

BenchmarkAdmin

2019 Benchmarking Analysis for Wisconsin Department of Employee Trust Funds

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Key Takeaways:

Cost

- Your total pension administration cost of \$87 per active member and annuitant was \$11 below the peer average of \$98.
- Your costs were lower primarily because you had fewer front-office FTE per 10,000 members, and because you had lower salary and other costs per FTE.
- Your costs increased by \$9.3 million or \$19 per member between 2018 to 2019. This is due to changes in the capitalization of IT spending that resulted from shifting IT efforts from system development to operational maintenance and enhancements. In addition ETF accelerated the amortization of previously capitalized IT assets.

Service

- Your total service score was 62. This was below the peer median of 80.
- The biggest reason why your service score was below the peer median was that your website does not have a secure member area.
- Your service score increased 2 points between 2016 and 2019.

73 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
NYC ERS
NYC TRS
NYSLRS
Ohio PERS
Oregon PERS
Pennsylvania PSERS
PERS Nevada
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

Alberta Teachers' RF
APS
BC Pension Corporation
Canadian Forces PP
FPSP
LAPP
OMERS
Ontario Pension Board
Ontario Teachers
OPTrust
RCMP
SHEPP

The Netherlands¹

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

Scandinavia

ATP

United Kingdom¹

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

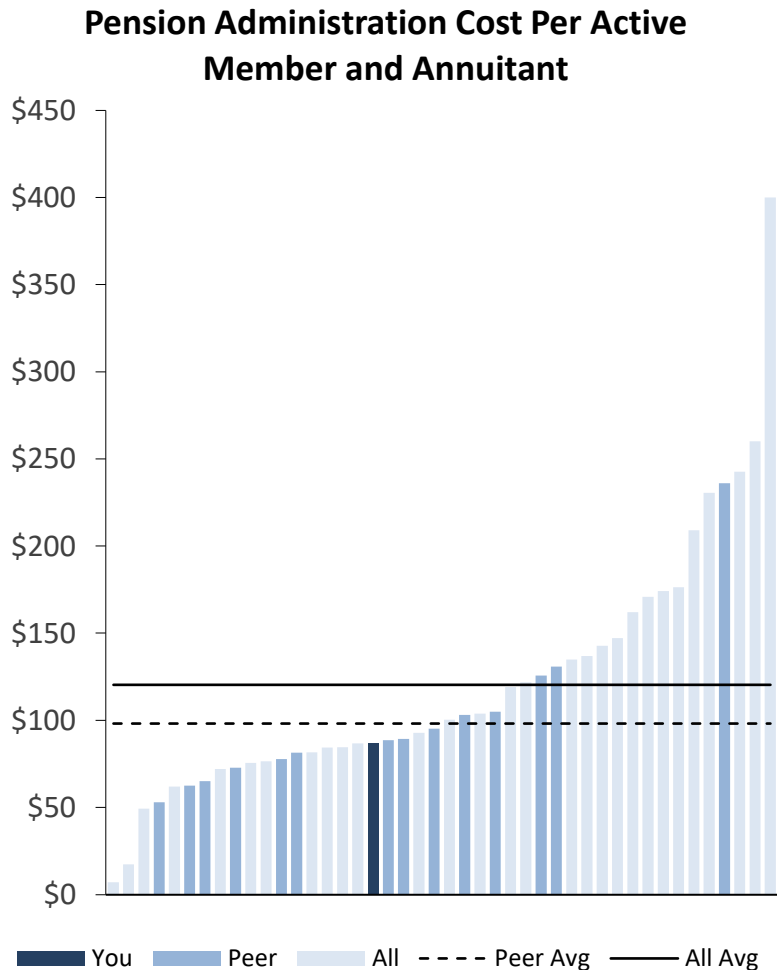
1. Systems in the UK and most systems in the Netherlands complete different benchmarking surveys and hence your analysis does not include their results.

The custom peer group for Wisconsin DETF consisted of the following 15 peers:

Custom Peer Group for Wisconsin DETF			
Peers (sorted by size)	Membership (in 000s)		
	Active Members	Annuitants	Total
NYSLRS	534	482	1,015
CalSTRS	461	305	766
Virginia RS	346	215	561
Washington State DRS	330	194	524
Ohio PERS	304	213	517
Pennsylvania PSERS	256	237	493
Michigan ORS	199	277	476
Wisconsin DETF	258	209	467
Indiana PRS	252	160	412
STRS Ohio	210	160	370
Colorado PERA	242	121	362
Arizona SRS	207	150	357
Oregon PERS	177	152	329
Illinois MRF	177	132	308
Iowa PERS	172	124	296
Peer Median	252	194	467
Peer Average	275	209	484

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 \$87 per active member and annuitant was \$11 below the peer average of \$98.



Category	\$000s	\$ per Active Member and Annuitant	
		You	Peer Avg
<u>Front office</u>			
Member Transactions	3,101	7	13
Member Communication	7,491	16	18
Collections & Data Maintenance	2,949	6	8
<u>Governance and support</u>			
Governance and Financial Control	2,337	5	7
Major Projects	* 2,864	6	8
Information Technology	15,397	33	28
Building	1,842	4	5
Legal	1,348	3	3
HR, Actuarial, Audit, Other	3,238	7	9
Total Pension Administration	40,568	87	98

Your total pension administration cost was \$40.6 million. This excludes the fully-attributed cost of administering healthcare, and optional and third-party administered benefits of \$6.9 million.

*reflects amortization of capitalized IT costs.

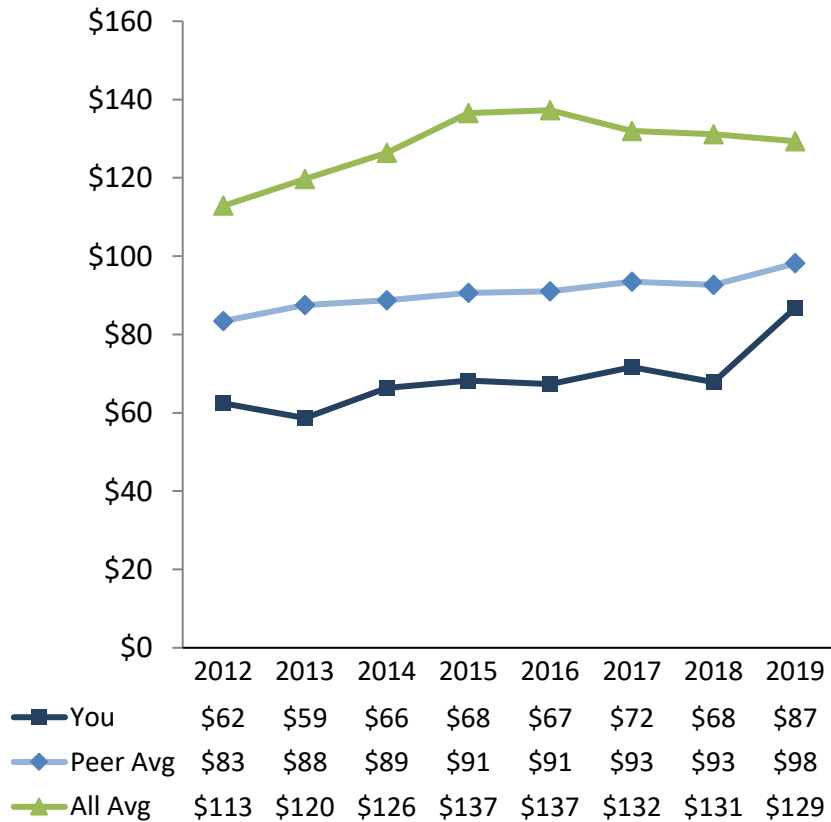
Reasons why your cost per member was \$11 below the peer average:

Reason	You	Peer Avg	Impact \$ per active member and annuitant
1 Fewer front-office FTE per 10,000 members	3.3 FTE	3.5 FTE	-\$3
2 Lower third party costs per member in the front-office	\$3	\$6	-\$4
3 Lower costs per FTE			
Salaries and Benefits	\$96,717	\$106,366	
Building and Utilities	\$7,338	\$10,284	
HR	\$4,258	\$3,947	
IT Desktop, Networks, Telecom	<u>\$11,715</u>	<u>\$15,959</u>	
Total	\$120,027	\$136,556	-\$9
4 Higher support costs per member ¹			
Governance and Financial Control	\$6	\$7	
Major Projects	\$6	\$8	
IT Strategy, Database, Applications	\$30	\$21	
Actuarial, Legal, Audit, Other	<u>\$9</u>	<u>\$11</u>	
Total	\$50.26	\$46.33	\$4
Total			-\$11

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

Your costs increased by \$19 per member between 2018 to 2019 because of increased major project and information technology costs.

