 9% No / 2% n/a				43
u) Upload documents (such as birth certificates)?	No	No		56% Yes / 44% No / 0% n/a				16	48% Yes / 50% No / 2% n/a				43
v) View pensionable earnings and/or service without downloading?	Yes	Yes		88% Yes / 13% No / 0% n/a				16	84% Yes / 14% No / 2% n/a				43
If yes:													
v1) Are both salary and service data available?	Yes	Yes		81% Yes / 6% No / 13% n/a				14	82% Yes / 2% No / 16% n/a				37
v2) Is online data up-to-date to the most recent pay period?	Yes	Yes		75% Yes / 13% No / 13% n/a				14	68% Yes / 16% No / 16% n/a				37
v3) Is a complete annual history from the beginning of employment provided?	Yes	Yes		69% Yes / 19% No / 13% n/a				14	50% Yes / 34% No / 16% n/a				37
w) If you administer a core DC or hybrid DB/ DC plan:													
w1) Switch between investment options?	n/a	n/a		38% Yes / 13% No / 50% n/a				8	23% Yes / 7% No / 70% n/a				13
w2) Change deferral percentage selections for regular contributions?	n/a	n/a		19% Yes / 31% No / 50% n/a				8	11% Yes / 18% No / 70% n/a				13
w3) Initiate withdrawals?	n/a	n/a		25% Yes / 25% No / 50% n/a				8	16% Yes / 14% No / 70% n/a				13

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
w4) View current valuation of their account?	n/a		n/a	44% Yes / 6% No / 50% n/a				8	25% Yes / 5% No / 70% n/a				13
If yes, volume?													
a) Benefit calculator in non-secure area?	438,815		383,247	438,815	205,921	43,010	210,194	9	438,815	88,867	8,639	119,545	23
b) Benefit calculator in secure area not linked to member data?	n/a		n/a	13,620	4,945	3,236	6,686	4	13,620	3,236	853	4,569	9
c) Benefit calculator in secure area linked to member's salary and service data?	773,644		914,887	2,358,311	277,393	26,746	523,904	13	2,358,311	168,194	6,346	284,024	38
d) Service credit purchase calculator?	93,518		60,724	93,518	14,471	656	25,570	14	98,912	13,578	402	20,332	34
e) Register for 1-on-1 counseling sessions?	30,922		18,093	30,922	6,167	547	10,337	8	30,922	4,096	547	7,514	14
f) Register for presentations?	Unknown		n/a	29,272	7,314	5,145	10,832	8	29,272	5,357	232	7,291	22
g) Live chat?	n/a		n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
h) Change address?	13,733		13,908	276,248	17,667	3,701	43,409	15	276,248	12,982	774	24,983	40
i) Change beneficiary?	100,655		70,052	456,870	14,283	2,491	69,436	13	456,870	14,011	566	39,713	29
j) Change email address?	116,968		10,994	116,968	18,284	1,086	41,382	12	116,968	9,567	698	26,700	26
k) Reset password?	94,483		3,626	223,592	94,483	1,089	93,733	11	223,592	22,908	10	53,805	30
l) Change banking information for direct deposit?	50,675		36,106	285,323	7,980	2,183	40,644	12	285,323	2,486	167	20,830	24
m) Change tax withholding amount?	37,384		25,842	143,333	8,307	6,073	32,439	13	143,333	7,122	157	16,272	31
n) Download or print duplicate tax receipts? [i.e., 1099s in the U.S.]	68,538		50,950	196,138	36,615	8,665	53,633	14	196,138	21,818	307	30,517	36
o) View pension payment details? [i.e., gross amounts, deductions]	142,371		78,688	2,477,815	142,371	16,552	411,545	11	2,477,815	43,364	118	188,570	32
p) Submit a retirement application?	2,145		n/a	11,303	3,958	2,145	5,596	9	11,303	2,826	53	4,008	18
q) View status of online retirement application?	20,246		n/a	132,742	41,503	12,677	55,812	6	132,742	12,677	150	28,636	13
r) Apply for a refund or transfer-out?	n/a		n/a	34,741	6,640	825	9,830	9	34,741	7,095	825	10,254	10
s) Secure mailbox or digital file including history of recent correspondence and member documents?	n/a		n/a	650,390	367,176	4,105	326,606	6	650,390	90,285	2,594	220,429	13
t) Download member statement? [i.e., Adobe format]	457,348		238,079	457,348	81,270	2,942	147,898	13	517,111	78,844	2,942	102,064	39
u) Upload documents (such as birth certificates)?	n/a		n/a	28,450	2,174	6	9,329	5	35,562	7,848	6	12,425	16
v) View pensionable earnings and/or service without downloading?	581,582		120,234	4,482,877	370,458	67,819	879,356	14	4,482,877	179,000	5,962	572,026	37
w) If you administer a core DC or hybrid DB/ DC plan:													
w1) Switch between investment options?	n/a		n/a	2,038	1,186	1,110	1,417	5	13,504	1,396	668	3,464	8
w2) Change deferral percentage selections for regular contributions?	n/a		n/a	4,052	2,436	820	2,436	2	63,406	4,052	820	22,759	3
w3) Initiate withdrawals?	n/a		n/a	1,846	953	897	1,232	3	18,815	1,234	611	4,106	6
w4) View current valuation of their account?	n/a		n/a	671,687	270,050	31,601	310,847	4	1,241,968	179,367	18,996	369,543	7
Videos													

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
80 Do you have videos that members can access online? If yes: a) How many different videos do you have for members online? During your most recent fiscal year: b) What was the total number of new views for all streamed videos?	Yes	Yes		100% Yes / 0% No / 0% n/a				16	98% Yes / 2% No / 0% n/a				44
a) How many different videos do you have for members online?	35	20		1,063	24	2	110	16	1,063	19	1	57	43
b) What was the total number of new views for all streamed videos?	21,723	9,611		375,196	20,352	4,565	52,862	14	375,196	11,682	162	26,278	40
<b>Activity 2f Mass Communication: (ii) News and Targeted Communication</b>													
81 What % of email addresses do you have in your system for the following groups:													
a) Active members?	62.5%	36.0%		100.0%	63.0%	18.1%	61.0%	16	100.0%	62.3%	0.0%	56.6%	42
b) Inactive members?	Unknown	0.0%		46.0%	23.0%	1.6%	26.2%	15	60.6%	31.7%	0.0%	29.5%	41
c) Annuitants?	57.6%	54.0%		88.0%	57.7%	27.0%	57.3%	16	88.0%	50.4%	0.0%	49.7%	42
82 Indicate whether you sent newsletters or news magazines (in either electronic or paper format) last year to any of the following member segments, and if yes, the number of times it was sent and the approximate % sent electronically. Only indicate 'yes' if the newsletter was customized for and only sent to members in the segment:  Target segment													
a) All members (active, inactive and annuitants)?	No	No		31% Yes / 69% No / 0% n/a				16	32% Yes / 68% No / 0% n/a				44
b) Active and inactive members?	Yes	No		38% Yes / 63% No / 0% n/a				16	32% Yes / 68% No / 0% n/a				44
c) Active members and annuitants?	No	No		0% Yes / 100% No / 0% n/a				16	2% Yes / 98% No / 0% n/a				44
d) Active members only?	Yes	Yes		63% Yes / 38% No / 0% n/a				16	48% Yes / 52% No / 0% n/a				44
e) Inactive members only?	No	No		13% Yes / 88% No / 0% n/a				16	11% Yes / 89% No / 0% n/a				44
f) Annuitants only?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	82% Yes / 18% No / 0% n/a				44
g) Age segments (i.e., under 35, 35-50, 50 plus)?	No	No		13% Yes / 88% No / 0% n/a				16	14% Yes / 86% No / 0% n/a				44
h) Women only or men only?	No	No		0% Yes / 100% No / 0% n/a				16	0% Yes / 100% No / 0% n/a				44
i) Employer or employment category (i.e., a different newsletter for teachers vs. bus drivers)?	No	No		31% Yes / 69% No / 0% n/a				16	14% Yes / 86% No / 0% n/a				44
j) Other? (describe your other newsletter segments below) n/a	No	No		31% Yes / 69% No / 0% n/a				16	18% Yes / 82% No / 0% n/a				44
If yes: # of times you sent last year?													
a) All members (active, inactive and annuitants)?	n/a	n/a		12	3	1	4	5	12	3	1	4	14
b) Active and inactive members?	1	n/a		4	3	1	3	6	70	3	1	7	14

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
c) Active members and annuitants?	n/a		n/a	n/a	n/a	n/a	n/a	0	3	3	3	3	1
d) Active members only?	2		3	8	3	1	3	10	8	2	1	3	21
e) Inactive members only?	n/a		n/a	1	1	1	1	2	4	1	1	2	5
f) Annuitants only?	1		4	4	3	1	3	15	15	2	1	3	36
g) Age segments (i.e., under 35, 35-50, 50 plus)?	n/a		n/a	8	6	4	6	2	47	6	1	15	6
h) Women only or men only?	n/a		n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
i) Employer or employment category (i.e., a different newsletter for teachers vs. bus drivers)?	n/a		n/a	14	12	2	10	5	14	11	2	9	6
j) Other? (describe your other newsletter segments below)	n/a		n/a	12	10	2	8	5	12	8	2	7	8
Approx. % sent by email													
a) All members (active, inactive and annuitants)?	n/a		n/a	100.0%	56.0%	0.0%	51.2%	5	100.0%	42.9%	0.0%	46.2%	14
b) Active and inactive members?	100.0%		n/a	100.0%	56.5%	0.0%	55.5%	6	100.0%	49.5%	0.0%	49.8%	14
c) Active members and annuitants?	n/a		n/a	n/a	n/a	n/a	n/a	0	40.0%	40.0%	40.0%	40.0%	1
d) Active members only?	100.0%		100.0%	100.0%	100.0%	0.0%	71.3%	10	100.0%	91.3%	0.0%	61.3%	21
e) Inactive members only?	n/a		n/a	21.0%	10.5%	0.0%	10.5%	2	21.0%	0.0%	0.0%	4.2%	5
f) Annuitants only?	100.0%		100.0%	100.0%	7.0%	0.0%	29.2%	15	100.0%	6.5%	0.0%	21.9%	36
g) Age segments (i.e., under 35, 35-50, 50 plus)?	n/a		n/a	52.0%	26.0%	0.0%	26.0%	2	100.0%	46.0%	0.0%	47.2%	6
h) Women only or men only?	n/a		n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
i) Employer or employment category (i.e., a different newsletter for teachers vs. bus drivers)?	n/a		n/a	100.0%	100.0%	0.0%	77.1%	5	100.0%	92.9%	0.0%	67.6%	6
j) Other? (describe your other newsletter segments below)	n/a		n/a	100.0%	100.0%	35.0%	87.0%	5	100.0%	100.0%	35.0%	84.4%	8
83 Are new members issued a 'welcome' kit describing their benefits?	No		No	88% Yes / 13% No / 0% n/a				16	89% Yes / 11% No / 0% n/a				44
a) If yes, does it include a personalized letter addressing the new member by name?	n/a		n/a	56% Yes / 31% No / 13% n/a				14	70% Yes / 18% No / 11% n/a				39
84 Do you send your members a general brochure with a summary of the benefits every year in either paper or email format?	Yes		Yes	38% Yes / 63% No / 0% n/a				16	39% Yes / 61% No / 0% n/a				44
85 Do you automatically send targeted letters or emails addressed to members by name triggered by the following milestones:													
a) Vested for pension benefits (if member is not vested immediately)?	No		Yes	38% Yes / 56% No / 6% n/a				15	36% Yes / 50% No / 14% n/a				38
b) Vested for disability benefits (if member is not vested immediately)?	No		Yes	6% Yes / 88% No / 6% n/a				15	9% Yes / 70% No / 20% n/a				35
c) Expiration of disability benefits for inactive members or members that have exited employment?	Yes		Yes	38% Yes / 63% No / 0% n/a				16	25% Yes / 57% No / 18% n/a				36
d) Approaching eligibility, or becoming eligible, for retirement?	No		Yes	56% Yes / 44% No / 0% n/a				16	52% Yes / 48% No / 0% n/a				44



Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
e) Eligibility or likely eligibility, to purchase service credit?	No	No		13% Yes / 88% No / 0% n/a				16	27% Yes / 73% No / 0% n/a				44
f) Missing beneficiary?	No	No		25% Yes / 75% No / 0% n/a				16	36% Yes / 64% No / 0% n/a				44
g) Missing email address?	No	No		6% Yes / 94% No / 0% n/a				16	11% Yes / 89% No / 0% n/a				44
h) Never visited the secure member area?	No	No		6% Yes / 88% No / 6% n/a				15	9% Yes / 86% No / 5% n/a				42
i) Other milestone communication? (describe below) n/a	No	No		56% Yes / 44% No / 0% n/a				16	66% Yes / 34% No / 0% n/a				44
86 Do you actively solicit member feedback on your publications through:													
a) Focus groups?	Yes	No		38% Yes / 63% No / 0% n/a				16	25% Yes / 75% No / 0% n/a				44
b) Tear out surveys or feedback cards in the publications themselves?	No	No		0% Yes / 100% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44
c) Surveys sent to members who request a publication?	No	No		13% Yes / 88% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
d) Other (describe)? n/a	No	Yes		56% Yes / 44% No / 0% n/a				16	52% Yes / 48% No / 0% n/a				44
Activity 2f Mass Communication: (iii) Member Statement													
87 How many times per year (annually = 1, every 2nd year = 0.5, every 3 years = 0.33, every 5 years = 0.2) do you send member statements to:													
a) Active members?	1	1		1	1	1	1	16	5	1	1	1	44
b) Inactive members?	0	0		1	1	0	1	16	5	1	0	1	44
88 Approximately what % of members complain about the accuracy of data in their member statements?	0.0%	0.0%		2.0%	0.0%	0.0%	0.3%	16	3.0%	0.1%	0.0%	0.6%	44
89 Indicate the approximate percentage breakdown of how you send member statements to active members:													
a) Directed through the employer?	0.0%	0.0%		66.5%	0.0%	0.0%	7.2%	16	100.0%	0.0%	0.0%	13.1%	42
b) Mailed directly to members' homes?	0.0%	0.0%		100.0%	15.7%	0.0%	37.6%	16	100.0%	35.3%	0.0%	44.0%	43
c) Email or text message to members that the statement is available in the secure member area?	100.0%	100.0%		100.0%	38.5%	0.0%	46.3%	16	100.0%	27.1%	0.0%	45.2%	43
90 On average, how current is an active member's data in the statements that the member receives (in months)? [For example, if statements with data current to December 31st are mailed in a staggered mailing beginning May 1st and finishing June 30th, then the members are receiving data that is between 4 and 6 months old, or 5 months old on average.]	5	5		5	2	0	2	16	7	3	0	3	43
91 Do your statements for active members include:													
a) Total accumulated service credit?	Yes	Yes		100% Yes / 0% No / 0% n/a				16	98% Yes / 0% No / 2% n/a				43

Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#		Max	Med	Min	Avg	#
b) Pensionable earnings?	Yes		Yes	75% Yes / 25% No / 0% n/a				16		86% Yes / 11% No / 2% n/a				43
c) A historical summary of salary and service credit earned each year?	No		No	44% Yes / 56% No / 0% n/a				16		27% Yes / 70% No / 2% n/a				43
d) The refund value if you left at the statement date?	Yes		Yes	94% Yes / 6% No / 0% n/a				16		77% Yes / 20% No / 2% n/a				43
e) An estimate of the future pension entitlement based on age scenario modeling or assuming the member continues to work until earliest possible retirement?	Yes		Yes	75% Yes / 25% No / 0% n/a				16		82% Yes / 16% No / 2% n/a				43
New Media and Other														
92 Indicate if your system has an active account (i.e., you have updated it or posted to it in the past 12 months) on the following social media platforms:														
a) Facebook?	Yes		Yes	81% Yes / 19% No				16		61% Yes / 39% No				44
b) Twitter?	No		No	69% Yes / 31% No				16		52% Yes / 48% No				44
c) YouTube?	Yes		Yes	63% Yes / 38% No				16		64% Yes / 36% No				44
d) LinkedIn?	No		Yes	69% Yes / 31% No				16		52% Yes / 48% No				44
e) Pinterest?	No		No	6% Yes / 94% No				16		5% Yes / 95% No				44
f) Instagram?	No		No	13% Yes / 88% No				16		23% Yes / 77% No				44
g) WhatsApp?	No		No	0% Yes / 100% No				16		5% Yes / 95% No				44
h) Blog?	No		No	31% Yes / 69% No				16		18% Yes / 82% No				44
i) Other? Please describe below.	No		No	6% Yes / 94% No				16		16% Yes / 84% No				44
n/a														
If available, number of regular users?														
a) Facebook?	9,245		n/a	29,139	8,944	1,309	10,611	10		29,139	4,900	139	7,622	21
b) Twitter?	n/a		n/a	17,388	1,518	905	3,662	8		17,388	1,427	2	2,534	18
c) YouTube?	Unknown		n/a	5,248	326	128	1,270	6		12,363	512	16	1,388	19
d) LinkedIn?	n/a		n/a	14,253	1,990	36	3,251	8		35,974	2,226	36	5,596	18
e) Pinterest?	n/a		n/a	n/a	n/a	n/a	n/a	0		n/a	n/a	n/a	n/a	0
f) Instagram?	n/a		n/a	2,296	2,296	2,296	2,296	1		2,296	150	1	513	7
g) WhatsApp?	n/a		n/a	n/a	n/a	n/a	n/a	0		n/a	n/a	n/a	n/a	0
h) Blog?	n/a		n/a	30,893	2,239	1,882	11,671	3		30,893	2,061	0	8,754	4
i) Other? Please describe below.	n/a		n/a	12	12	12	12	1		12	12	12	12	1
93 If easily available, provide the following metrics for your most recently ended fiscal year (this does not impact your service score):														

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
a) For Facebook, what is your average annual post engagement rate (combined clicks, comments, likes and shares divided by total post reach)?	Unknown	12.5%	13.1%	6.0%	1.1%	5.7%	10	16.0%	6.2%	0.2%	6.2%	21	
b) For Twitter, what is your average tweet engagement rate (combined clicks, retweets, replies, follows, and likes divided by total impressions)?	n/a	n/a	1.7%	0.8%	0.0%	0.8%	10	12.0%	0.8%	0.0%	1.2%	21	
94 Approximately how many full time equivalent staff ("FTE") are dedicated to maintaining your social media presence? Include time spent modifying or creating content specifically for social media platforms and time spent monitoring, measuring and responding to comments and questions on social media.	1.0	0.5	4.0	1.0	0.0	1.1	15	4.0	1.0	0.0	0.7	43	
95 Do you support private two-way communication with members through any social media platforms?	Yes	Yes	75% Yes / 25% No / 0% n/a					16	43% Yes / 57% No / 0% n/a				44
96 Do you have a mobile app(s)? If yes, briefly describe each app: n/a n/a n/a If yes, volume:	No	No	13% Yes / 88% No / 0% n/a					16	9% Yes / 91% No / 0% n/a				44
	n/a	n/a	16,315	10,776	5,236	10,776	2	16,315	8,669	100	8,438	4	
	n/a	n/a	n/a	n/a	n/a	n/a	0	872	872	872	872	1	
	n/a	n/a	n/a	n/a	n/a	n/a	0	430	430	430	430	1	
97 Do you have a mobile version of your website? [i.e., a version of your website designed specifically for smart phones and tablets]	Yes	Yes	81% Yes / 19% No / 0% n/a					16	80% Yes / 20% No / 0% n/a				44
a) If yes, can members access their own data via the mobile version of your website?	Yes	Yes	56% Yes / 25% No / 19% n/a					13	55% Yes / 25% No / 20% n/a				35
Activity 3 Collections and Data Maintenance													
98 Number of:													
a) Employers at the end of your fiscal year?	2,822	2,824	3,219	1,432	631	1,715	16	3,219	731	1	942	44	
b) Employers that joined your system during the fiscal year?	2	10	38	7	0	9	16	38	4	0	6	44	
c) Employers that exited your system during the fiscal year?	3	0	21	5	0	6	16	21	2	0	4	44	
99 How many 'collection points' (i.e., employers, state agencies, departments and/or service providers etc) do you deal with for collecting:													
a) Member payroll data?	2,822	2,824	3,062	1,184	91	1,518	16	3,062	632	1	865	44	

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
b) Money (i.e., contributions)? [Your number of 'collection points' could be less than your number of employers if, for example, some of your payroll data comes from a central agency that processes payroll data from numerous employers and then provides it to you in a consolidated, integrated format.]	2,822	2,824		3,399	1,166	92	1,518	16	3,399	632	1	863	44
100 How many 'reconciliation points' (i.e., employers, state agencies, departments and/or service providers, etc.) do you deal with when:													
a) Validating member data?	2,822	2,824		3,062	1,432	564	1,654	16	3,062	793	1	952	44
b) Reconciling money issues (i.e., contributions)? [For most systems, the number of 'reconciliation points' will be the same as the number of 'collection points' per question 101 immediately above. But they could be different. For example, MOSERS has 1 primary collection point - the Office of Administration. The Office of Administration does not check to see if employers have sent the correct amount. MOSERS has to go back to the individual payroll offices at each employer to reconcile money problems and validate data.]	2,822	2,824		3,062	1,321	92	1,545	16	3,062	632	1	890	44
101 What is the breakdown of 'collection points' providing you with payroll data between the following formats and what is the total number of active members covered by each format?													
a) 100% electronic? [No manual steps required unless there are errors.]	1,128	1,148		3,115	1,029	0	1,288	16	3,115	516	0	706	44
b) Mostly electronic? [For example, some systems receive files by internet and then must manually start a program that uploads the file.]	0	0		1,507	0	0	125	16	1,521	0	0	114	44
c) Computer readable? [i.e., via computer tape or disk]	0	0		0	0	0	0	16	2	0	0	0	44
d) Paper?	1,674	1,676		1,674	0	0	113	16	1,674	0	0	49	44
Total # of active members													
a) 100% electronic? [No manual steps required unless there are errors.]	470.0k	518.0k		867.0k	226.0k	0.0k	315.4k	16	884.5k	169.6k	0.0k	206.0k	44
b) Mostly electronic? [For example, some systems receive files by internet and then must manually start a program that uploads the file.]	n/a	0.0k		257.9k	0.0k	0.0k	37.0k	15	45,142.0k	0.0k	0.0k	1,216.0k	38
c) Computer readable? [i.e., via computer tape or disk]	n/a	0.0k		0.0k	0.0k	0.0k	0.0k	13	99.2k	0.0k	0.0k	3.0k	34
d) Paper?	18.0k	37.0k		18.0k	0.0k	0.0k	1.4k	14	18.0k	0.0k	0.0k	0.7k	35
102 How many warrants of execution or court orders did you obtain against delinquent employers?	0	0		1	0	0	0	16	1	0	0	0	44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
103 What % of your active and inactive member on-line records are complete and accurate? [For example, you don't have to double check paper records or check non-recent data with employers prior to incepting a pension. On-line data may be inaccurate because of poor collection processes, or poor transfer of paper records in the past, or merging in new employers with bad data, etc.]	99.0%	98.0%		100.0%	97.5%	84.0%	95.0%	16	100.0%	96.0%	62.0%	93.7%	44
104 Do you actively keep track of the addresses of inactive members?	Yes	Yes		88% Yes / 13% No / 0% n/a				16	75% Yes / 25% No / 0% n/a				44
105 Do you have a diagnostic software system for detecting and correcting contribution errors?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	84% Yes / 16% No / 0% n/a				44
106 When you get an address change, how many systems do you need to update? <b>Activity 3b - Service to Employers</b>	1	1		7	1	1	1	16	7	1	1	1	44
107 Number of:													
a) Incoming calls from employers?	3,488	6,128		90,043	13,966	1,700	22,081	16	90,043	8,987	0	13,288	44
b) Email queries from employers?	Unknown	2,100		113,724	13,882	1,828	21,408	16	273,848	12,684	330	21,783	44
c) Conferences for employers (conferences must span more than half a day and typically involve multiple presentations)? [For example, some administrators with multiple employers host an annual conference to update the employers on trends, regulation, legislation, and new services that might affect their pension plan].	0	2		6	0	0	1	16	22	0	0	2	44
d) Presentations given to employers such as orientation workshops or seminars on benefit changes, etc. (do not include presentations given at conferences)?	13	26		293	41	8	69	16	293	30	0	47	44
e) On-site reviews (or audits or inspections) of your employers? [For example, several systems perform reviews of their employers that have problems providing data and or contributions on a timely basis to ensure that they are correctly fulfilling their obligations to their members.]	0	0		415	19	0	62	16	415	3	0	50	44
f) Other site visits to employers (exclude 'd' and 'e' above)?	0	0		56	1	0	11	16	166	3	0	17	44
108 Do you have an employer targeted section on your website or a separate website for your employers? [Do not include PDF documents.]	Yes	Yes		100% Yes / 0% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44
109 Do you have online videos targeted for employers?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	70% Yes / 30% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
110 How many different types of presentations did you give to employers?	7	6		43	10	2	13	16	43	6	0	8	44
111 Do you have a newsletter dedicated to employers that is different from the newsletter for members?	Yes	Yes		100% Yes / 0% No / 0% n/a				16	82% Yes / 18% No / 0% n/a				44
a) If yes, how many times did you prepare and send an employer dedicated newsletter last year?	12	19		57	7	2	12	16	61	9	2	13	36
112 Do you have Service Level agreements with your employers that clarifies both your and the employer's service responsibilities and includes measurement and reporting vis-à-vis your responsibilities?	No	No		25% Yes / 75% No / 0% n/a				16	27% Yes / 73% No / 0% n/a				44
113 Do you offer and maintain generalized reporting software for your employer collection points?	Yes	Yes		100% Yes / 0% No / 0% n/a				16	93% Yes / 7% No / 0% n/a				44
If yes:													
a) Is the application web-based? [i.e., you connect to it through a web browser]	Yes	Yes		100% Yes / 0% No / 0% n/a				16	91% Yes / 2% No / 7% n/a				41
b) Can the software integrate both data collection and billing?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	61% Yes / 32% No / 7% n/a				41
c) Can it provide real-time error checking and feedback versus data previously submitted by the employer? [For example, can it identify an unusual increase in an employee's salary?]	Yes	Yes		69% Yes / 31% No / 0% n/a				16	61% Yes / 32% No / 7% n/a				41
114 Do you maintain customized reporting software for any of your employer collection points? [For example, you may maintain customized reporting software for your largest employer.]	No	No		13% Yes / 88% No / 0% n/a				16	18% Yes / 82% No / 0% n/a				44
Activity 4 - Governance and Financial Control													
115 Indicate the oversight bodies that you reported to last year, and the number of meetings, excluding investment related meetings, that you participated in:													
a) Board of Trustees?	Yes	Yes		75% Yes / 19% No / 6% n/a				15	82% Yes / 16% No / 2% n/a				43
b) Non-board legislative oversight committee?	No	No		56% Yes / 38% No / 6% n/a				15	48% Yes / 50% No / 2% n/a				43
c) Advisory committee?	Yes	No		50% Yes / 44% No / 6% n/a				15	43% Yes / 55% No / 2% n/a				43
d) Members' Council?	No	No		0% Yes / 94% No / 6% n/a				15	2% Yes / 95% No / 2% n/a				43
e) Other (describe below)?	No	No		56% Yes / 38% No / 6% n/a				15	48% Yes / 50% No / 2% n/a				43
n/a													
# of meetings, including sub-committees, last year													
a) Board of Trustees?	4	4		44	11	4	17	12	102	14	4	22	36
b) Non-board legislative oversight committee?	n/a	n/a		35	6	1	9	9	35	6	1	10	21
c) Advisory committee?	1	n/a		14	5	1	6	8	14	4	0	5	19
d) Members' Council?	n/a	n/a		n/a	n/a	n/a	n/a	0	8	8	8	8	1