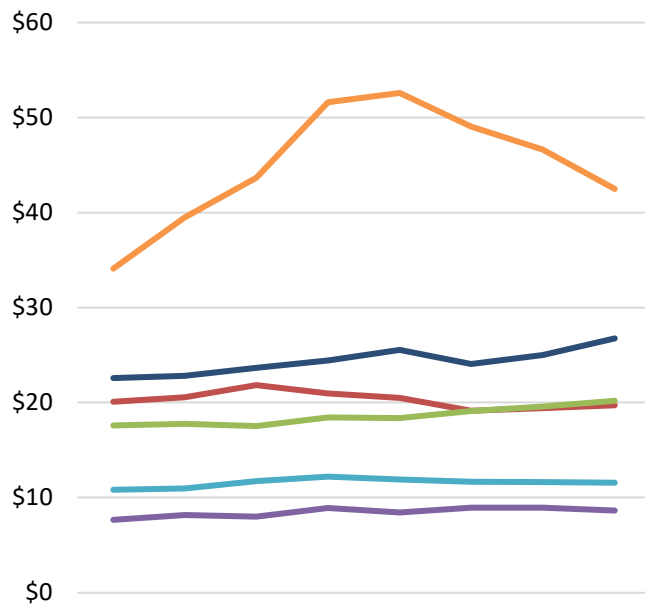
Trend in Total Pension Administration Costs



Category	\$ per Active Member and Annuitant		
	You 2019	Your 2018	Change
<u>Front office</u>			
Member Transactions	7	6	1
Member Communication	16	16	0
Collections & Data Maintenance	6	6	0
<u>Governance and support</u>			
Governance and Financial Control	5	5	0
Major Projects	6	1	5
Information Technology	33	21	12
Building	4	4	0
Legal	3	2	1
HR, Actuarial, Audit, Other	7	7	0
Total Pension Administration	87	68	19

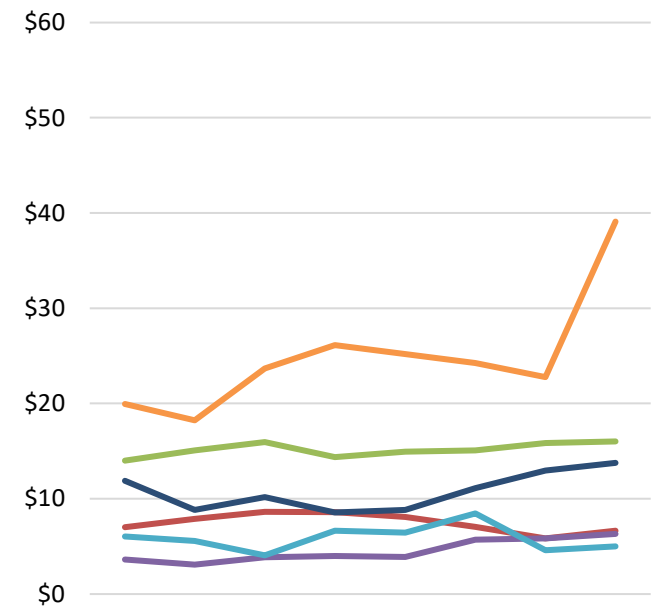
For most systems, IT and major project costs were double the costs of any other costs. This was not the case for your plan until 2019.

Cost per Member - All Avg



	2012	2013	2014	2015	2016	2017	2018	2019
IT and Major Projects	\$34	\$39	\$44	\$52	\$53	\$49	\$47	\$42
Member Transactions	\$20	\$21	\$22	\$21	\$20	\$19	\$19	\$20
Member Communication	\$18	\$18	\$18	\$18	\$18	\$19	\$20	\$20
Collections and Data	\$8	\$8	\$8	\$9	\$8	\$9	\$9	\$9
Governance	\$11	\$11	\$12	\$12	\$12	\$12	\$12	\$12
Support	\$23	\$23	\$24	\$24	\$26	\$24	\$25	\$27

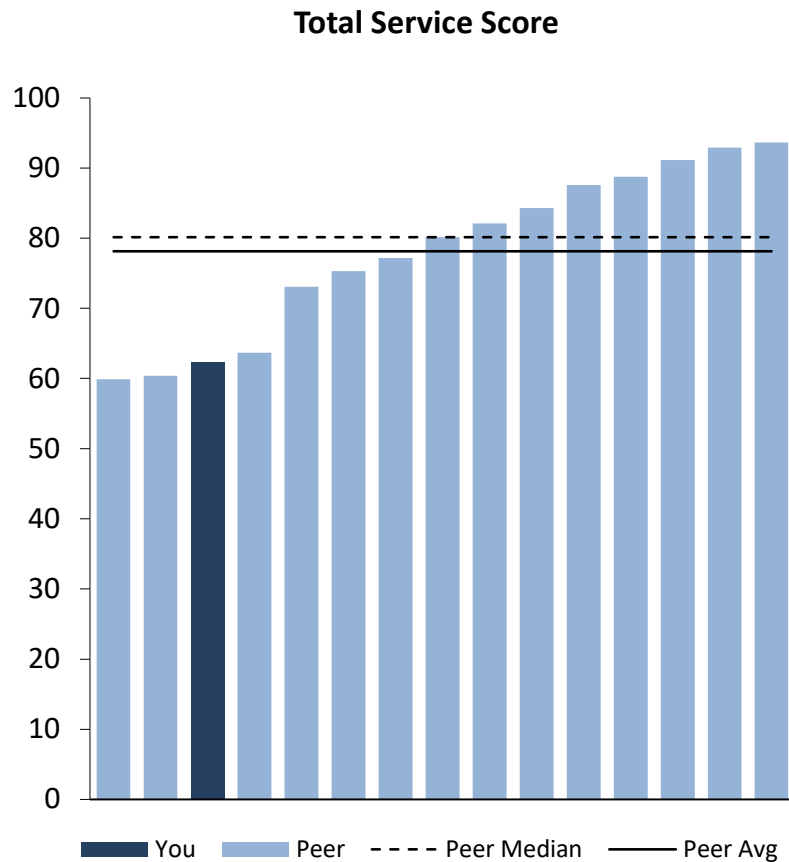
Cost per Member - You



	2012	2013	2014	2015	2016	2017	2018	2019
IT and Major Projects	\$20	\$18	\$24	\$26	\$25	\$24	\$23	\$39
Member Transactions	\$7	\$8	\$9	\$9	\$8	\$7	\$6	\$7
Member Communication	\$14	\$15	\$16	\$14	\$15	\$15	\$16	\$16
Collections and Data	\$4	\$3	\$4	\$4	\$4	\$6	\$6	\$6
Governance	\$6	\$6	\$4	\$7	\$6	\$8	\$5	\$5
Support	\$12	\$9	\$10	\$9	\$9	\$11	\$13	\$14

Trend analysis is based on 33 systems that provided 8 consecutive years of data.

Your total service score was 62. This was below the peer median of 80. The two biggest contributors to your lower service score were website followed by call center.



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.

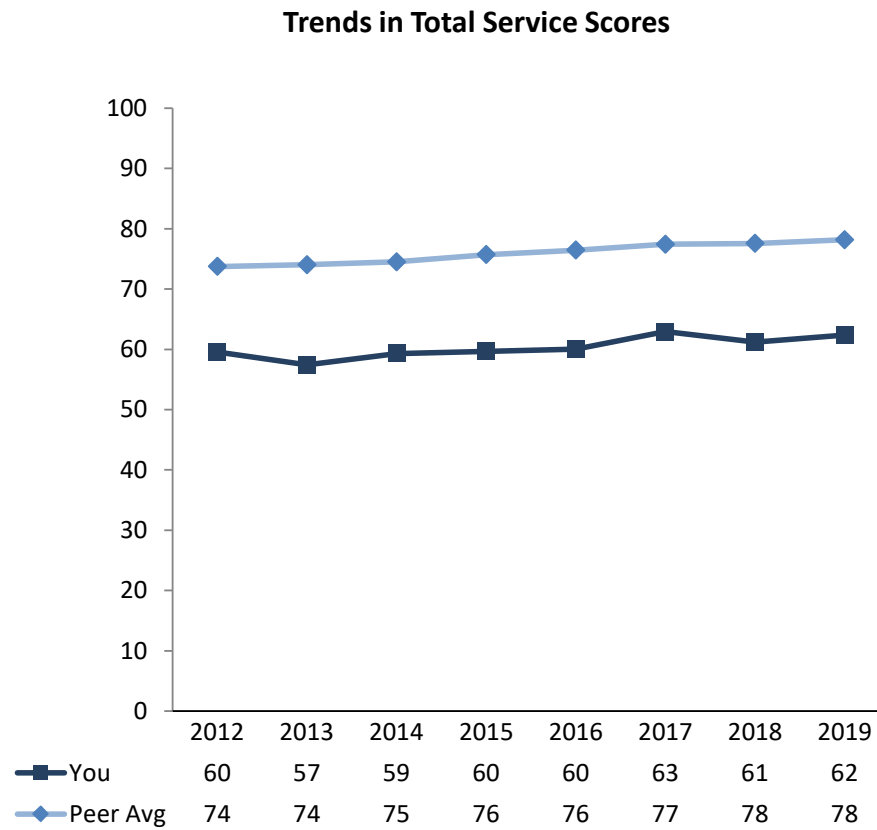
Higher service is not necessarily cost-effective.

Activity	Weight	You	Peer Med
1. Member Transactions			
a. Pension Payments	10.0%	99	100
b. Pension Inceptions	7.4%	92	88
c. Refunds & Transfers-out	1.3%	100	95
d. Purchases & Transfers-in	3.1%	88	88
e. Disability	3.8%	82	82
2. Member Communication			
a. Call Center	21.0%	46	72
c. 1-on-1 Counseling	7.4%	74	91
d. Member Presentations	6.5%	100	100
e. Written Pension Estimates	4.7%	70	87
f. Mass Communication			
• Website	21.3%	22	83
• News & targeted communication	2.8%	75	83
• Member statements	4.7%	91	88
3. Other			
Customer Experience Surveying	5.0%	32	30
Disaster Recovery	1.0%	100	93
Weighted Total Service Score	100%	62	80

Where can you improve your total service score?

Potential improvements to your total service score	
Factor	Potential Improvement
Add 29 secure member tools and design features such as: address change, apply for retirement, print tax receipts, change tax withholding amount, change email address, change beneficiary, etc.	+ 12.3
Your interactive calculator is not linked to member data. To achieve a perfect service score you must link member data to your interactive calculator.	+ 4.3
On average, members calling your call center reach a knowledgeable person in 228 seconds. To achieve a perfect service score, members must reach a knowledgeable person on the phone in 60 seconds or less.	+ 3.5
18.4% of your incoming calls resulted in undesired outcomes. To achieve a perfect service score, members must experience no undesired call outcomes.	+ 3.1
<ul style="list-style-type: none">• CEM is not recommending these changes.• Service improvement should be cost effective and important to your members.	

Your service score increased from 60 to 62 between 2012 and 2019.

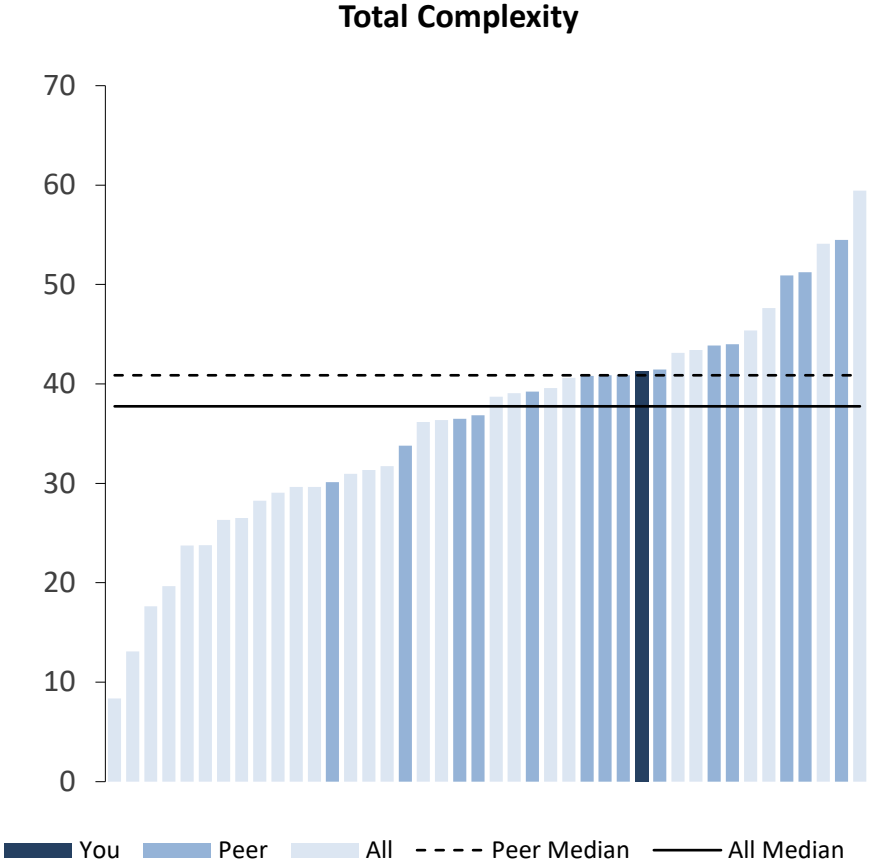


Historic scores have been restated to reflect changes in methodology. Therefore, your historic service scores may differ from previous reports.

Examples of some trends in key service measures included in your Service Score:

Select Key Service Metrics	You				Peer Avg
	2016	2017	2018	2019	
<u>Member Contacts</u>					
• % of calls resulting in undesired outcomes (busy signals, messages, hang-ups)	19%	13%	19%	18%	14%
• Average total wait time including time negotiating auto attendants (in secs).	287	193	247	228	254
<u>Website</u>					
• Can members access their own data in a secure environment?	No	No	No	No	93% Yes
• Do you have an online calculator linked to member data?	No	No	No	No	80% Yes
• # of other website tools offered such as changing address information, registering for counseling sessions and/or workshops, viewing or printing tax receipts, etc.	3	3	3	3	14
<u>1-on-1 Counseling and Member Presentations</u>					
• % of your active membership that attended a 1-on-1 counseling session	2.6%	3.1%	3.7%	3.1%	3.5%
• % of your active membership that attended a presentation	7.3%	5.9%	5.5%	6.5%	6.2%
<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 check?	99.0%	99.0%	99.9%	100.0%	86.7%
<u>Member Statements</u>					
• How current is an active member's data in the statements that the member receives?	3.0 mos	3.0 mos	3.0 mos	3.0 mos	2.3 mos
• Do statements provide an estimate of the future pension entitlement?	Yes	Yes	Yes	Yes	73% Yes

Costs are impacted by system complexity. Your total complexity of 41 was equal to the peer median.

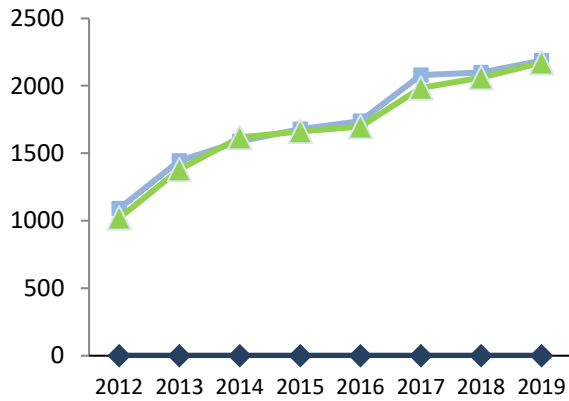


Complexity Score by Cause		
Cause	You	Peer Median
Pension Payment Options	49	43
Customization Choices	8	8
Multiple Plan Types and Overlays	50	31
Multiple Benefit Formula	46	57
External Reciprocity	35	35
COLA Rules	28	18
Contribution Rates	24	43
Variable Compensation	85	100
Service Credit Rules	53	49
Divorce Rules	100	55
Purchase Rules	49	67
Refund Rules	8	55
Disability Rules	72	69
Total Complexity	41	41

Digital volumes have doubled whereas calls, emails and mail volumes have decreased.