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
e) Other (describe below)?	n/a		n/a	98	4	2	16	9	98	5	1	14	21
116 Do you have back-up equipment and premises arranged for your operations if substantial damage occurs at your principal location?	Yes		Yes	100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44
117 Do you have an independent auditor that reviews and tests the disaster recovery plan?	No		No	56% Yes / 44% No / 0% n/a				16	68% Yes / 32% No / 0% n/a				44
118 If your principal location became inoperable due to some disaster (such as fire, tornado, etc), how long would it take, in business days, for you to:													
a) Continue paying pension payments to retirees?	1		1	5	1	0	1	16	5	1	0	1	44
b) Begin doing new pension inceptions at normal volumes?	30		30	30	4	0	11	16	30	3	0	7	44
c) Collect data and money from employers?	30		30	30	2	0	5	16	30	1	0	3	44
d) Respond to member calls at close to current service levels?	30		30	30	3	0	10	16	30	3	0	6	44
119 Did you have any material legislative changes or other unusual events that materially affected your costs and/ or service in the most recent fiscal year?	No		No	25% Yes / 75% No				16	25% Yes / 75% No				44
a) If yes, describe:													
n/a													
<b>Customer Experience</b>													
120 Did you send a customer experience survey in your most recent fiscal year:													
a. General survey to customers, regardless of whether they interacted with the pension plan or not?	Yes		n/a	75% Yes / 25% No / 0% n/a				16	48% Yes / 48% No / 5% n/a				42
a1. Active members													
a1a. Satisfaction	Yes		n/a	63% Yes / 0% No / 38% n/a				10	34% Yes / 7% No / 59% n/a				18
a1b. Net Promoter Score (NPS)	n/a		n/a	19% Yes / 31% No / 50% n/a				8	7% Yes / 27% No / 66% n/a				15
a1d. Engagement	n/a		n/a	38% Yes / 19% No / 44% n/a				9	23% Yes / 16% No / 61% n/a				17
a2. Annuitant													
a2a. Satisfaction	Yes		n/a	50% Yes / 6% No / 44% n/a				9	32% Yes / 7% No / 61% n/a				17
a2b. Net Promoter Score (NPS)	n/a		n/a	13% Yes / 31% No / 56% n/a				7	5% Yes / 27% No / 68% n/a				14
a2d. Engagement	n/a		n/a	25% Yes / 19% No / 56% n/a				7	18% Yes / 16% No / 66% n/a				15
a3. Inactive members													
a3a. Satisfaction	Yes		n/a	44% Yes / 13% No / 44% n/a				9	18% Yes / 20% No / 61% n/a				17
a3b. Net Promoter Score (NPS)	n/a		n/a	13% Yes / 38% No / 50% n/a				8	5% Yes / 30% No / 66% n/a				15
a3d. Engagement	n/a		n/a	31% Yes / 19% No / 50% n/a				8	14% Yes / 23% No / 64% n/a				16

Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#		Max	Med	Min	Avg	#
a4. Employers members														
Did you survey satisfaction regarding this activity in your most recently ended fiscal year?														
a4b. Satisfaction	Yes		n/a	56% Yes / 6% No / 38% n/a				10		32% Yes / 9% No / 59% n/a				18
a4d. Net Promoter Score (NPS)	n/a		n/a	6% Yes / 38% No / 56% n/a				7		2% Yes / 30% No / 68% n/a				14
a4d. Engagement	n/a		n/a	13% Yes / 31% No / 56% n/a				7		9% Yes / 25% No / 66% n/a				15
Did you do any customer experience or satisfaction surveys focused solely on a single activity or customer journey?	Yes		n/a	31% Yes / 0% No / 69% n/a				5		25% Yes / 2% No / 73% n/a				12
b. Survey focused exclusively on a single-channel touchpoint?	n/a		n/a	69% Yes / 0% No / 31% n/a				11		68% Yes / 5% No / 27% n/a				32
b1. 1-on-1 meeting														
b1a. Satisfaction	Yes		No	81% Yes / 19% No / 0% n/a				16		70% Yes / 14% No / 16% n/a				37
b1b. Net Promoter Score (NPS)	n/a		n/a	13% Yes / 56% No / 31% n/a				11		7% Yes / 57% No / 36% n/a				28
b1c. Effort	n/a		n/a	6% Yes / 63% No / 31% n/a				11		11% Yes / 55% No / 34% n/a				29
b1e. What was the longest possible time in days between the activity/ journey end and the survey?	1		n/a	14	1	0	4	13	30	1	0	4		31
b1g. Can you break down results by service agent?	Yes		n/a	69% Yes / 13% No / 19% n/a				13		57% Yes / 14% No / 30% n/a				31
b1h. Can you break down the survey results by topic or journey covered?	Yes		n/a	50% Yes / 31% No / 19% n/a				13		52% Yes / 18% No / 30% n/a				31
b2. Member presentation or group counseling session														
b2a. Satisfaction	Yes		Yes	94% Yes / 0% No / 6% n/a				15		84% Yes / 0% No / 16% n/a				37
b2b. Net Promoter Score (NPS)	n/a		n/a	25% Yes / 44% No / 31% n/a				11		18% Yes / 52% No / 30% n/a				31
b2c. Effort	n/a		n/a	19% Yes / 44% No / 38% n/a				10		16% Yes / 48% No / 36% n/a				28
b2e. What was the longest possible time in days between the activity/ journey end and the survey?	1		1	14	1	0	3	15	30	1	0	3		39
b2g. Can you break down results by service agent?	Yes		Yes	88% Yes / 6% No / 6% n/a				15		80% Yes / 9% No / 11% n/a				39
b3. Telephone call														
b3a. Satisfaction	Yes		No	69% Yes / 31% No / 0% n/a				16		66% Yes / 23% No / 11% n/a				39
b3b. Net Promoter Score (NPS)	n/a		n/a	6% Yes / 63% No / 31% n/a				11		7% Yes / 61% No / 32% n/a				30
b3c. Effort	n/a		n/a	6% Yes / 63% No / 31% n/a				11		14% Yes / 52% No / 34% n/a				29
b3e. What was the longest possible time in days between the activity/ journey end and the survey?	1		n/a	60	1	0	7	11	60	3	0	9		31
b3g. Can you break down results by service agent?	Yes		n/a	56% Yes / 13% No / 31% n/a				11		55% Yes / 16% No / 30% n/a				31
b3h. Can you break down the survey results by topic or journey covered?	Yes		n/a	25% Yes / 38% No / 38% n/a				10		45% Yes / 23% No / 32% n/a				30
b4. Website visit - secure member area														
b4a. Satisfaction	n/a		No	31% Yes / 56% No / 13% n/a				14		41% Yes / 39% No / 20% n/a				35



Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#		Max	Med	Min	Avg	#
b4b. Net Promoter Score (NPS)	n/a		n/a	6% Yes / 50% No / 44% n/a				9		7% Yes / 52% No / 41% n/a				26
b4c. Effort	n/a		n/a	6% Yes / 50% No / 44% n/a				9		14% Yes / 45% No / 41% n/a				26
b4e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	90	7	0	25	5		90	2	0	11	18
b4h. Can you break down the survey results by topic or journey covered?	n/a		n/a	19% Yes / 0% No / 81% n/a				3		30% Yes / 7% No / 64% n/a				16
b5. Website - public area														
b4a. Satisfaction	n/a		n/a	13% Yes / 0% No / 88% n/a				2		7% Yes / 0% No / 93% n/a				3
b4b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 0% No / 100% n/a				0		0% Yes / 0% No / 100% n/a				0
b4c. Effort	n/a		n/a	0% Yes / 0% No / 100% n/a				0		2% Yes / 0% No / 98% n/a				1
b4e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	365	228	90	228	2		365	90	0	152	3
b4h. Can you break down the survey results by topic or journey covered?	n/a		n/a	6% Yes / 0% No / 94% n/a				1		5% Yes / 0% No / 95% n/a				2
c. Survey focused exclusively on a single customer journey?	n/a		n/a	44% Yes / 25% No / 31% n/a				11		39% Yes / 32% No / 30% n/a				31
A member:														
c1. Starts a new job														
c1a. Satisfaction	n/a		n/a	0% Yes / 31% No / 69% n/a				5		5% Yes / 30% No / 66% n/a				15
c1b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 31% No / 69% n/a				5		0% Yes / 32% No / 68% n/a				14
c1c. Effort	n/a		n/a	0% Yes / 31% No / 69% n/a				5		5% Yes / 27% No / 68% n/a				14
c1e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	n/a	n/a	n/a	n/a	0		30	18	5	18	2
c2. Exits their job														
c2a. Satisfaction	n/a		n/a	0% Yes / 31% No / 69% n/a				5		7% Yes / 25% No / 68% n/a				14
c2b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 31% No / 69% n/a				5		0% Yes / 30% No / 70% n/a				13
c2c. Effort	n/a		n/a	0% Yes / 31% No / 69% n/a				5		7% Yes / 23% No / 70% n/a				13
c2e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	n/a	n/a	n/a	n/a	0		35	30	5	23	3
c3. Takes a leave of absence														
c3a. Satisfaction	n/a		n/a	0% Yes / 31% No / 69% n/a				5		7% Yes / 27% No / 66% n/a				15
c3b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 31% No / 69% n/a				5		0% Yes / 30% No / 70% n/a				13
c3c. Effort	n/a		n/a	0% Yes / 31% No / 69% n/a				5		7% Yes / 25% No / 68% n/a				14
c3e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	n/a	n/a	n/a	n/a	0		30	7	5	14	3
c4. Marries and/or has children														
c4a. Satisfaction	n/a		n/a	0% Yes / 31% No / 69% n/a				5		0% Yes / 32% No / 68% n/a				14

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
c4b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 31% No / 69% n/a				5	0% Yes / 30% No / 70% n/a				13
c4c. Effort	n/a		n/a	0% Yes / 31% No / 69% n/a				5	0% Yes / 30% No / 70% n/a				13
c4e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0
c5. Divorces													
c5a. Satisfaction	n/a		n/a	0% Yes / 31% No / 69% n/a				5	2% Yes / 32% No / 66% n/a				15
c5b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 31% No / 69% n/a				5	0% Yes / 30% No / 70% n/a				13
c5c. Effort	n/a		n/a	0% Yes / 31% No / 69% n/a				5	2% Yes / 30% No / 68% n/a				14
c5e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	n/a	n/a	n/a	n/a	0	7	7	7	7	1
c6. Becomes disabled													
c6a. Satisfaction	n/a		No	44% Yes / 19% No / 38% n/a				10	41% Yes / 11% No / 48% n/a				23
c6b. Net Promoter Score (NPS)	n/a		n/a	6% Yes / 31% No / 63% n/a				6	2% Yes / 32% No / 66% n/a				15
c6c. Effort	n/a		n/a	6% Yes / 31% No / 63% n/a				6	11% Yes / 23% No / 66% n/a				15
c6e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	365	40	1	79	7	365	30	0	50	18
c7. Retires													
c7a. Satisfaction	n/a		n/a	50% Yes / 0% No / 50% n/a				8	41% Yes / 2% No / 57% n/a				19
c7b. Net Promoter Score (NPS)	n/a		n/a	6% Yes / 31% No / 63% n/a				6	5% Yes / 27% No / 68% n/a				14
c7c. Effort	n/a		n/a	19% Yes / 19% No / 63% n/a				6	18% Yes / 16% No / 66% n/a				15
c7e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	90	36	1	44	8	90	30	0	31	17
c8. Death and implications for survivors													
c8a. Satisfaction	n/a		n/a	13% Yes / 25% No / 63% n/a				6	11% Yes / 25% No / 64% n/a				16
c8b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 31% No / 69% n/a				5	0% Yes / 30% No / 70% n/a				13
c8c. Effort	n/a		n/a	0% Yes / 31% No / 69% n/a				5	5% Yes / 27% No / 68% n/a				14
c8e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	90	70	50	70	2	90	35	0	36	5
An employer:													
c9. Joins the pension plan													
c9a. Satisfaction	n/a		n/a	0% Yes / 31% No / 69% n/a				5	5% Yes / 25% No / 70% n/a				13
c9b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 25% No / 75% n/a				4	0% Yes / 25% No / 75% n/a				11
c9c. Effort	n/a		n/a	0% Yes / 25% No / 75% n/a				4	5% Yes / 20% No / 75% n/a				11
c9e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	n/a	n/a	n/a	n/a	0	270	153	35	153	2

Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#		Max	Med	Min	Avg	#
c10. Assigns a new primary contact for the pension plan														
c10a. Satisfaction	n/a		n/a	0% Yes / 31% No / 69% n/a				5		2% Yes / 30% No / 68% n/a				14
c10b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 25% No / 75% n/a				4		0% Yes / 27% No / 73% n/a				12
c10c. Effort	n/a		n/a	0% Yes / 25% No / 75% n/a				4		2% Yes / 25% No / 73% n/a				12
c10e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	n/a	n/a	n/a	n/a	0		270	270	270	270	1
d. Survey focused exclusively on a single transaction that may be part of a customer journey?	n/a		n/a	44% Yes / 25% No / 31% n/a				11		45% Yes / 25% No / 30% n/a				31
d1. Written benefit estimates														
d1b. Net Promoter Score (NPS)	n/a		No	50% Yes / 6% No / 44% n/a				9		48% Yes / 9% No / 43% n/a				25
d1c. Effort	n/a		n/a	6% Yes / 25% No / 69% n/a				5		7% Yes / 36% No / 57% n/a				19
d1e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	6% Yes / 25% No / 69% n/a				5		11% Yes / 30% No / 59% n/a				18
d1f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	14		365	46	1	77	8		365	7	0	37	21
d2. Refunds, withdrawals and transfers-out														
d2a. Satisfaction	n/a		No	25% Yes / 25% No / 50% n/a				8		30% Yes / 25% No / 45% n/a				24
d2b. Net Promoter Score (NPS)	n/a		n/a	0% Yes / 19% No / 81% n/a				3		5% Yes / 34% No / 61% n/a				17
d2c. Effort	n/a		n/a	0% Yes / 19% No / 81% n/a				3		9% Yes / 27% No / 64% n/a				16
d2e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	90	46	7	47	4		90	15	0	24	15
d3. Purchases and transfers-in														
d3a. Satisfaction	n/a		No	38% Yes / 25% No / 38% n/a				10		39% Yes / 25% No / 36% n/a				28
d3b. Net Promoter Score (NPS)	n/a		n/a	6% Yes / 19% No / 75% n/a				4		7% Yes / 34% No / 59% n/a				18
d3c. Effort	n/a		n/a	6% Yes / 19% No / 75% n/a				4		14% Yes / 25% No / 61% n/a				17
d3e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a		n/a	90	31	7	39	6		90	15	0	22	19
<b>Plan Design</b>														
Plan Characteristics														
121 Indicate 'yes' if your employers/ member groups can be described as the following (indicate all that apply):														
a) Is your membership limited to a city or county?	No		No	0% Yes / 100% No / 0% n/a				16		9% Yes / 91% No / 0% n/a				44
b) Participating Local Employers (i.e., municipalities have a choice in participating in your plan)?	Yes		Yes	75% Yes / 25% No / 0% n/a				16		57% Yes / 43% No / 0% n/a				44
c) State, Province, Country?	Yes		Yes	88% Yes / 13% No / 0% n/a				16		75% Yes / 25% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
d) Teachers?	Yes		Yes	75% Yes / 25% No / 0% n/a				16	64% Yes / 36% No / 0% n/a				44
e) School Employees (Custodians, Admin. Staff)?	Yes		Yes	88% Yes / 13% No / 0% n/a				16	75% Yes / 25% No / 0% n/a				44
f) Safety (Police, Fire, Sheriff's Dept, etc) ?	Yes		Yes	75% Yes / 25% No / 0% n/a				16	66% Yes / 34% No / 0% n/a				44
g) Other (Judges, Legislators, etc)?	Yes		Yes	81% Yes / 19% No / 0% n/a				16	61% Yes / 39% No / 0% n/a				44
h) Corporate?	No		No	0% Yes / 100% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44
i) Industry?	No		No	0% Yes / 100% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
i1) If Industry, describe the industry: n/a													
122 Which of the following descriptions best describes the non-optional benefit plans that you administer for each of your member groups:  A plan is non-optional if members must participate in it, or choose between it and alternatives. Do not include membership in benefit plans that are supplemental and optional such as deferred compensation 457, 403B or 401(k) plans. Do not include plans administered by a 3rd party.													
a) Traditional Defined Benefit ("DB")?	Yes		Yes	94% Yes / 6% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44
b) DB Cash Balance (aka Money Purchase)?	No		No	13% Yes / 88% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
c) Hybrid DB/ DC Cash Balance?	No		No	6% Yes / 94% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44
d) Hybrid DB/ Money Match?	No		No	6% Yes / 94% No / 0% n/a				16	5% Yes / 95% No / 0% n/a				44
e) DROP savings?	No		No	6% Yes / 94% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
f) Defined Contribution ("DC")?	No		No	25% Yes / 75% No / 0% n/a				16	16% Yes / 84% No / 0% n/a				44
g) Hybrid DB/ DC?	No		No	44% Yes / 56% No / 0% n/a				16	27% Yes / 73% No / 0% n/a				44
h) Other (describe)? n/a	No		No	0% Yes / 100% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
123 Do members in any of your defined benefit plan(s) have the option of electing: [These questions are not applicable for DC plans or the DC portion of hybrid DB/DC plans]													
a) A 'variable investment option' that can increase or decrease the value of a member's future DB pension depending on the investment performance of a 'variable fund'?	No		No	13% Yes / 88% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
b) A 'pension savings overlay'? [Some Dutch systems have this option. The additional contributions are converted into an annuity at retirement. Interest is based on a fixed percentage or on the performance of the pension fund.]	No		No	25% Yes / 75% No / 0% n/a				16	11% Yes / 89% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
c) To change their contribution rate in order to get either more money at retirement or earlier eligibility to retire?	No		No	0% Yes / 100% No / 0% n/a				16	2% Yes / 98% No / 0% n/a				44
124 Do you have a Highly Compensated Employee replacement benefit program for employees that exceed legal or contractual limits of maximum pensionable earnings?	Yes		Yes	81% Yes / 19% No / 0% n/a				16	68% Yes / 32% No / 0% n/a				44
125 Are any of the following activities administered by a third party:													
a) DB administration?	No		No	0% Yes / 100% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
b) DC administration?	Yes		Yes	69% Yes / 19% No / 13% n/a				14	34% Yes / 34% No / 32% n/a				30
c) Pensioner data maintenance?	No		No	0% Yes / 100% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
d) Active member data maintenance?	No		No	0% Yes / 100% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
e) Contribution collection?	No		No	0% Yes / 100% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
f) Disability decisions?	No		No	38% Yes / 63% No / 0% n/a				16	34% Yes / 64% No / 2% n/a				43
126 Which of the following programs do you offer to members AND administer yourself? [i.e., design, enrolment, premium collection]													
a) Pre-retirement health?	No		No	19% Yes / 81% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
b) Post-retirement health?	No		No	50% Yes / 50% No / 0% n/a				16	25% Yes / 75% No / 0% n/a				44
c) Pre-retirement dental and vision?	No		No	6% Yes / 94% No / 0% n/a				16	2% Yes / 98% No / 0% n/a				44
d) Post-retirement dental and vision?	No		No	38% Yes / 63% No / 0% n/a				16	16% Yes / 84% No / 0% n/a				44
e) Long-term care insurance?	No		No	13% Yes / 88% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
f) Loans to members?	No		No	13% Yes / 88% No / 0% n/a				16	11% Yes / 89% No / 0% n/a				44
g) Optional tax deferred savings plans? [i.e., 457, 403, 401k, 401a, etc.]	Yes		Yes	44% Yes / 56% No / 0% n/a				16	23% Yes / 77% No / 0% n/a				44
h) Optional insurance? [i.e., life and/or auto and/or home]	Yes		Yes	25% Yes / 75% No / 0% n/a				16	14% Yes / 86% No / 0% n/a				44
i) Other (describe)?	No		No	25% Yes / 75% No / 0% n/a				16	20% Yes / 80% No / 0% n/a				44
n/a													
n/a													
n/a													
127 Is your organization directly responsible for both investments and pension administration?	No		No	63% Yes / 38% No / 0% n/a				16	64% Yes / 36% No / 0% n/a				44
128 Does your board have an organization separate from the plan administrator that supports the Board and helps oversee the administrator? [This separate organization may also be responsible for public relations and select administrative duties and projects such as designing communication materials.]	No		No	0% Yes / 100% No / 0% n/a				16	14% Yes / 86% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
129 Does your board have the power on its own to approve your operating budget? [i.e., your budget does not also have to be approved by a separate government representative, such as the Treasury, Legislature, Governor, Minister, General Assembly, etc.] Paying Pension Rules	No	No		31% Yes / 63% No / 6% n/a				15	45% Yes / 52% No / 2% n/a				43
130 Do you make payments to annuitants that are accounted for separately from the normal pension? [For example : • Some systems permit employers to supplement the normal pension of their retirees. The pension fund collects the supplement from the employer and pays it on behalf of the employer. • At some Dutch systems contributions to the normal retirement pension are required by the pensioner during early retirement. These contributions are often reimbursed to the pensioner. The accounting and the member's payment advice shows 2 different payments (the pension + the reimbursement) and 1 collection (the required contribution).]	Yes	Yes		69% Yes / 31% No / 0% n/a				16	43% Yes / 57% No / 0% n/a				44
131 Do you:													
a) Check income of non-disabled pensioners? [For most systems this does not apply. At a few systems, if a pensioner's income from other sources exceeds a certain amount, his/her pension could be stopped or reduced.]	Yes	Yes		50% Yes / 50% No / 0% n/a				16	41% Yes / 59% No / 0% n/a				44
b) Check income of disabled members after they have started receiving disability payments?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	64% Yes / 30% No / 7% n/a				41
c) Check school status? [For example, some systems will check that a dependent beneficiary is still eligible to receive a survivor pension benefit.]	No	No		38% Yes / 63% No / 0% n/a				16	55% Yes / 45% No / 0% n/a				44
d) Do proof-of-life checks that require individual annuitants to provide affidavits or notarization or similar proof of life?	Yes	Yes		94% Yes / 6% No / 0% n/a				16	89% Yes / 11% No / 0% n/a				44
e) Provide written confirmations of pensioner income or member account balances to third-parties? [For example, provide confirmation of income or account value for loans or for social security or subsidized housing, etc.] Payment Options	Yes	Yes		100% Yes / 0% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44
132 Do you offer "joint and survivor" options that are:													

Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#		Max	Med	Min	Avg	#
a) Reduced to Beneficiary Only? [For example, If the beneficiary dies first, then the retiree's pension continues at the same level. However if the retiree dies first then the beneficiary receives a reduced pension (such as 70% for spouse).]	Yes		Yes	75% Yes / 25% No / 0% n/a				16		75% Yes / 25% No / 0% n/a				44
b) Reduced to Last Survivor? [For example, if either the retiree or beneficiary dies the survivor receives a reduced pension (such as 70%, etc.).]	No		No	31% Yes / 69% No / 0% n/a				16		25% Yes / 75% No / 0% n/a				44
c) "Reversion" or "Pop-up"? [For example, if the beneficiary dies first, the retiree's pension increases to an unmodified level. However, if the retiree dies first the pension does not increase for the surviving beneficiary (and it may decrease).]	Yes		Yes	88% Yes / 13% No / 0% n/a				16		66% Yes / 34% No / 0% n/a				44
133 Do you limit the number of Joint and Beneficiary or Survivor percentages (i.e., 100% Survivor, 50% Survivor, etc.)? If you permit an unlimited number of percentages, then your response should be no.	Yes		Yes	63% Yes / 38% No / 0% n/a				16		70% Yes / 30% No / 0% n/a				44
a) How many percentages do you permit?	2		2	91	3	2	12	10		91	3	1	7	31
134 Do any of your retirement formula for members explicitly subtract estimated Social Security (or CPP in Canada) when determining the benefit?	Yes		Yes	25% Yes / 75% No / 0% n/a				16		50% Yes / 50% No / 0% n/a				44
a) If yes, is this true for all of your members or are some pensions reduced to reflect Social Security and others not?	Some		Some	0% All / 25% Some / 75% n/a				4		16% All / 34% Some / 50% n/a				22
b) If yes, do you have a "Level Income" option for early retirees that pays a higher benefit to members prior to age 65 and then reduces the benefit at age 65 when social security (or CPP in Canada) starts to be paid?	Yes		Yes	19% Yes / 6% No / 75% n/a				4		45% Yes / 5% No / 50% n/a				22
135 Do you have "High/ Low" or "Low/High" options that are not tied to social security? [For example, a retiree might want higher payments for 10 years until a mortgage obligation is repaid, followed by lower payments.]	No		No	13% Yes / 88% No / 0% n/a				16		7% Yes / 93% No / 0% n/a				44
136 Do you offer "Annuity Certain" options? [For example, Annuity Certain options provide the annuitant with a monthly benefit for life. If the annuitant dies before a set guarantee period, monthly benefits continue to be paid to a beneficiary for the balance of the guarantee period.]	No		No	50% Yes / 50% No / 0% n/a				16		50% Yes / 50% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
137 Do you have a designer option where members can design virtually any actuarially sound cash flow they choose? [Designer options need to be custom priced by an actuary.]	No	No		6% Yes / 94% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
138 Can a member choose between a COLA protected and a non-COLA pension? [The only example we have seen provides a much higher FAS salary base for the non-COLA pension.]	Yes	Yes		6% Yes / 94% No / 0% n/a				16	7% Yes / 93% No / 0% n/a				44
139 Do you have a Deferred Retirement Option Plan ("DROP")? [This option allows eligible employees to receive payment of retirement benefits while continuing to work. These payments are usually deposited into a separate account, and the total accumulated value of this account is paid via lump sum to the employee on actual retirement.]	No	No		19% Yes / 81% No / 0% n/a				16	20% Yes / 80% No / 0% n/a				44
140 At retirement, can a member convert:													
a) Part of his benefit into a partial lump sum payment?	No	No		50% Yes / 50% No / 0% n/a				16	43% Yes / 57% No / 0% n/a				44
b) All of his benefit into a lump sum or commuted value payment? [That can be rolled over to another fund, or investment account, etc.]	No	No		31% Yes / 69% No / 0% n/a				16	25% Yes / 75% No / 0% n/a				44
141 Are members permitted to retire mid-month (in which case they receive a partial pension payment for the remainder of the month) or are they always assumed to retire on a set day (usually the first or the last day) of the month?	Set Day	Set Day		31% Any Day / 69% Set Day / 0% n/a				16	39% Any Day / 61% Set Day / 0% n/a				44
142 How many mortality tables do you keep track of for determining joint and survivor or beneficiary options? [Most systems track only one table. But some systems calculate joint and survivor pensions using the mortality table that was in effect when the retiring member joined the system. Since mortality tables change from time to time, the result is that these systems are required to track numerous mortality tables.]	1	1		272	2	1	20	16	272	2	0	10	44
Cost of Living Adjustments													
143 How many different cost of living adjustment ("COLA") rule sets do you have for retired, and if applicable, inactive members? (These rule sets may be either contractual or legislated.)	1	0		13	2	1	4	16	13	2	0	3	44



Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#		Max	Med	Min	Avg	#
[Most systems have only one or none. Examples of different COLA rule sets that could apply to various member groups or grandfathered subsets of member groups include: 1. CPI uncapped 2. CPI capped at 2% without a carry forward; 3. CPI capped at 2% with a carry forward]														
144 Do you have:														
a) Cost of living adjustment ("COLA") clauses that carry forward inflation that exceeds a cap (versus no cap or no carry forward or no COLA etc.)?	No		No	25% Yes / 75% No / 0% n/a				16		27% Yes / 73% No / 0% n/a				44
b) Conditional COLA based on the level of funding?	No		No	25% Yes / 75% No / 0% n/a				16		27% Yes / 73% No / 0% n/a				44
c) Umbrella legislation that guarantees the purchasing power of an annuitants' pension will not fall below a certain level? [An example of such legislated protection is the PPPA in California.]	No		No	25% Yes / 75% No / 0% n/a				16		18% Yes / 82% No / 0% n/a				44
145 Do you have COLA clauses that increase the base pensionable earnings of inactive members?	No		No	13% Yes / 88% No / 0% n/a				16		25% Yes / 75% No / 0% n/a				44
a) If yes, are these COLA increases the same as they are for annuitants?	n/a		n/a	6% Yes / 6% No / 88% n/a				2		18% Yes / 7% No / 75% n/a				11
Benefit Formulas														
146 How many different rule sets do you have that apply to member groups or subsets of a member group for qualifying for an unreduced retirement formula? [For example, one system has the following 3 rule sets that apply to its member groups and special subsets of its member groups.  1. All public employees can get an unreduced retirement at 65 with 5 years of service, or at 60 with 20 years of service. (Even though there are two qualifying rules, it only counts as 1 rule set because the rules apply equally to all members.)  2. Pre-1995 public employees can get an unreduced retirement at age 55 with 20 years of service. 3. Teachers can get an unreduced retirement when age plus years of service equals 75.]	9		9	91	9	2	14	16		91	7	1	10	44
147 Can members retire earlier than the age required for an unreduced retirement formula?	Yes		Yes	100% Yes / 0% No / 0% n/a				16		98% Yes / 2% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
[For example, at one system an unreduced formula of 1.5% per year of service is available beginning at age 60. Members can retire earlier but the pension is reduced by 5% for each year earlier than age 60.]													
148 How many different salary definitions could apply in retirement formula calculations? [Examples of different salary definitions include: • Average of 3 final years' salary subject to raises not in excess of 10%;  • Average of 3 best consecutive years' salary with no cap on raises; • Final 12 months salary.]	5	5		15	3	2	6	16	22	3	1	5	44
149 How many different 'formula percentage' rule sets could apply in unreduced retirement formulas? [For example, one system has the following three different 'formula percentage' rule sets: 1. Fire and Police get 2.5% per year of service; 2. Public Employees get 1.75% per year of service; 3. Teachers get 1.8% for the first 5 years of service, 2.0% for the next 5 years of service and 2.3% per year of service thereafter.]	5	5		91	5	2	12	16	91	4	1	9	44
150 Do you have different employers with different benefit formula? If yes, which of the following happens when a member moves from one employer that you administer to another with a different benefit formula? [For example, moves from PERS to Law Enforcement.]	Yes	Yes		69% Yes / 31% No / 0% n/a				16	55% Yes / 45% No / 0% n/a				44
a) Each system uses its own formula and salary data to determine the benefit.	Yes	Yes		31% Yes / 38% No / 31% n/a				11	30% Yes / 25% No / 45% n/a				24
b) Each system applies its own formula but uses either the salary earned in the last system, or the highest salary (or salaries) in either system.	Yes	Yes		31% Yes / 38% No / 31% n/a				11	23% Yes / 32% No / 45% n/a				24
c) The highest formula will apply.	No	No		6% Yes / 63% No / 31% n/a				11	5% Yes / 50% No / 45% n/a				24
d) The formula of the plan where the member works last will apply.	Yes	Yes		25% Yes / 44% No / 31% n/a				11	20% Yes / 34% No / 45% n/a				24
e) Other (describe). n/a External Reciprocity	No	No		6% Yes / 63% No / 31% n/a				11	11% Yes / 43% No / 45% n/a				24

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
151 Do you have agreements with external systems where you both agree to use the member's final salary from the system where the member worked immediately prior to retirement in the benefit calculation? [Otherwise, each system pays the "dual" member a pension benefit based on its own rules for determining the benefit. Neither credit nor money are transferred between systems.]	No	No		38% Yes / 63% No / 0% n/a				16	34% Yes / 66% No / 0% n/a				44
152 Do you have agreements with external Systems where the member may combine internal and external credit to form one joint account?  [The accounts remain separate until the member applies for a benefit, at which time either: • The System with the most service credit for that person is responsible for the combined account, or • The System where the member worked last is responsible.]  Service Credit Rules	No	No		13% Yes / 88% No / 0% n/a				16	16% Yes / 84% No / 0% n/a				44
153 How many different definitions do you have for a "full year" of service credit? [For example, a system could have: • One definition such as "more than 120 days = a year". • Or the following three definitions: 9 months = a year for state colleges, 10 months = a year for teachers and 12 months = a year for public employees. • Or the following three definitions: 182 days in school district A or B, 179 days in school district C and 180 days in all other school districts.  • Or the following two definitions for hourly employees: 48 weeks of 40 hours per week versus 48 weeks of 36 hours per week.]	5	5		10	4	1	4	16	100	3	1	7	44
154 Does your system have more than one payroll year for determining service credit? [For example, the teachers' year could be July - June with their service credit determined based on the time worked July - June and the public employees' year could be January to December with their service credit determined based on time worked January to December.]  a) If yes, how many different payroll years exist in your system?	Yes	Yes		31% Yes / 69% No / 0% n/a				16	34% Yes / 66% No / 0% n/a				44
	9	9		12	3	2	6	5	30	3	2	6	15

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
155 How many different vesting periods do you have that apply to active members? [Your answer should be 0 if you have immediate vesting. Most North American systems have only one.]	2	2		8	2	0	3	16	8	2	0	2	44
156 Do you permit:													
a) Permanent part-time employees to be members? [An example of a permanent part-time employee is someone contracted to work 3 days a week.]	Yes	Yes		94% Yes / 6% No / 0% n/a				16	98% Yes / 2% No / 0% n/a				44
b) Casual/ temporary/ intermittent/ seasonal employees to be members? [An example of a 'temporary' employee is an infrequent substitute teacher.]	No	No		81% Yes / 19% No / 0% n/a				16	70% Yes / 30% No / 0% n/a				44
157 Are you sometimes asked by employers to determine the eligibility of members? [This can occur when a member works for multiple employers in your system or when there is unclear eligibility legislation. For example, a school bus driver may drive buses for multiple districts or counties at the same time. Based on time spent within each district the driver would be ineligible. However, based on the combined employment the driver may be eligible.]	Yes	Yes		94% Yes / 6% No / 0% n/a				16	91% Yes / 9% No / 0% n/a				44
Service Credit Purchases													
158 Indicate each of the payment methods you permit for service credit purchases and upgrades:													
a) Rollover from tax qualified plans such as 401(a) or 401(k) or Conduit IRA or KEOGH in the US; or RRSP plans in Canada?	Yes	Yes		100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44
b) Lump sum payments from members?	Yes	Yes		100% Yes / 0% No / 0% n/a				16	100% Yes / 0% No / 0% n/a				44
c) Installment payments direct from members?	No	No		56% Yes / 44% No / 0% n/a				16	66% Yes / 32% No / 2% n/a				43
d) Installment payments via payroll deduction through employers?	No	No		56% Yes / 44% No / 0% n/a				16	59% Yes / 41% No / 0% n/a				44
159 How many different service credit purchase categories do you have with different definitions and/or eligibility requirements? [For example, some systems have multiple different categories with different definitions such as 'refunded prior service', 'sick leave', 'military service', etc. Other systems have a single category such as 'any previous work, any time, anywhere'.]	18	18		54	14	4	16	16	54	12	2	14	44
160 How many different service credit purchase calculation formula or methodologies do you have?	4	4		14	5	3	6	16	19	5	2	6	44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
<p>[For example, one system has the following 4 different cost calculation formula:</p> <ul style="list-style-type: none"> <li>• Previously refunded contributions X the actuarial earnings rate.</li> <li>• Salary X Contribution Rate (no interest) for active duty military service.</li> <li>• Salary X Contribution Rate X 5% per annum for out-of-state government, or private school teaching service</li> <li>• Actuarial Cost for up to 5 years of any non-government, non-teaching work done outside of the pension system.]</li> </ul>													
161 Are your service credit purchase rules (category definitions, eligibility requirements and calculation methodologies):													
a) Essentially identical for all your members?	No	No		19% Yes / 75% No / 6% n/a				15	39% Yes / 59% No / 2% n/a				43
b) Similar for all member groups, albeit with some differences?	Yes	Yes		69% Yes / 31% No / 0% n/a				16	50% Yes / 50% No / 0% n/a				44
c) Very different for different member groups?	No	No		13% Yes / 81% No / 6% n/a				15	16% Yes / 82% No / 2% n/a				43
Refunds, Transfers-out and Terminating Payments													
162 Do you pay a one-time death payment when a member, retiree or the retiree's beneficiary dies (separate from the survivor pension)?	Yes	Yes		56% Yes / 44% No / 0% n/a				16	64% Yes / 36% No / 0% n/a				44
a) If yes, how many different one-time death payment rule sets do you have? [i.e., \$5,000, \$2,000 etc.]	6	6		6	4	2	4	9	8	4	1	4	28
163 How many different refund formulas do you have?	2	2		7	3	1	3	16	8	2	1	3	44
<p>[For example, a few systems have different formulas for vested and non-vested members, or for different member groups.]</p> <p>Disability</p>													
164 What happens to disabled members' benefits when they reach regular retirement age:													
a) No change (disabled member continues to receive the same disability payments. There are no new potential pension obligations.)?	Yes	Yes		81% Yes / 19% No / 0% n/a				16	75% Yes / 18% No / 7% n/a				41
b) Disabled members receive the greater of their current disability benefit or service retirement based on their service credit earned to the date of disability? [i.e., time on disability does not count as service credit]	No	No		25% Yes / 75% No / 0% n/a				16	14% Yes / 80% No / 7% n/a				41
c) Disabled members receive service retirement (time on disability counts as eligible service credit)?	Yes	Yes		31% Yes / 69% No / 0% n/a				16	34% Yes / 59% No / 7% n/a				41
d) Other (describe)?	No	No		38% Yes / 63% No / 0% n/a				16	20% Yes / 68% No / 11% n/a				39
n/a													

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
165 Will you pay a disabled member that returns to work at a salary lower than he previously earned:													
a) The difference between his old salary (or his old disability benefit) and his new lower salary?	Yes		No	31% Yes / 69% No / 0% n/a				16	16% Yes / 68% No / 16% n/a				37
b) An amount that is potentially greater than the difference between his old salary and his new lower salary?	No		No	6% Yes / 94% No / 0% n/a				16	5% Yes / 80% No / 16% n/a				37
166 How do you determine whether a member qualifies for long-term disability/ disability pension:													
a) Follow the ruling of a government agency such as social security or worker's compensation?	No		No	13% Yes / 88% No / 0% n/a				16	11% Yes / 77% No / 11% n/a				39
b) Employer decides?	No		No	0% Yes / 94% No / 6% Some / 0% n/a				16	2% Yes / 86% No / 2% Some / 9% n/a				40
c) Process independent of social security, worker's compensation and employer decisions? [For example, many systems use independent internal processes or medical review boards or medical consultants.]	Yes		Yes	100% Yes / 0% No / 0% n/a				16	86% Yes / 2% No / 11% n/a				39
d) Other (describe)?	No		No	13% Yes / 88% No / 0% n/a				16	9% Yes / 77% No / 14% n/a				38
n/a													
167 Which of the following descriptions best describes the MINIMUM level of disability necessary to be eligible for a long-term disability/ disability pension: [If you have different plans with different definitions, choose the definition that applies to the largest number of cases.]													
a) Disabling injury or illness that prevents you from performing your current job duties (even though you might be able to perform other jobs) and expected to be permanent (or for some systems - persist longer than 6 or 12 months)?	Yes		Yes	50% Yes / 50% No / 0% n/a				16	55% Yes / 36% No / 9% n/a				40
b) Disabling injury or illness that prevents the member from performing current and 'other' jobs that he/she is qualified for and/or can become qualified to do in a reasonable period of time and expected to be permanent (or for some systems - persist longer than 6 or 12 months)? [Sometimes but not always the 'other job' is defined as not able to earn a certain level (i.e., 75%) of pre-disability earnings.]	No		No	25% Yes / 75% No / 0% n/a				16	16% Yes / 75% No / 9% n/a				40
c) Totally and permanently incapacitated and member is not reasonably expected to recover from disabling medical condition or not expected to ever work again?	No		No	25% Yes / 75% No / 0% n/a				16	25% Yes / 61% No / 14% n/a				38
d) Other (describe)?	No		No	6% Yes / 94% No / 0% n/a				16	9% Yes / 75% No / 16% n/a				37
n/a													
168 If you administer short-term disability:													

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
a) Are the short-term and long-term disability/ disability pension processes closely entwined? [i.e., difficult to distinguish between costs of long-term/disability pensions and short term disability, same staff do both, similar approval processes]	n/a		n/a	13% Yes / 13% No / 75% n/a				4	9% Yes / 7% No / 84% n/a				7
b) Are the disability definitions, other than the expected duration of disability, the same for both long-term and short-term disability? [For example, the only difference between the definition of long-term/ disability pensions and short-term disability at some systems is the disabling injury or illness is expected to last longer than 12 months for long-term.]	n/a		n/a	0% Yes / 25% No / 75% n/a				4	5% Yes / 11% No / 84% n/a				7
c) Are there materially different approval processes for short-term and long-term disability/ disability pensions?	n/a		n/a	19% Yes / 6% No / 75% n/a				4	7% Yes / 9% No / 84% n/a				7
169 How many different rule sets with different definitions or benefits do you have that apply to member groups or subsets of a member group for:													
a) Long-term disability/ disability pensions?	7		7	96	3	2	11	16	96	3	1	7	40
b) Short-term disability (if you administer it yourself)? [For example, some systems have different disability definitions or benefits for police and fire than they do for other public employees. Other systems have grandfathered disability rule sets that only apply to members hired prior to a certain date.]	n/a		n/a	2	2	1	2	3	2	1	0	1	7
170 Do you reduce payments if the member qualifies or receives:													
a) Disability social security?	Yes		Yes	56% Yes / 44% No / 0% n/a				16	30% Yes / 61% No / 9% n/a				40
b) Worker's compensation?	Yes		Yes	69% Yes / 31% No / 0% n/a				16	45% Yes / 43% No / 11% n/a				39
c) Other public funds (i.e., federal military disability)?	Yes		Yes	25% Yes / 75% No / 0% n/a				16	9% Yes / 80% No / 11% n/a				39
d) Income protection plans/other disability insurance?	No		No	25% Yes / 75% No / 0% n/a				16	9% Yes / 80% No / 11% n/a				39
e) Employer sick leave and annual leave pay?	Yes		Yes	44% Yes / 56% No / 0% n/a				16	18% Yes / 70% No / 11% n/a				39
f) Unemployment compensation?	No		No	31% Yes / 69% No / 0% n/a				16	14% Yes / 75% No / 11% n/a				39
g) Income from other employment?	Yes		Yes	69% Yes / 31% No / 0% n/a				16	43% Yes / 45% No / 11% n/a				39
h) Other (describe)?	No		No	25% Yes / 75% No / 0% n/a				16	18% Yes / 70% No / 11% n/a				39
n/a													
Pensionable Earnings													