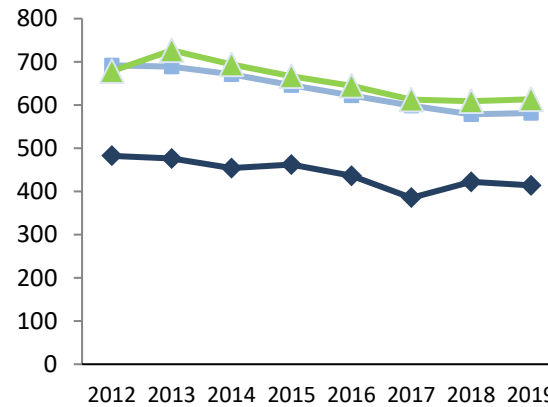
Website - Total Secure Area Visits

per 1,000 active members and annuitants



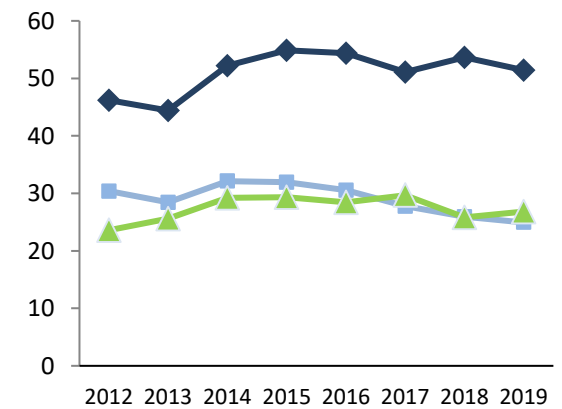
Incoming Calls and Emails

per 1,000 active members and annuitants



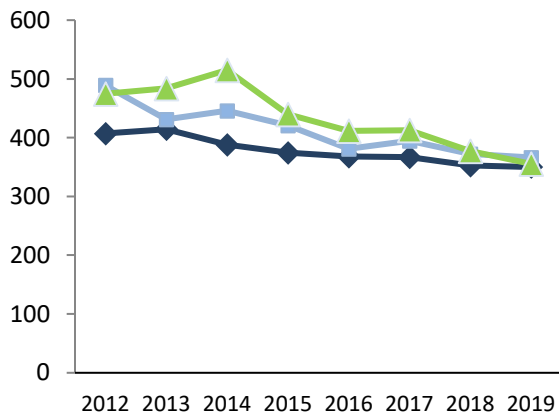
Written Estimates

per 1,000 active members and annuitants



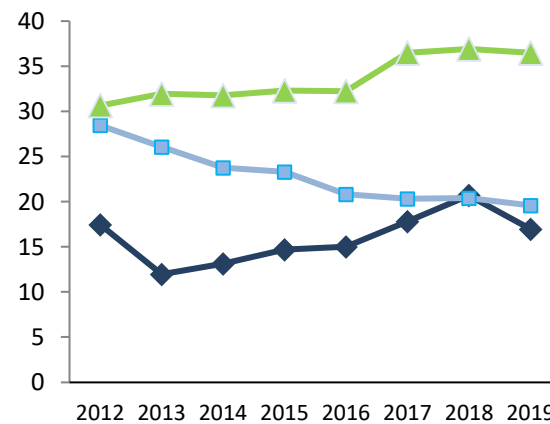
Incoming Mail

per 1,000 active members and annuitants



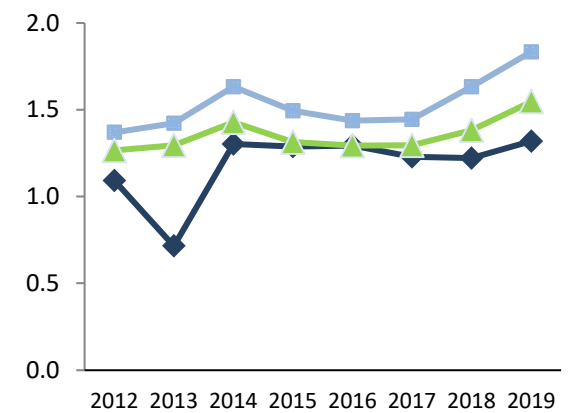
Members Counseled 1-on-1

per 1,000 active members and annuitants



Member Presentations

per 1,000 active members and annuitants



◆ You ■ Peer Avg ▲ All Avg

2

Peer Characteristics

This section contains:

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

Your peer group consists of 15 peers.

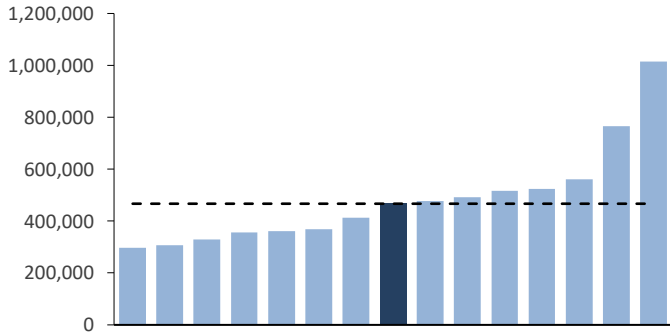
The most relevant comparisons are to systems similar to you in total membership and nationality. Your peer group consists of the following 15 systems:

Custom Peer Group for Wisconsin DETF			
	Active		
	Members	Annuitants	Total
NYSLRS	533,610	481,795	1,015,405
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	303,920	212,953	516,873
Pennsylvania PSERS	255,749	237,339	493,088
Michigan ORS	199,364	276,726	476,090
Wisconsin DETF	257,911	209,059	466,970
Indiana PRS	252,096	160,008	412,104
STRS Ohio	209,870	159,857	369,727
Colorado PERA	241,556	120,872	362,428
Arizona SRS	207,119	150,314	357,433
Oregon PERS	176,704	151,980	328,684
Illinois MRF	176,532	131,507	308,039
Iowa PERS	172,304	123,781	296,085
Peer Median	252,096	193,984	466,970
Peer Avg	274,966	208,661	483,627

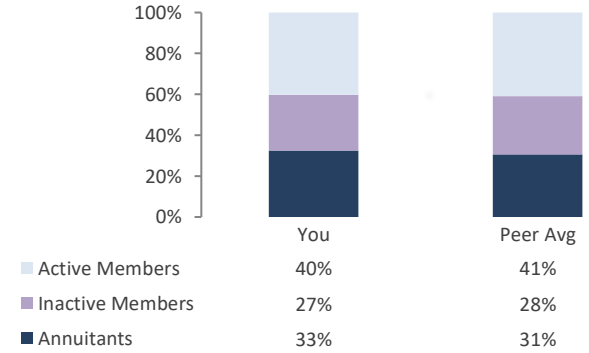
Inactive members are not considered when selecting peers because they are excluded when determining cost per member. They are excluded when determining cost per member because they are much less costly to administer than either active members or annuitants.

Graphical summary of peer characteristics

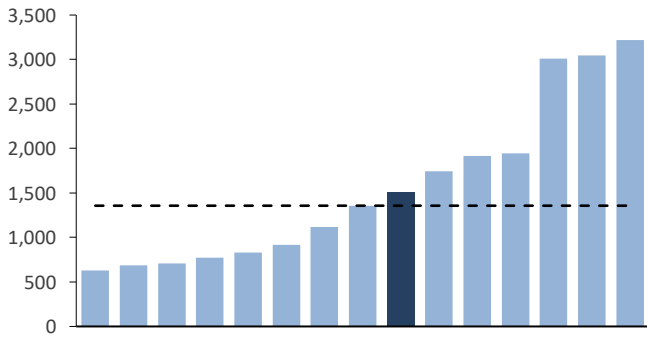
Active Members and Annuitants



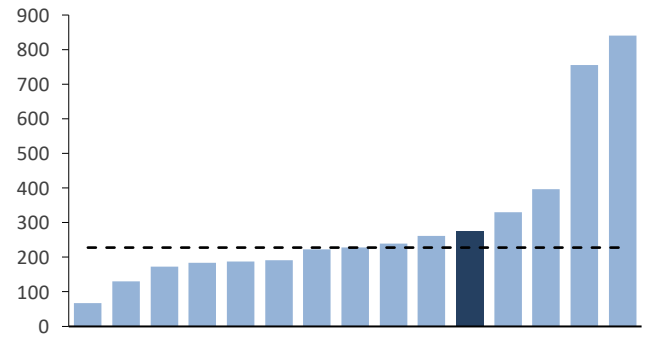
Membership Mix



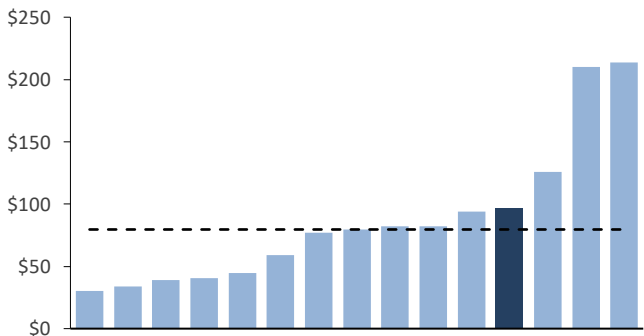
Number of Employers



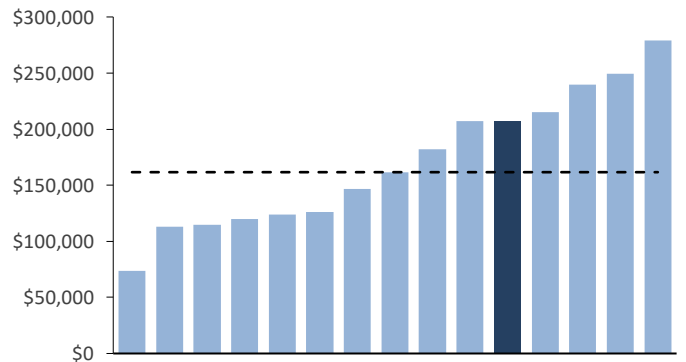
Pension Administration FTE



Total Assets in \$ billions



Total Assets per Active Member and Annuitant



You
 Peer
 Peer Median

Profiles of the 47 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																				
Alberta Teachers	42	28	12			X							X							
APS	217	107	51	X		X	X	X	X				X							
BC Pension Corporation	334	199	82	X	X	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	163	68	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	185	142	65	X	X	X							X							
OPTrust	48	38	8	X								X	X							
RCMP	22	21	1	X			X						X							
SHEPP	36	18	3						X			X	X							
Scandinavia																				
ATP	3,161	1,060	980	X																
The Netherlands																				
ABP	1,129	887	952									X	X							
PFZW	1,238	463	1,096									X	X							