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
171 Indicate which of the following forms of variable compensation are paid in your system. And, if paid, indicate whether all, some or none of that type of variable compensation is included in pensionable earnings.													
a) Bonuses?	Yes		Yes	81% Yes / 19% No / 0% n/a				16	82% Yes / 18% No / 0% n/a				44
b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance?	Yes		Yes	88% Yes / 13% No / 0% n/a				16	86% Yes / 14% No / 0% n/a				44
c) Overtime pay?	Yes		Yes	94% Yes / 6% No / 0% n/a				16	86% Yes / 14% No / 0% n/a				44
d) Commissions or similar payments such as fees paid to sheriffs for process serving?	No		No	31% Yes / 69% No / 0% n/a				16	39% Yes / 61% No / 0% n/a				44
If yes, is all, some or none of it included in pensionable earnings?													
a) Bonuses?	Some		Some	13% All / 13% None / 56% Some / 19% n/a				13	14% All / 14% None / 55% Some / 18% n/a				36
b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance?	Some		Some	6% All / 12% None / 69% Some / 13% n/a				14	14% All / 16% None / 57% Some / 14% n/a				38
c) Overtime pay?	All		All	69% All / 0% None / 25% Some / 6% n/a				15	45% All / 14% None / 27% Some / 14% n/a				38
d) Commissions or similar payments such as fees paid to sheriffs for process serving?	n/a		n/a	13% All / 0% None / 19% Some / 69% n/a				5	14% All / 5% None / 20% Some / 61% n/a				17
172 When determining a member's pensionable earnings does a cap on salary increases apply?	No		No	56% Yes / 44% No / 0% n/a				16	50% Yes / 50% No / 0% n/a				44
Customization Options													
173 Can either existing employers, or a new employer joining your system, choose:													
a) Whether they offer early retirement, or a window of early retirement?	No		No	25% Yes / 75% No / 0% n/a				16	20% Yes / 80% No / 0% n/a				44
b) Whether or not part-time employees are eligible?	No		No	13% Yes / 88% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
c) Whether employee contributions are paid pre or post tax?	Yes		Yes	50% Yes / 50% No / 0% n/a				16	23% Yes / 77% No / 0% n/a				44
d) Whether they pay for employee contributions themselves, or not?	No		No	44% Yes / 56% No / 0% n/a				16	27% Yes / 73% No / 0% n/a				44
e) Position coverage based on predetermined rule sets? [For example, employers can choose from a list of pre-determined rules sets such as 1.5% X FAS for General and 2.5% X FAS for Law Enforcement. Employers may have flexibility to determine eligibility for each group.]	No		No	25% Yes / 75% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
f) Contribution levels and/ or match rates? [For example, at Texas MRS, employers can choose employee deposit rates of 5%, 6% or 7% and employer match rates of 1 to 1, 1.5 to 1 or 2 to 1. We think this only applies to money match and DC plans because for DB plans the promised benefit determines the contribution.]	No		No	19% Yes / 81% No / 0% n/a				16	14% Yes / 86% No / 0% n/a				44



Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#		Max	Med	Min	Avg	#
g) To pay for one-time improvements in retiree or member benefits? [For example, one fund's employers can elect to pay to improve the money purchase entitlement of their members.]	No	No		19% Yes / 81% No / 0% n/a				16		16% Yes / 84% No / 0% n/a				44
174 When new employers join your system, do they have the flexibility to customize any of the following items: If yes, indicate the number of standard choices for that item.														
a) Benefit program multipliers? [i.e., 2% per year of service, 2.5% per year of service, etc.]	No	No		6% Yes / 94% No / 0% n/a				16		2% Yes / 98% No / 0% n/a				44
b) Final salary definition? [i.e., Sick Leave in or out, Final 1 year, Highest 5 consecutive years, etc.]	No	No		13% Yes / 88% No / 0% n/a				16		5% Yes / 95% No / 0% n/a				44
c) Retirement eligibility rules? [i.e., age and/or years of service required to retire]	No	No		0% Yes / 100% No / 0% n/a				16		0% Yes / 100% No / 0% n/a				44
d) Cost of living adjustment rules? [i.e., CPI capped at 2%, CPI uncapped, etc]	No	No		6% Yes / 94% No / 0% n/a				16		7% Yes / 93% No / 0% n/a				44
e) Vesting period?	No	No		0% Yes / 100% No / 0% n/a				16		0% Yes / 100% No / 0% n/a				44
f) Service credit purchase categories?	No	No		13% Yes / 88% No / 0% n/a				16		9% Yes / 91% No / 0% n/a				44
g) Death benefit coverage? [i.e., one system has 3 choices: none, \$5,000 and \$10,000]	Yes	Yes		13% Yes / 88% No / 0% n/a				16		7% Yes / 93% No / 0% n/a				44
h) Disability coverage rules?	No	No		6% Yes / 94% No / 0% n/a				16		9% Yes / 91% No / 0% n/a				44
i) Choice as to whether and how contributions and benefits are coordinated with social security?	No	No		6% Yes / 94% No / 0% n/a				16		5% Yes / 95% No / 0% n/a				44
j) Other (describe)?	No	No		6% Yes / 94% No / 0% n/a				16		16% Yes / 84% No / 0% n/a				44
n/a														
If yes: # of standard options														
a) Benefit program multipliers? [i.e., 2% per year of service, 2.5% per year of service, etc.]	n/a	n/a		5	5	5	5	1	5	5	5	5	1	
b) Final salary definition? [i.e., Sick Leave in or out, Final 1 year, Highest 5 consecutive years, etc]	n/a	n/a		2	2	2	2	2	2	2	2	2	2	
c) Retirement eligibility rules? [i.e., age and/or years of service required to retire]	n/a	n/a		n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0	
d) Cost of living adjustment rules? [i.e., CPI capped at 2%, CPI uncapped, etc]	n/a	n/a		4	4	4	4	1	6	4	2	4	3	
e) Vesting period?	n/a	n/a		n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0	
f) Service credit purchase categories?	n/a	n/a		10	6	2	6	2	10	2	2	4	4	
g) Death benefit coverage? [i.e., one system has 3 choices: none, \$5,000 and \$10,000]	2	2		6	4	2	4	2	6	2	2	3	3	
h) Disability coverage rules?	n/a	n/a		4	4	4	4	1	4	2	2	3	4	
i) Choice as to whether and how contributions and benefits are coordinated with social security?	n/a	n/a		2	2	2	2	1	2	2	1	2	2	

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
j) Other (describe)?	n/a		n/a	30	30	30	30	1	30	3	1	6	7
175 Can an existing employer change any of the choices (per question 178 above), effectively creating a new or altered rule set, at any time?	Yes	No		25% Yes / 75% No / 0% n/a				16	25% Yes / 73% No / 2% n/a				43
Collections and Data Maintenance													
176 How many different contribution percentages do you collect from:													
a) Employers? [For example, single member group systems may have only one contribution percentage whereas some multi-plan systems may collect numerous different contribution rates from various participating employers.]	117	127		4,331	15	1	666	16	4,331	6	0	287	44
b) Members?	2	2		56	3	1	11	16	228	4	1	12	44
177 Which of the following payment methods for employee contributions occur in the plans that you administer:													
a) No employee contributions?	Yes	No		38% Yes / 63% No / 0% n/a				16	32% Yes / 68% No / 0% n/a				44
b) Employer pays his part and also the employee contributions?	No	No		63% Yes / 38% No / 0% n/a				16	50% Yes / 50% No / 0% n/a				44
c) Employer withholds employee contributions pre-tax from his salary?	Yes	Yes		100% Yes / 0% No / 0% n/a				16	95% Yes / 5% No / 0% n/a				44
d) Employer withholds employee contributions post-tax from his salary?	Yes	Yes		69% Yes / 31% No / 0% n/a				16	43% Yes / 57% No / 0% n/a				44
178 Do you have any other contributions in addition to the regular employee and employer contributions? [For example, Ohio SERS collects a surcharge for members who earn less than a minimum compensation amount.]	Yes	Yes		44% Yes / 56% No / 0% n/a				16	48% Yes / 52% No / 0% n/a				44
a) If yes, describe: We Collect % of payroll for Disability, Retiree Insurance, and Death Benefit. % set each year by General Assembly. We also collect contributions made toward satisfying anti-pension-spiking liabilities incurred by an employer.													
179 Do you collect pension contributions from any members directly? [For example, Nurses in the Netherlands can continue to contribute to their pension even if they are inactive. Do not include optional contributions such as to 401k savings plans]	Yes	Yes		25% Yes / 75% No / 0% n/a				16	30% Yes / 70% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
180 Do members deal with you directly when selecting or changing DB plan options such as options to switch from core DB to DC or DROP plans, option to participate in variable investment option overlays, option to change their contribution rate, option to repair pension gaps, pre-retirement election options, etc?	Yes	Yes		44% Yes / 50% No / 6% n/a				15	45% Yes / 43% No / 11% n/a				39
181 Are you required, by policy or by law, to actively seek out and initiate either a benefit or a refund for inactive vested members or inactive unvested members? Billing and Inspection	Yes	Yes		94% Yes / 6% No / 0% n/a				16	98% Yes / 2% No / 0% n/a				44
182 Do you:													
a) Send a written advice to employers that inform them of their required contribution rates and then rely on each employer to pay the correct contributions?	Yes	Yes		81% Yes / 19% No / 0% n/a				16	70% Yes / 25% No / 5% n/a				42
b) Invoice employers in arrears based on actual member service and salary data?	No	No		69% Yes / 31% No / 0% n/a				16	55% Yes / 41% No / 5% n/a				42
c) Invoice employers in advance based on estimated member service and salary data, and then adjust based on actual experience?	No	No		25% Yes / 75% No / 0% n/a				16	16% Yes / 80% No / 5% n/a				42
183 How many times per year do you send invoices or 'advices' to each employer? Divorce	1	1		42	11	0	12	16	46	1	0	9	42
184 Choose the statement that best describes how divorce settlements for active members (or divorce decrees or QDROS, or QILDROS, or Division of Benefit Orders, etc.) impact your system. If you have different rules for different plans, choose the statement that applies to the largest number of cases.													
a) Minimal impact. Law prevents you from paying the pension to anybody except the member and the member's specified beneficiaries.	No	No		6% Yes / 94% No / 0% n/a				16	9% Yes / 91% No / 0% n/a				44
b) Minimal impact unless children are involved. With children you may be required to redirect payment.	No	No		0% Yes / 100% No / 0% n/a				16	0% Yes / 100% No / 0% n/a				44
c) A portion of the pension is paid to the ex-spouse, but ONLY when the member begins receiving benefits.	Yes	Yes		63% Yes / 38% No / 0% n/a				16	55% Yes / 45% No / 0% n/a				44
d) A portion of the pension is paid to the ex-spouse. The ex-spouse can initiate the pension at a time different than the member provided that eligibility conditions are met.	No	No		44% Yes / 56% No / 0% n/a				16	34% Yes / 66% No / 0% n/a				44

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
e) Other (describe) n/a	No		No	13% Yes / 88% No / 0% n/a					16	14% Yes / 86% No / 0% n/a					44

## Appendix B - Foreign currency conversion

All currency amounts have been converted to USD using Purchasing Power Parity figures per the OECD. The table below shows the foreign exchange rates for the past 4 years.

Currency	Purchasing Power Parity <sup>1</sup>			
	2019	2018	2017	2016
United States Dollars - USD	1.000	1.000	1.000	1.000
Canada Dollars - CAD	0.832	0.801	0.794	0.804
Euro - EUR	1.400	1.427	1.338	1.337
Denmark Kroner - DKK	0.148	0.147	0.136	0.139
Sweden Kronor - SEK	0.112	0.113	0.110	0.112
United Kingdom Pounds - GBP	1.451	1.452	1.422	1.450
Australia Dollars - AUD	0.680	0.697	0.660	0.691

1. Source OECD Website, February 2019.

## Appendix C - Activity definitions

1. Member Transactions	
1a. Pension Payments	<p>1. Paying (but not incepting) annuity pensions for disability, early and normal retirees and their survivors, including:</p> <ul style="list-style-type: none"> <li>• EFT processing.</li> <li>• Check processing and postage.</li> <li>• Resolving failed, misdirected and lost payments.</li> <li>• Paying, but not calculating, adjustments to pensions. For example, many systems pay retroactive adjustments to pensions initiated based on incomplete data.</li> <li>• Collecting overpayments.</li> <li>• The processing of return payments from annuitants.</li> <li>• Stopping pension payments upon the death of an annuitant.</li> </ul> <p>2. Processing deductions from the gross pension payment. For example:</p> <ul style="list-style-type: none"> <li>• Processing and paying taxes and other governmental deductions, such as social security.</li> <li>• Processing legally required deductions such as liens on wages ordered by a judge.</li> <li>• Processing and effecting payment of optional deductions that the member can request, such as for health care or optional life insurance or union dues.</li> <li>• Processing and mailing of check stubs or EFT payment advices.</li> <li>• Processing and mailing of annual tax receipts to annuitants.</li> <li>• Keeping track of the rules and regulations for deductions.</li> </ul> <p>3. Confirming payment eligibility. This includes:</p> <ul style="list-style-type: none"> <li>• Cross referencing pension payrolls with death records.</li> <li>• Obtaining proof that someone is alive.</li> <li>• Checking eligibility.</li> </ul> <p>If a sister organization performs any of the above tasks, then the costs incurred by the sister organization should be included here and in your Total Costs.</p> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Maintaining banking, address and beneficiary data for retirees. These belong in 3c Data Not from Employers.</li> <li>• The work of inflation adjustments. It belongs in 1b Pension Inceptions.</li> </ul>
1b. Pension Inceptions	<p>1. New annuitants: calculating, finalizing and arranging annuity pensions to new payees (i.e., early and normal service retirements, death in-service or on-pension resulting in annuity payments to spouse or dependents, divorce that results in new annuity pension streams). Exclude disability inceptions (except Dutch systems). Disability belongs in 1e Disability.</p> <p>2. Changes to gross amount of pensions (excluding disability pensions) including:</p> <ul style="list-style-type: none"> <li>• Adjusting pensions that were initiated based on incomplete or estimated data.</li> <li>• Reducing the annuity payment when pensioner begins receiving social security (NL: AOW, Canada: CPP).</li> <li>• Cost of living adjustments for pensioners.</li> <li>• Last survivor options that reduce the amount paid to the pensioner when a spouse dies.</li> <li>• High/Low construction: Reducing the gross annuity paid from the "High" amount to the "Low" amount.</li> <li>• Pop-up options that increase the amount paid to the pensioner if spouse dies first.</li> <li>• Redesign of the payment option (such as changing from 0% survivor to 50% survivor) at request of the annuitant.</li> </ul> <p>3. Time spent by the pension inception team on appeals about annuity pension inceptions. Exclude time and cost of legal staff or external legal counsel. Legal costs belong in 7d Legal and Rule Interpretation.</p>