Profiles of the 47 benchmarking participants

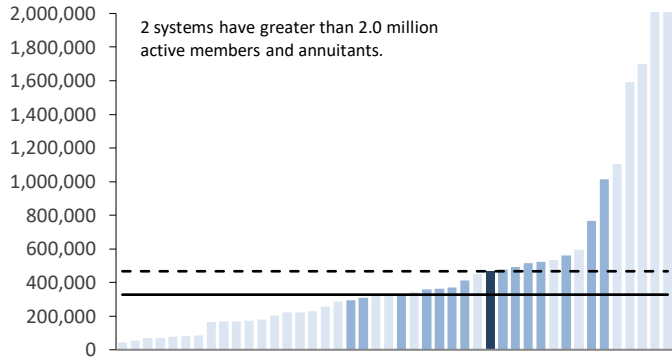
continued

Participant	Members by Type (000s)			Member Groups								Plan Types								
	Active Members	Annuity	Inactive Members	City or County	State/ County	Teachers	School	Police and/or Fire	Participating Local	Other (Judges etc)	Corporate	Industry	DB	Cash Balance	DB/ Cash Balance	DB/ Money Match	Drop	DC	Hybrid DB/ DC	Administer
United States																				
Arizona SRS	207	150	233	X	X	X		X	X				X	X						X
CalPERS	877	715	419	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							
Florida RS	646	458	117	X	X	X	X	X	X				X			X	X			
Idaho PERS*																				
Illinois MRF	177	132	120				X	X	X				X							
Indiana PRS	252	160	2	X	X	X	X	X	X				X			X	X	X		
Iowa PERS	172	124	72	X	X	X	X	X	X				X							
KPERS	154	103	61	X	X	X	X	X	X				X	X		X				
LACERA	99	68	15	X				X	X				X							X
Maryland SRPS*																				
Michigan ORS	199	277	580		X	X	X	X	X				X				X	X		X
Nevada PERS	109	70	17		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							
Ohio PERS	304	213	628		X			X	X				X	X				X	X	
Oregon PERS	177	152	71	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							
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*																				
Utah RS	97	68	55	X	X	X	X	X	X				X				X	X		
Virginia RS	346	215	162	X	X	X	X	X	X				X						X	
Washington State DRS	330	194	286	X	X	X	X	X	X				X					X		
Wisconsin DETF	258	209	175	X	X	X	X	X	X				X							X

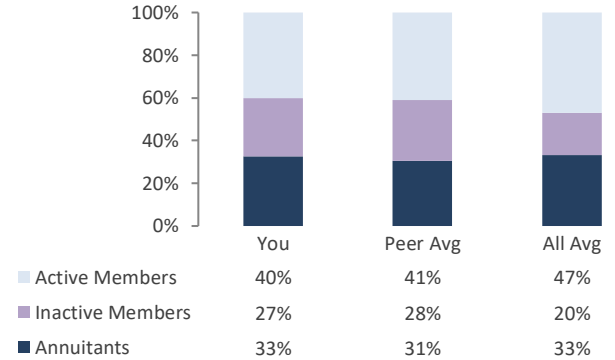
* We have not yet received clean data from the 3 systems identified with an asterisk. Therefore, they have been excluded from this analysis.

Graphical summary of all participant characteristics

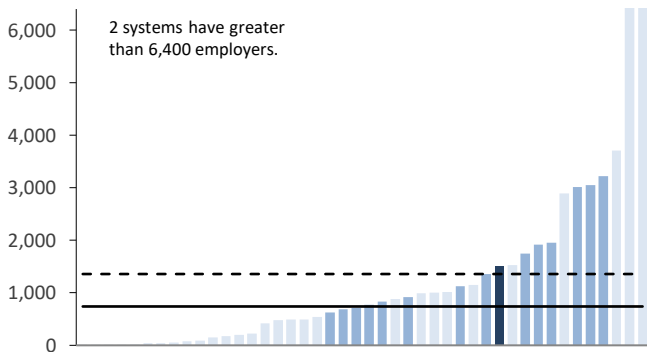
Active Members and Annuitants



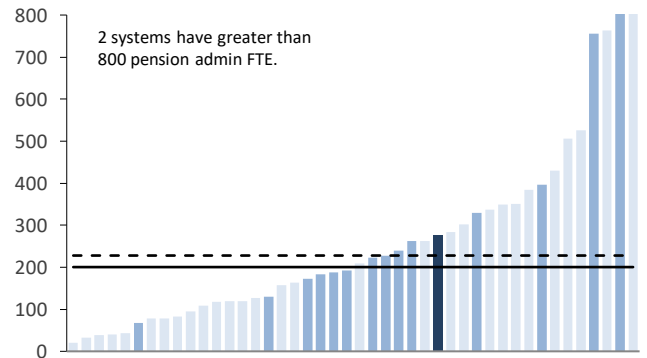
Membership Mix



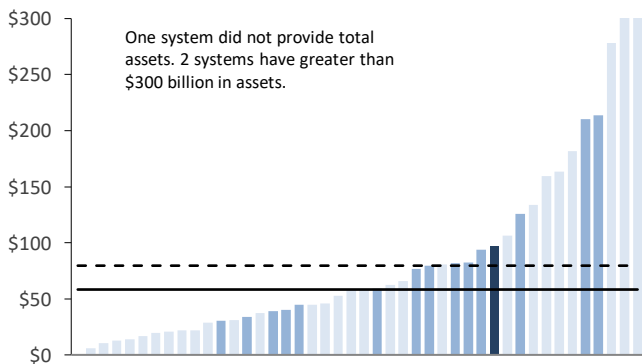
Number of Employers



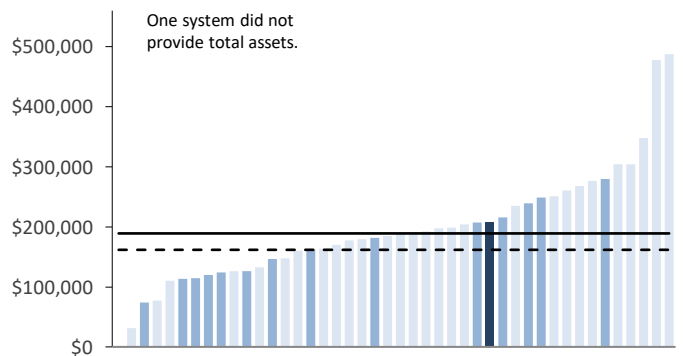
Pension Administration FTE



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 \$40.6 million or \$87 per active member and annuitant.