## Appendix C - Activity definitions

1c. Withdrawals, Refunds, Transfers-out	<p>Payments that terminate your relationship with a member including:</p> <ul style="list-style-type: none"> <li>• Withdrawals and Refunds of contributions.</li> <li>• Lump sum and commuted value payments.</li> <li>• Pre-retirement death that results in a final payment (refund, commuted value, death payment).</li> <li>• One time death payments that are supplemental to the annuity payments. Do not include the cost of paying or stopping the final pension payment which belong in 1a Pension Payments.</li> <li>• Hardship withdrawals (including partials).</li> <li>• Excess contribution refunds (For example, 50% Rule Refunds in Canada).</li> <li>• Individual rollovers of DB monies to internal DC accounts which effectively terminate the DB pension entitlement.</li> <li>• Individual transfers-out of monies to authorized external systems.</li> <li>• Collective transfers-out when an employer exits your system.</li> </ul> <p>The activity also includes:</p> <ul style="list-style-type: none"> <li>• Providing written estimates of refunds and transfers-out (do not include estimates for Lump Sums and Commuted Value Payments which belong in 2e Written Pension Estimates).</li> <li>• Calculating, arranging and making estimated and final payments.</li> <li>• Related tax deductions, filings and reporting sent to members and tax authorities.</li> <li>• Reminders to speed up processing by external parties.</li> <li>• Collecting overpayments of lump sums or other terminating payments.</li> </ul>
1d. Purchases and Transfers-in	<ul style="list-style-type: none"> <li>• Service credit purchases for refunded past service, military service, etc.</li> <li>• Purchases that provide members with additional pensionable salary.</li> <li>• Individual transfers-in/ rollover of monies from external retirement systems.</li> <li>• Collective transfers-in such as when a new employer is merged into your system.</li> </ul> <p>The activity also includes:</p> <ul style="list-style-type: none"> <li>• Providing formal written estimates of purchases and transfers-in/ rollovers.</li> <li>• Posting purchases and applying payments.</li> <li>• Receiving purchase payments.</li> <li>• Related tax reporting sent to members and tax authorities.</li> <li>• Purchases applicant dealing directly with the Purchase division, subsequent to an initial request for a purchase.</li> </ul>
1e. Disability	<p>Include only if you are responsible for the administration of non-optional long term disability, and/ or short term disability. Includes:</p> <ul style="list-style-type: none"> <li>• Written disability estimates.</li> <li>• Disability approval process.</li> <li>• Applications and inceptions.</li> <li>• Disability appeals and complaints, provided that they are not handled by your legal staff or external legal counsel. Legal costs belong in 7d Legal Rule Interpretation.</li> <li>• Monitoring and reviewing disabled pensioners and/ or temporarily disabled members for continuing entitlement, including checks on income and medical reviews.</li> <li>• Checks on eligibility of disability payments.</li> <li>• Rehabilitation of disability recipients (very few systems perform this activity).</li> <li>• Medical assessment reviews of new hires for eligibility for death and disability benefits.</li> </ul> <p>Do not include if disability is an optional benefit for members. Instead include in 1g Optional and Third Party Administered Benefits.</p> <p>Do not include insurance costs. If an insurance company administers the disability program on your behalf, and you cannot clearly separate the administration cost from the insurance cost, then treat disability as a third party administered benefit.</p> <p>Do not include paying disability pensions. This belongs in 1a Pension Payments.</p>

## Appendix C - Activity definitions

1f. Healthcare Administration	<p>This activity only applies to the subset of U.S. systems that administer healthcare. Include only the costs of the healthcare department and any healthcare activities that are not closely integrated with pension administration activities (i.e., If the healthcare call center is separate from the pension administration call center, include its costs and volumes here. But if healthcare calls are integrated with the pension call center, include the costs and volumes in the Call Center activity.). The healthcare department will usually, at a minimum, be responsible for design, vendor management and enrolment.</p> <p>Do NOT include any activities that are integrated with pension administration and not done by the healthcare department. For example:</p> <ul style="list-style-type: none"> <li>• Communication activities such as call center calls and presentations are often integrated with pension administration. In these cases the cost and volumes belong in the pension administration activity.</li> <li>• Similarly, the legal and actuarial departments often handle both healthcare and pension issues. If this is the case, these costs belong in activities 7c Actuarial and 7d Legal and Rules Interpretation.</li> </ul>
1g. Optional and Third Party Administered Benefits	<p>Examples of optional and third party administered benefits are:</p> <ul style="list-style-type: none"> <li>• Benefits that are supplemental to the members' primary pension benefit at retirement. Examples include tax deferred savings plans (i.e., 403B, 457, 401k and 401a), insurance (dental, vision, long-term care) and loans to members.</li> <li>• Third party administered benefits. For example, the defined contribution portion of hybrid DB/DC plans are often outsourced.</li> </ul> <p>Include the costs of:</p> <ul style="list-style-type: none"> <li>• Specialists responsible for optional and third party benefits, including design, vendor management and enrolment.</li> <li>• Fees paid to third parties to administer outsourced benefits.</li> </ul> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Communication activities such as call center calls, presentations and brochures. These belong in the communication activities. For example, the cost and volumes of call center calls about supplemental benefits belong in 2a Call Center.</li> <li>• Actuarial and legal costs. These belong in activities 7c Actuarial and 7d Legal and Rules Interpretation.</li> </ul>

### 2. Member Communication

2a. Call Center	<p>The 'first-line' communication work for active, inactive and annuitant member inquiries. First-line communication includes responding to general questions, initial requests for activity specific work to be performed (such as a request for a written estimate or a refund of contributions, death reporting, change of address or direct deposit or beneficiary), questions about account status or annual statements, advice given over the phone, etc. This activity includes member inquiries by:</p> <ul style="list-style-type: none"> <li>• Telephone: waiting for calls, talking to members on the phone, redirecting calls, training Contact Center staff, auditing calls, call satisfaction surveying and long distance charges.</li> <li>• Automated information or self-serve lines (i.e., telephone lines where the member never needs to speak to a service representative and can navigate menu options where they request forms and publications, etc.). But do NOT include the cost of responding to requests for forms and publications. This belongs in Activity 2f Mass Communication.</li> <li>• Email: reading, responding to simple requests, redirecting activity specific requests.</li> <li>• Written correspondence: reading, responding to simple requests, redirecting activity specific requests.</li> </ul> <p>Includes contact center hardware and software.</p> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Work performed after the call for activities where costs are collected separately. For example, if a member requests a written pension or benefit estimate, then the cost of preparing it belongs in 2e Written Pension Estimates and not here, even if the work is done in the Contact Center.</li> <li>• Subsequent follow-up activity specific communication. For example, a disability applicant dealing directly with the disability division belongs in 1e Disability.</li> </ul>
-----------------	--



## Appendix C - Activity definitions

2b. Mail Room, Imaging	<ul style="list-style-type: none"> <li>• Managing incoming and outgoing mail.</li> <li>• Incoming written correspondence: sorting, redirecting activity specific requests.</li> <li>• Scanning and imaging of incoming documents and forms to start a workflow process.</li> </ul> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Postage. This belongs in the activities where they were incurred. For example, the mailing of pension checks, check stubs, EFT advices or annual tax receipts belong in 1a Pension Payments.</li> </ul>
2c. 1-on-1 Counseling	<ul style="list-style-type: none"> <li>• Walk-in traffic that meets with counselors.</li> <li>• Pre-scheduled 1-on-1 retirement and other counseling. Include pre-scheduled counseling sessions that are conducted via teleconference or over the phone that cover materials sent to the member in advance of the session.</li> <li>• If written pension estimates are prepared during a counseling session the cost belongs in counseling and not in written estimates.</li> </ul>
2d. Presentations and Group Counseling	<ul style="list-style-type: none"> <li>• All presentations to members and retirees.</li> <li>• Group retirement counseling.</li> <li>• Webinars.</li> </ul>
2e. Written Pension Estimates	<p>Preparing and sending, by mail or email, customized written estimates in response to requests from individual members regarding:</p> <ul style="list-style-type: none"> <li>• Annuity pensions including early and service retirement.</li> <li>• Giving customized written insight into pension consequences of divorce, death, layoffs, taxes, gaps in pension coverage, etc.</li> <li>• Lump sum or commuted value payouts.</li> </ul> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Estimates for transfers, purchases or refunds of contributions. These belong in 1c Withdrawals, Refunds, Transfers-out and 1d Purchases and Transfers-in.</li> <li>• Estimates that the member did not request, such as estimates that are automatically sent out when the member is eligible to retire or estimates on member statements. These belong in 2f Mass Communication.</li> <li>• Non-written estimates such as verbal estimates provided over the phone or obtained by the member from the website.</li> <li>• Time spent during a counseling session preparing written estimates. This belongs in 2c 1-on-1</li> </ul>
2f. Mass Communication	<p>Any benefit related communication that is sent to all members or groups of members. The cost should include design, printing and mailing costs. Examples include:</p> <ul style="list-style-type: none"> <li>• Member statements.</li> <li>• Brochures and publications.</li> <li>• Newsletters and information letters.</li> <li>• Videos, CD-ROMS.</li> <li>• Website pension content targeted at members and annuitants. Includes design, development and maintenance of the member content, as well as its pro rata share of the website infrastructure.</li> <li>• Annual reports and popular annual report summaries, but do not include the accounting and auditing costs incurred to prepare the annual report. Accounting costs belong in 4a Financial Administration and Control and auditing costs belong in 7e Audit.</li> <li>• Welcome kits.</li> <li>• Letters informing members when they reach or approach certain milestones such as becoming vested, eligible for disability, eligibility for retirement, etc.</li> </ul> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Pre-scheduled retirement counseling done in group sessions or 1-on-1 or member presentations. These belong in 2c 1-on-1 Counseling and 2d Presentations and Group Counseling.</li> <li>• 1-on-1 correspondence. These costs belong in the activity to which the correspondence pertains. For example, correspondence re: pension estimates belongs in 2e Written Pension Estimates.</li> <li>• Payment advices, check stubs, letters informing of changes in gross amount, and annual tax receipts prepared for retirees. These belong in 1a Pension Payments.</li> <li>• Employer targeted communication such as the employer portions of the website and employer newsletters. These belong in 3b Service to Employers.</li> </ul>

## Appendix C - Activity definitions

3. Collections and Data Maintenance	
3a. Data and Money from Employers	<ul style="list-style-type: none"> <li>• Collection and cashing of member and employer contributions from employers.</li> <li>• Collection of member data (service credit, salary, personal information, employer, etc) from employers.</li> <li>• Reconciliation of required versus remitted money.</li> <li>• Analysis, correction and confirmation with employer of member data.</li> <li>• Setting up the data and money collection process for new employers.</li> <li>• Improving the data collection process for existing employers (i.e., converting paper systems to electronic, etc).</li> <li>• Registering member choices and instructions that are received through the employer. For example: <ul style="list-style-type: none"> <li>▫ Some hybrid DB/ DC systems require that a member's DC instructions come through the employer.</li> <li>▫ Members at some Dutch systems can choose to contribute more to get early retirement. This choice is registered via the employer.</li> </ul> </li> </ul> <p>(The activities below used to be in a separate activity 'Billing and Inspection' and are now merged into 3a Data and Money from Employers)</p> <ul style="list-style-type: none"> <li>• Advising employers of the required contribution rate (but excluding the actuarial cost of determining the rates which belongs in 7c Actuarial).</li> <li>• Billing employers for regular contributions, special contributions to cover funding shortfalls, additional payments to retirees funded by the employer, etc.</li> <li>• Collecting bad debts. But do not include legal costs. These belong in 7d Legal and Rules Interpretation.</li> <li>• Employer reviews or audits. For example, several systems perform on-site reviews of employers that have problems providing data and or contributions on a timely basis. They want to ensure that the employers are correctly fulfilling their obligations to their members.</li> <li>• Inspection and enforcement of obligation to participate in the System (i.e., participation in some Dutch industry funds is mandatory if the employer has certain characteristics).</li> </ul>
3b. Service to Employers	<ul style="list-style-type: none"> <li>• Training employers.</li> <li>• Helping new employers.</li> <li>• Maintaining employer relationships.</li> <li>• Presentations, counseling, workshops for employers.</li> <li>• Publications and newsletters for employers (as opposed to materials sent to members through employers).</li> <li>• Employer helpdesk/ Employer Call Center.</li> <li>• Employer website including the design, development and maintenance. as well as the pro rata share of the website infrastructure.</li> <li>• Advice, account management, HRM support re: pensions.</li> </ul> <p>Do NOT include marketing to employers. Marketing costs belong in 4c Government and Public Relations.</p>
3c. Data Not From Employers	<p>Gathering and maintaining member data that is not provided by employers including:</p> <ul style="list-style-type: none"> <li>• Retiree and Inactive data maintenance such as change of address, change of beneficiary, change in marital status, death, registering changes in payments, etc.</li> <li>• Tracking 'lost' inactive members.</li> <li>• If applicable, registering cost of living adjustments to the salary base of inactive members (a few systems do this).</li> <li>• Registering the impact of divorce on the future rights of members. But do not include the work of estimating the impact of divorce which belongs in either 2e Written Pension Estimates, 2c 1-on-1 Counseling and or 2a Call Center. Also do not include the cost of changing or initiating pensions as a result of divorce. This belongs in 1b Pension Inceptions.</li> <li>• Billing and collecting contributions directly from inactive members. For example, nurses in the Netherlands can continue to contribute to their pension even if they are inactive.</li> <li>• Registering member choices and instructions that are received directly from the member. For example: <ul style="list-style-type: none"> <li>▫ Defined Contribution instructions obtained directly from active, inactive or retired members, such as changes in asset allocation.</li> </ul> </li> </ul> <p>Do NOT include the cost of incepting new pensions or determining changes to the gross amount of the pension paid to retirees. This belongs in 1b Pension Inceptions.</p>