Activity ¹	Cost	\$s per Active Member and			% of Total Pension		
	\$000s	Annuitant			Administration Cost		
	You	You	Peer Avg	All Avg	You	Peer Avg	All Avg
1. Member Transactions							
a. Pension Payments	913	1.96	3.85	4.36	2.3%	3.9%	3.6%
b. Pension Inceptions	1,133	2.43	3.48	4.93	2.8%	3.5%	4.1%
c. Refunds, Withdrawals, and Transfers-out	304	0.65	1.64	2.85	0.8%	1.7%	2.4%
d. Purchases and Transfers-in	130	0.28	1.28	3.12	0.3%	1.3%	2.6%
e. Disability	<u>620</u>	<u>1.33</u>	<u>2.39</u>	<u>2.65</u>	<u>1.5%</u>	<u>2.4%</u>	<u>2.2%</u>
	3,101	6.64	12.63	17.91	7.6%	12.9%	14.9%
2. Member Communication							
a. Call Center	2,558	5.48	7.17	6.10	6.3%	7.3%	5.1%
b. Mail Room, Imaging	1,193	2.55	2.19	2.95	2.9%	2.2%	2.5%
c. 1-on-1 Counseling	755	1.62	2.25	2.31	1.9%	2.3%	1.9%
d. Member Presentations	488	1.05	1.76	1.44	1.2%	1.8%	1.2%
e. Written Pension Estimates	985	2.11	1.09	1.52	2.4%	1.1%	1.3%
f. Mass Communication	<u>1,512</u>	<u>3.24</u>	<u>3.38</u>	<u>4.13</u>	<u>3.7%</u>	<u>3.4%</u>	<u>3.4%</u>
	7,491	16.04	17.84	18.45	18.5%	18.2%	15.3%
3. Collections and Data Maintenance							
a. Data and Money from Employers	876	1.88	4.21	4.36	2.2%	4.3%	3.6%
b. Service to Employers	1,530	3.28	2.03	2.26	3.8%	2.1%	1.9%
c. Data Not from Employers	<u>544</u>	<u>1.16</u>	<u>1.31</u>	<u>1.65</u>	<u>1.3%</u>	<u>1.3%</u>	<u>1.4%</u>
	2,949	6.32	7.55	8.27	7.3%	7.7%	6.9%
4. Governance and Financial Control							
a. Financial Administration and Control	975	2.09	3.04	4.92	2.4%	3.1%	4.1%
b. Board, Strategy, Policy	1,169	2.50	2.37	4.74	2.9%	2.4%	3.9%
c. Government and Public Relations	<u>194</u>	<u>0.42</u>	<u>1.18</u>	<u>1.66</u>	<u>0.5%</u>	<u>1.2%</u>	<u>1.4%</u>
	2,337	5.01	6.59	11.32	5.8%	6.7%	9.4%
5. Major Projects							
a. Amortization of non-IT Major Projects	0	0.00	0.00	0.21	0.0%	0.0%	0.2%
b. Non-IT Major Projects (if you don't capitalize)	0	0.00	1.42	1.61	0.0%	1.4%	1.3%
c. Amortization of IT Major Projects	2,864	6.13	2.28	2.89	7.1%	2.3%	2.4%
d. IT Major Projects (if you don't capitalize)	<u>0</u>	<u>0.00</u>	<u>3.84</u>	<u>4.90</u>	<u>0.0%</u>	<u>3.9%</u>	<u>4.1%</u>
	2,864	6.13	7.55	9.61	7.1%	7.7%	8.0%
6. Information Technology							
a. IT Strategy, Database Management and Applications	12,457	26.68	19.50	20.24	30.7%	19.9%	16.8%
b. IT Desktop, Networks, Telecom	<u>2,941</u>	<u>6.30</u>	<u>8.53</u>	<u>8.69</u>	<u>7.2%</u>	<u>8.7%</u>	<u>7.2%</u>
	15,397	32.97	28.03	28.94	38.0%	28.5%	24.0%
7. Support Services and Other							
a. Building and Utilities	1,842	3.94	5.50	8.24	4.5%	5.6%	6.8%
b. Human Resources	1,069	2.29	2.11	3.76	2.6%	2.1%	3.1%
c. Actuarial	347	0.74	1.77	2.14	0.9%	1.8%	1.8%
d. Legal and Rule Interpretation	1,348	2.89	3.31	4.89	3.3%	3.4%	4.1%
e. Internal and External Audit	734	1.57	1.83	2.81	1.8%	1.9%	2.3%
f. Pay-as-you-go Benefits for Retired Staff	0	0.00	0.89	0.72	0.0%	0.9%	0.6%
g. Other Support Services	<u>1,089</u>	<u>2.33</u>	<u>2.61</u>	<u>3.29</u>	<u>2.7%</u>	<u>2.7%</u>	<u>2.7%</u>
	6,429	13.77	18.01	25.84	15.8%	18.3%	21.5%
Total Pension Administration ²	40,568	86.88	98.20	120.34	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).

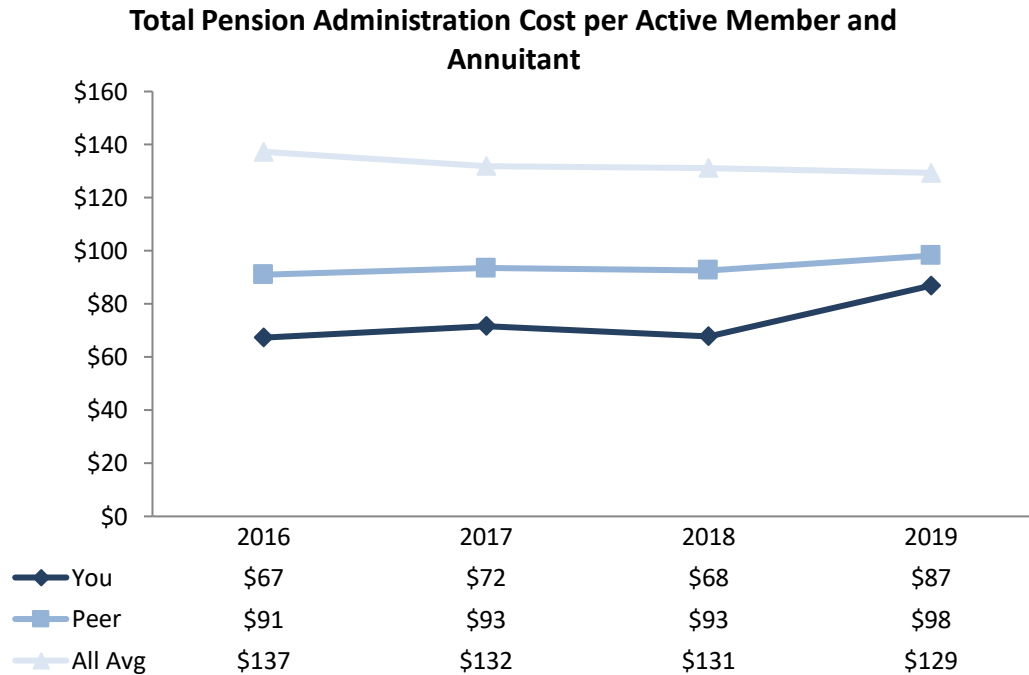
Activity ¹	\$ Cost per Active Member and Annuitant							All Participants					
	You	Avg	Max	Peer				Avg	Max	Q3	Med	Q1	Min
1. Member Transactions													
a. Pension Payments	1.96	3.85	9.62	5.00	3.66	1.82	0.62	4.36	14.69	5.55	3.43	1.80	0.06
b. Pension Inceptions	2.43	3.48	9.71	3.95	2.66	2.12	1.17	4.93	19.33	6.51	3.43	2.42	0.17
c. Refunds, Withdrawals, and Transfers-out	0.65	1.64	4.42	2.13	1.22	0.55	0.15	2.85	13.50	4.02	1.76	0.64	0.11
d. Purchases and Transfers-in	0.28	1.28	5.44	1.58	1.06	0.36	0.23	3.12	15.23	4.02	1.42	0.56	0.00
e. Disability	<u>1.33</u>	<u>2.39</u>	6.73	3.66	2.31	0.71	0.32	<u>2.77</u>	56.54	2.38	0.53	0.12	0.00
	6.64	12.63	31.09	15.23	9.63	6.81	4.06	17.91	96.84	20.59	12.25	7.38	0.33
2. Member Communication													
a. Call Center	5.48	7.17	21.06	8.13	5.71	4.97	1.95	6.10	22.53	7.31	5.18	3.29	0.00
b. Mail Room, Imaging	2.55	2.19	4.97	3.14	1.50	1.10	0.69	2.95	24.62	3.77	1.52	0.96	0.07
c. 1-on-1 Counseling	1.62	2.25	6.66	2.36	1.87	1.49	0.29	2.31	7.68	3.09	1.61	0.56	0.00
d. Member Presentations	1.05	1.76	6.04	1.88	0.99	0.74	0.33	1.44	7.38	1.56	0.95	0.60	0.00
e. Written Pension Estimates	2.11	1.09	2.83	1.41	0.85	0.55	0.00	1.52	5.01	2.08	1.10	0.64	0.00
f. Mass Communication	<u>3.24</u>	<u>3.38</u>	7.01	4.66	2.95	2.46	1.02	<u>4.13</u>	21.07	4.85	3.53	2.16	0.17
	16.04	17.84	42.26	22.02	16.04	10.85	8.55	18.45	80.49	22.55	15.98	11.17	0.45
3. Collections and Data Maintenance													
a. Data and Money from Employers	1.88	4.21	16.53	5.28	2.35	1.69	0.75	4.36	16.53	5.23	3.15	2.11	0.40
b. Service to Employers	3.28	2.03	4.57	2.76	1.52	1.18	0.52	2.26	9.27	3.05	2.00	1.18	0.00
c. Data Not from Employers	<u>1.16</u>	<u>1.31</u>	2.58	1.87	1.44	0.61	0.31	<u>1.65</u>	7.17	2.08	1.38	0.66	0.00
	6.32	7.55	20.51	9.27	6.32	3.87	1.63	8.27	20.51	10.61	7.55	5.16	0.46
4. Governance and Financial Control													
a. Financial Administration and Control	2.09	3.04	6.76	3.56	3.06	2.13	0.92	4.92	21.55	5.55	3.93	2.46	0.26
b. Board, Strategy, Policy	2.50	2.37	6.94	2.89	2.42	1.31	0.13	4.74	19.29	6.73	3.17	1.53	-1.95
c. Government and Public Relations	<u>0.42</u>	<u>1.18</u>	4.00	1.47	0.78	0.21	0.10	<u>1.66</u>	10.59	2.23	1.13	0.60	0.10
	5.01	6.59	17.70	7.97	5.90	4.38	1.26	11.32	31.93	17.67	9.23	4.95	0.91
5. Major Projects													
a. Amortization of non-IT Major Projects	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.21	5.56	0.00	0.00	0.00	0.00
b. Non-IT Major Projects (if you don't capitalize)	0.00	1.42	6.83	1.37	0.04	0.00	0.00	1.61	15.10	1.51	0.00	0.00	0.00
c. Amortization of IT Major Projects	6.13	2.28	11.08	4.23	0.42	0.00	0.00	2.95	27.45	4.23	0.00	0.00	0.00
d. IT Major Projects (if you don't capitalize)	<u>0.00</u>	<u>3.84</u>	11.49	6.70	2.05	0.00	0.00	<u>4.90</u>	59.99	6.04	1.54	0.00	0.00
	6.13	7.55	18.32	10.81	6.13	3.54	0.00	9.61	69.79	11.71	5.98	1.47	0.00
6. Information Technology													
a. IT Strategy, Database, Applications (excl. major projects)	26.68	19.50	40.00	24.98	20.89	12.10	6.12	20.24	48.16	26.92	18.52	12.08	2.18
b. IT Desktop, Networks, Telecom	<u>6.30</u>	<u>8.53</u>	12.58	11.51	9.82	6.24	1.99	<u>8.69</u>	31.06	11.21	7.89	4.89	0.26
	32.97	28.03	50.85	34.40	25.92	18.63	17.03	28.94	72.61	36.10	25.30	18.28	2.44
7. Support Services and Other													
a. Building and Utilities	3.94	5.50	15.23	5.73	3.94	2.89	1.67	8.24	33.34	9.99	5.33	3.06	0.27
b. Human Resources	2.29	2.11	7.93	2.45	2.05	1.08	0.45	3.76	21.37	4.66	2.56	1.08	0.10
c. Actuarial	0.74	1.77	6.87	1.91	1.33	0.95	0.74	2.14	6.87	2.59	1.49	0.80	0.00
d. Legal and Rule Interpretation	2.89	3.31	6.54	5.01	2.44	2.00	1.35	4.89	35.47	5.69	3.30	2.06	0.12
e. Internal and External Audit	1.57	1.83	4.35	2.20	1.57	0.98	0.66	2.81	27.64	3.09	1.81	1.41	0.06
f. Pay-as-you-go Benefits for Retired Staff	0.00	0.89	11.63	0.09	0.00	0.00	0.00	0.72	11.63	0.06	0.00	0.00	0.00
g. Other Support Services	<u>2.33</u>	<u>2.61</u>	6.22	3.98	2.33	1.46	0.00	<u>3.29</u>	15.91	4.49	2.20	0.74	0.00
	13.77	18.01	58.77	21.18	15.46	11.58	6.28	25.84	117.57	29.10	21.44	11.96	0.99
Total Pension Administration²	86.88	98.20	235.94	104.01	88.50	75.32	53.02	120.34	399.92	143.88	97.74	77.47	7.05