## Appendix C - Activity definitions

4. Governance and Financial Control	
4a. Financial Administration and Control	<ul style="list-style-type: none"> <li>• Budgeting and forecasting.</li> <li>• Financial reporting including preparing the annual report.</li> <li>• The chief financial officer's office including assistants. Exclude time spent on investments.</li> <li>• Compliance unless it is done by the legal department. If this is the case compliance costs belong in 7d Legal and Rules Interpretation.</li> <li>• Risk.</li> </ul> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Internal auditing of activity processes, or auditing of financial statements. These belong in 7e Auditing.</li> <li>• Actuarial work. This belongs in 7c Actuarial.</li> <li>• Printing and mailing, including postage, of annual reports to members. This goes in 2f Mass Communication.</li> <li>• Administration work that pertains to the Investment division, such as investment accounting.</li> </ul>
4b. Board, Strategy, Policy	<ul style="list-style-type: none"> <li>• Board of Trustees: elections, fees, expenses, etc.</li> <li>• The CEO's office including assistants. Exclude time spent on investments (when in doubt we suggest 50% administration, 50% investments).</li> <li>• Benchmarking studies, strategic planning, fiduciary audits, asset liability studies. But exclude portions attributed to investments.</li> <li>• New and existing plan/ product development.</li> <li>• Strategic market research.</li> </ul> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Actuarial or legal advisors to the Board. These costs belong in 7c Actuarial and 7d Legal, respectively.</li> </ul>
4c. Government and Public Relations	<ul style="list-style-type: none"> <li>• Maintaining relationships with government, unions and employer organizations.</li> <li>• Anticipating, influencing and initiating plan rule changes by government, by unions, by employers, and by employer organizations.</li> <li>• Costs of coordination with organizations of employers and employees.</li> <li>• Formulating a Governmental Policy document.</li> <li>• Media relations.</li> <li>• Marketing costs to attract new employers, or new members, or to support the position of the pension fund within the industry or other interest groups.</li> <li>• General communication/ marketing to support the position of the pension system in the community or in the industry.</li> <li>• Memberships in Councils of Industry Funds, Company Funds or International Organizations.</li> </ul>
5. Major Projects	
	<p>Major Projects are long lived assets that could be (or are) capitalized and expensed over their useful life if you follow GAAP (Generally Accepted Accounting Principles). Examples of Major Projects include:</p> <ul style="list-style-type: none"> <li>• Acquisitions of long lived assets such as computer hardware or a new building.</li> <li>• Major software development projects that will have an extended life.</li> </ul> <p>If you do not capitalize Major Projects, provide the actual costs expensed during the year. If you do capitalize Major Projects, include the depreciation or amortization costs of all past and current Major projects. But do not include the current year's cash investment in Major Projects that are being capitalized.</p> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Major Projects that pertain to non-pension or optional benefits such as a new IT system for health care. These costs should be excluded from Total Pension Administration Costs per question 7.1 Non-Pension and Optional Benefits are defined in the comment field in question 7.1.</li> </ul>

## Appendix C - Activity definitions

5a. Amortization of non-IT major projects	<p>Current year amortization of the non-IT portion of capitalized major projects.</p> <p>Major Projects are long lived assets that are capitalized (under GAAP or GASB 51) and expensed over their useful life, which is greater than one reporting period. Examples of non-IT major projects could include if the costs were capitalized: i) a large, one-time historic data cleaning project, or, ii) imaging all historic records.</p> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Amortization of the IT portion major projects. This belong in activity 5c Amortization of IT major projects.</li> <li>• Amortization of leaseholds or office furniture. This belongs in activity 7a Building and Utilities.</li> </ul>
5b. Non-IT major projects (if you don't capitalize)	<p>If you do not capitalize major projects, then include the current year cost of the non-IT portion of major projects that could be capitalized under GASB 51 or GAAP.</p> <p>Do NOT include the IT portion of major projects. This belong in activity 5d IT Major Projects (if you don't capitalize).</p>
5c. Amortization of IT major projects	<p>Current year amortization of the IT portion of capitalized major projects.</p> <p>Major Projects are long lived assets that are capitalized (under GAAP or GASB 51) and expensed over their useful life, which is greater than one reporting period. An example of an IT major project could be a major software development project in the application stage of development, i.e., design, software configuration, software interfacing, coding, installing hardware and testing.</p> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Amortization of the non-IT portion major projects. This belongs in activity 5a Amortization of non-IT major projects.</li> <li>• Amortization/depreciation of IT infrastructure such as mainframes and servers. This belongs in 6a IT Strategy, Database Management and Applications (excl. major projects).</li> <li>• Amortization/depreciation of desktop hardware and software, or telecommunications equipment. This belongs in activity 6b. IT Desktop, Network, and Telecommunication.</li> <li>• Amortization of projects that relate to investment management.</li> </ul>
5d. IT major projects (if you don't capitalize)	<p>If you do not capitalize major projects, then include the current year cost of the IT portion of major projects that could be capitalized under GASB 51 or GAAP.</p> <p>Do NOT include the non-IT portion of major projects. This belong in activity 5b Non-IT major projects (if you don't capitalize).</p>
<b>6. Information Technology</b>	
6a. IT Strategy, Database Management and Applications (excl. major projects)	<ul style="list-style-type: none"> <li>• IT management and strategy.</li> <li>• IT architecture.</li> <li>• Data center i.e., current year cost (whether cash or amortization) of mainframe, servers, data center</li> <li>• Training.</li> <li>• Head of the IT department's office.</li> <li>• Database management including: building databases, testing databases for data integrity, maintaining databases, ensuring operation of databases.</li> <li>• Application maintenance, enhancement and development that is not capitalized.</li> <li>• Project management that is not included in Major Projects.</li> </ul> <p>Do NOT include the portion of the above that relates to investment management.</p>
6b. IT Desktop, Network, and Telecommunications	<ul style="list-style-type: none"> <li>• User services including application licenses, personal computer hardware and software, help desk.</li> <li>• Network (i.e., LAN/ WAN, network security).</li> <li>• Telecommunications including call center equipment and mobile devices. If any of the above costs are capitalized, include current year amortization.</li> </ul> <p>Do NOT include the portion of the above that relates to investment management.</p>

## Appendix C - Activity definitions

7. Support Services	
7a. Building and Utilities	<ul style="list-style-type: none"> <li>• Building occupancy costs including rent, lease, amortization of leaseholds and building and office furniture depreciation.</li> <li>• Building depreciation if you own the building.</li> <li>• Building insurance.</li> <li>• Building maintenance services such as custodial, maintenance, security services etc.</li> <li>• Utilities.</li> </ul> <p>Do NOT include the portion of the above that relates to investment management.</p>
7b. Human Resources	<ul style="list-style-type: none"> <li>• Human resources staff and human resources consulting, including recruitment, training, career development, induction, disciplinary action etc.</li> <li>• Include time spent in the development of the HR framework, including policies and procedures.</li> </ul> <p>Do NOT include:</p> <ul style="list-style-type: none"> <li>• Time spent by non HR staff interviewing or training. For example the training of a call center agent belongs in activity 2a Call Center.</li> <li>• The portion of the above that relates to investment management.</li> <li>• Recruitment fees - these should be added to the staff costs of the people to which they relate in the different business units.</li> </ul> <p>Do NOT include separation or severance costs here. These belong in the 'Third Party and Other Costs' of the activities that the terminated FTE performed.</p>
7c. Actuarial	<p>All internal actuarial department costs, external actuarial fees and sister-entity cross charges for actuarial work including:</p> <ul style="list-style-type: none"> <li>• Actuarial work for financial and government reporting.</li> <li>• Actuarial work to determine funding policy, contribution rates or billing rates.</li> <li>• Quantifying the impact of changes in the plan.</li> <li>• Advice on plan design / redesign, funding and contributions, the employer's covenant, mergers and acquisitions etc.</li> <li>• Inception, disability and healthcare calculations that require actuarial input.</li> <li>• Formulating an Actuarial Policy document.</li> </ul>
7d. Legal and Rule Interpretation	<ul style="list-style-type: none"> <li>• All external legal fees.</li> <li>• Internal legal department (including legal fees charged by sister organizations or the corporate parent).</li> <li>• Appeals concerning pension inceptions (as well as any other appeals) if they are handled by the legal department or by external legal counsel.</li> <li>• Plan contract amendments. Adding new participating employers.</li> <li>• Interpretation of existing rule sets and laws.</li> <li>• Developing rules that simplify the interpretation of the plan contract and related legislation on behalf of staff, employers or members.</li> <li>• Support to the communications department in writing brochures and other communication material.</li> </ul> <p>Do NOT include the portion of the above that relates to investment management.</p>
7e. Internal and External Audit	<ul style="list-style-type: none"> <li>• Fees paid to the external auditor, particularly for the audit opinion on the accounts.</li> <li>• The external auditor may be the public audit office or an independent audit firm - in either case these fees or charges belong in the '3rd Party Fees' column.</li> <li>• The costs of internal audit and / or quality assurance departments.</li> </ul>
7f. Benefits Paid for Retired Staff	<p>Healthcare and other benefit costs for retired or inactive staff that are paid by the employer (and not via member contributions) on a 'pay-as-you-go' basis.</p> <p>Do NOT include accrued costs for existing staff such as contributions to their pension. These belong in each activity's cost as part of salary and benefits.</p>
7g. Other Support Services	<p>All other pension administration costs that have not been included elsewhere.</p>

## Appendix D - Defaults

Survey Question	Method	Default
Q107 Number of:  b) Email queries from employers?	Your response was unknown. As a default we have used the average response of other participants to this question.	21,870
Q34 In the table below, indicate whether or not each described outcome can occur when a member calls into your system seeking a knowledgeable person during business hours, and if yes, indicate the volume of occurrences.  d) # Abandoned calls (i.e., caller hangs-up while in a menu)?	Your response was unknown. As a default we used number of incoming calls multiplied by estimated percentage of calls to the member communications center that the caller abandons which, if unknown, was replaced by the all-participant average.	16,275
b) # Caller gets pre-recorded 'call another time' message during business hours?	Your response was unknown. As a default we used number of incoming calls multiplied by estimated percentage of calls to the member communications center that result in the caller receiving a pre-recorded message to 'call another time' which, if unknown, was replaced by the all-participant average.	15,129
Q33 What were your volumes of:  b) Outgoing calls from service representatives responding to messages (voice mail, receptionist, etc.) or following-up on previous calls?	Your response was unknown. We have used as a default the value that ensures that the ratio of this value to the number of incoming calls is equal to the all-participant average ratio.	24,977

## Appendix E - Service, cost and complexity model changes to 2018 report

### Service

CEM's service score methodology changed in FY2018. Overall, total service scores were impacted slightly. The changes reflect a greater emphasis on the use of technology to enhance the member experience, specifically in the website, call center, presentation and satisfaction surveying activities:

- 1 Pension payments - Weight reduced from 20.5% to 10.4% of the total service score.
- 2 Website - Weight increased from 11.8% to 22.1%.
- 3 Call center - Weight decreased from 22.0% to 21.8%.
- 4 Call center - The threshold for a perfect call wait time increased from 20 seconds to 60 seconds. Research indicates that members don't mind waiting longer on the phone as long as their issues are resolved at first contact, without being transferred or calling back to the pension system.
- 5 Call center - The score for notifying members of expected wait times increases as your wait time gets longer. E.g. notifying members of a 3 minute wait time is more valuable than notifying members of a 30 second wait time.
- 6 Presentations - Removed requirements that presentations be held in the field and we no longer reduce the score if the average attendees per presentation exceeds 20 participants.
- 7 Changed the description of satisfaction survey to customer experience. Added a 6% weight for surveying either NPS or engagement of active and annuitants. Added a 6% weight in aggregate for the following member journeys: divorce, member death, new job, exits job, marries or has children, takes a leave of absence. Reduced other weights approximately pro rata.

### Cost

CEM also simplified its cost model in FY2018 in order to make our analysis more intuitive and informationally dense:

- 1 The impact of 2 Cost reasons, transaction per member and transactions per FTE, were combined into one: FTE per member.
- 2 Cost 'reasons' page was updated to show more information and stand on its own.

### Complexity

CEM's total complexity score changed in 2018, from a relative measure to absolute. Complexity scores are no longer scaled, and will show you whether your plan's complexity is increasing or decreasing over time. The total overall complexity rankings were minimally impacted.

Two complexity causes were also removed from the scoring: Translation, Defined Contribution Plan Rules.

## Appendix E - Service, cost and survey question changes to 2019 report

### Service

Weight changes on Customer experience activities

- 1 Added Public website surveying, weighted as 8%
- 2 Weight % for surveying on 1-on-1 counseling process decreased from 10% to 7%.  
Weight % for surveying on member telephone calls increased from 8% to 16%.  
Weight % for surveying on secure member area website visit increased from 14% to 15%.  
Weight % for surveying on disability process decreased from 10% to 5%.  
Weight % for surveying on retirement process decreased from 25% to 16%.

### Cost

CEM decided further simplified the cost model.

- 1 Reason 1: FTE per 10,000 members  
Removed transaction volume impact for the third party cost in the front-office cost.
- 2 Reason 2: Third party cost in the front-office  
Simplified to calculate the raw difference third party cost per member.

### Survey question

CEM removed the following questions.

- 1 Pension Payments  
Will you issue a pension payment in a foreign currency if the member requests it?
- 2 Disability  
Do you have an expedited method for processing disability for a terminally ill member?
- 3 1-on-1 Member Counseling  
If you provide 1-on-1 counseling in the field, indicate the number of different field locations where you provided 1-on-1 counseling last year that were at: a) Field offices, b) Member's place of employment, c) Intermittent locations
- 4 Mass Communication: (ii) News and Targeted Communication  
Do you publish any of the following materials in a language other than English (or other than French in Quebec and France), or in Braille: a) Member statements?, b) Annual report?, c) Newsletters?, d) Website?, e) Brochures and pamphlets?
- 5 New Media and Other  
Indicate if your system has an active account (i.e., you have updated it or posted to it in the past 12 months) on the following social media platforms: d) Google+ ?
- 6 Customer Experience  
How often did you survey about the activity or journey?