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

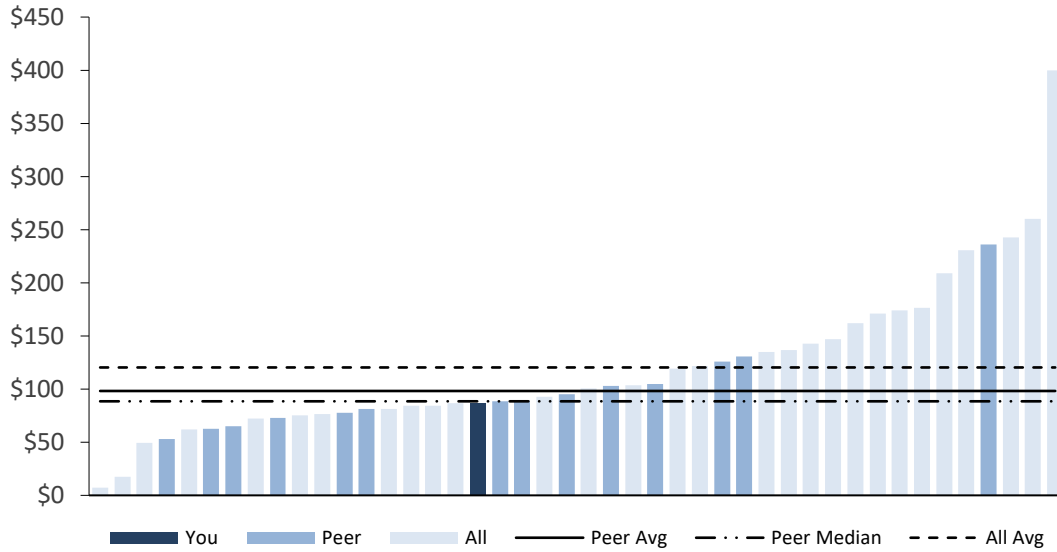
Your total pension administration costs have grown at a compound annual rate of 8.9% between 2016 and 2019. This was above the 2.6% average for your peers that have participated for 4 consecutive years.



1. Trend analysis is based on systems that have participated for 4-consecutive years (15 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.

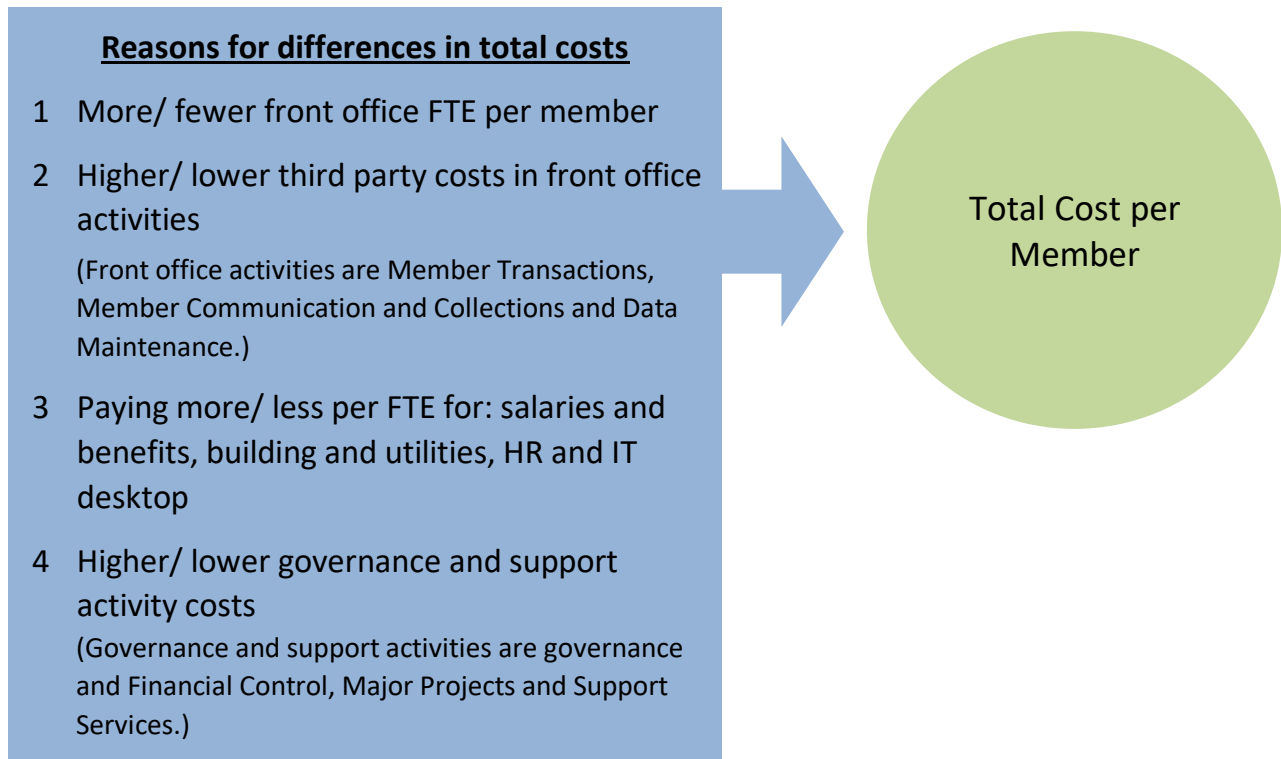
Your total pension administration cost was \$87 per active member and annuitant. This was \$11 below the peer average of \$98 (and \$1 below the peer median of \$88).

Pension Administration Cost Per Active Member and Annuitant



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 \$11 below the peer average.

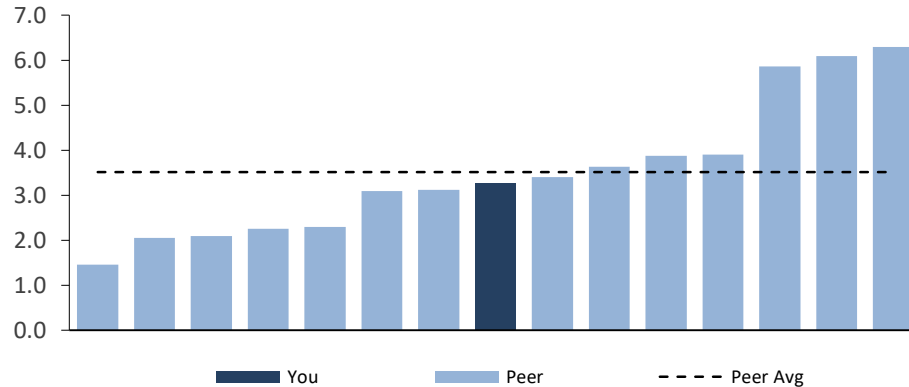
Reason	You	Peer Avg	Impact \$s per active member and annuitant
1 Fewer front office FTE per 10,000 members	3.3	3.5	-\$3
2 Lower third party costs per member in the front office	\$3	\$6	-\$4
3 Lower costs per FTE			
Front office Salaries and Benefits	\$81,002	\$90,027	
Governance and support Salaries and Benefits	<u>\$121,085</u>	<u>\$127,100</u>	
Blended Average	\$96,717	\$106,366	
Building and Utilities	\$7,338	\$10,284	
HR	\$4,258	\$3,947	
IT Desktop, Networks, Telecom	<u>\$11,715</u>	<u>\$15,959</u>	
Total	\$120,027	\$136,556	-\$9
4 Higher support costs per member ¹			
Governance and Financial Control	\$6	\$7	
Major Projects	\$6	\$8	
IT Strategy, Database, Applications	\$30	\$21	
Actuarial, Legal, Audit, Other	<u>\$9</u>	<u>\$11</u>	
Total	\$50	\$46	\$4
Total			-\$11

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 3.3 front office FTE per 10,000 members was 7% 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 fewer front office FTE per member decreased your total cost per member by \$3 relative to the peer average.

Front office FTE per 10,000 Active Members and Annuitants



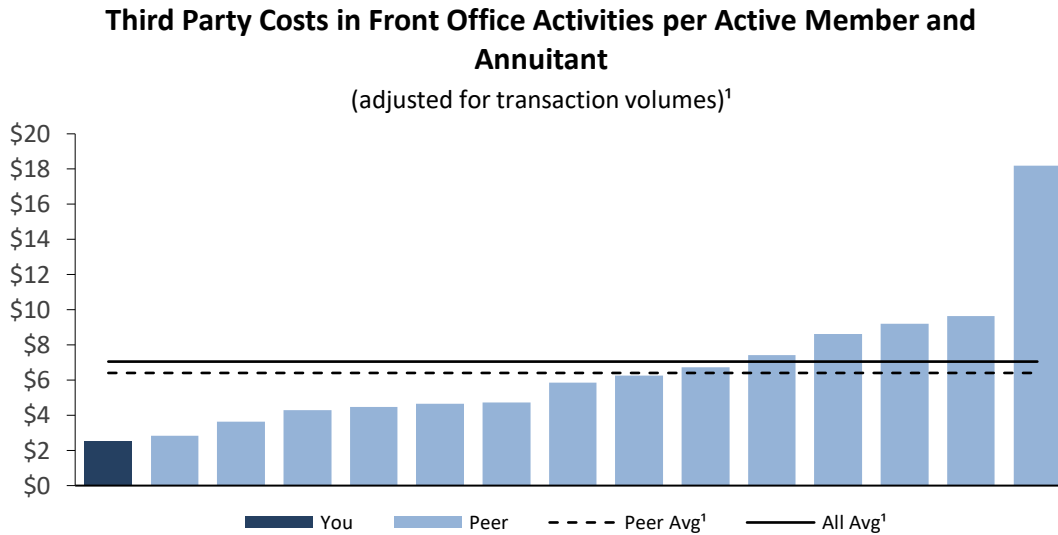
Your front-office FTE per 10,000 members is a function of two components: volume per 1,000 active members and annuitants (workloads) and activity volume per FTE (productivity).

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

Activity	Volume Description	Volume per 1,000 Active Members and Annuitants			Activity Volume per FTE		
		You	Peer Avg	+/-	You	Peer Avg	+/-
Member Transactions							
Pension Payments	Annuitants	448	429	19	19,967	30,562	-10,595
New Payee Inceptions	New Inceptions	21	24	-2	693	801	-108
Refunds & Transfers-out	Refunds	18	23	-5	2,354	2,943	-589
Purchases and Transfers-in	Purchases	0.8	5.6	-4.8	257	490	-233
Disability Applications	Disability Applications	4.1	1.7	2.4	246	181	65
Member Communication							
Calls and Emails	Calls and Emails	414	582	-168	5,865	8,952	-3,087
Incoming Mail	Incoming Mail	350	366	-16	15,699	26,536	-10,838
Members Counseled 1-on-1	Members Counseled	17	20	-3	856	1,005	-148
Member Presentations	Member Presentations	1.3	1.8	-0.5	107	149	-43
Written Estimates	Written Estimates	51	25	26	1,992	2,754	-762
Collections & Data Maintenance							
Data & Money from Employers	Active Members	552	571	-19	23,575	25,333	-1,758
Service to Employers	Active Members	552	571	-19	13,971	39,937	-25,966
Data Not from Employers	All Members	1,375	1,465	-91	98,601	263,456	-164,855
Weighted Total		36.7	36.7	0.1	112,412	104,881	7,531

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

Your third party costs in the front office activities were \$3 per member which was 60% below the adjusted¹ peer average of \$6. Your lower third party costs decreased your total cost per member by \$4 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	\$81,002	\$90,027
Governance and support	<u>\$121,085</u>	<u>\$127,100</u>
Blended Average	\$96,717	\$104,710
Pay-as-you-go Benefits for Retired Staff	\$0	\$1,657
Building and Utilities	\$7,338	\$10,284
Human Resources	\$4,258	\$3,947
IT Desktop, Networks, Telecom	\$11,715	\$15,959
Total	\$120,027	\$136,556

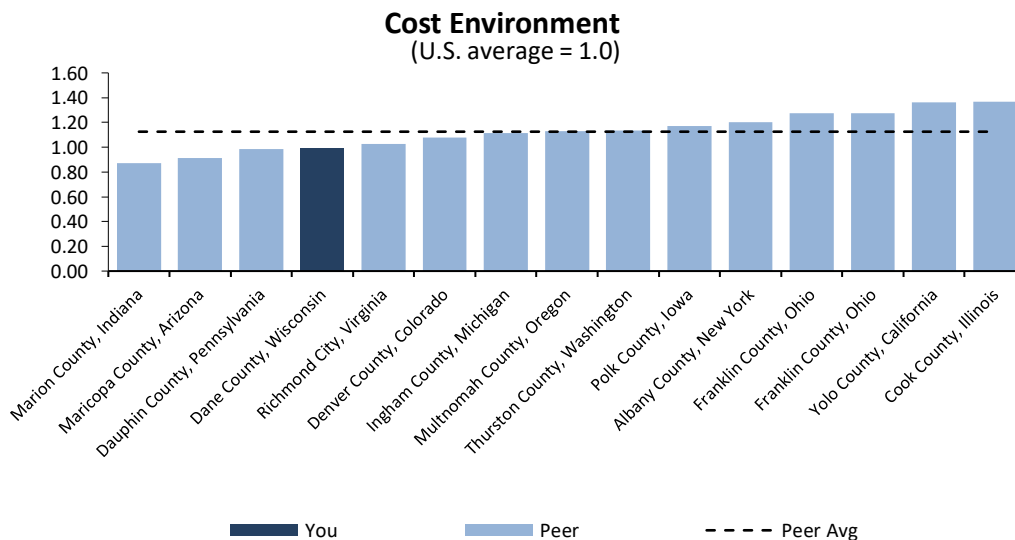
Your cost per FTE for salaries and benefits, building and utilities, human resources and IT desktop of \$120,027 was 12% below the FTE-weighted peer average of \$136,556. Your lower costs per FTE decreased your total cost per member by \$9 relative to the peer average.

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 12% below the peer average.



Reason 4: You paid more for governance and support activities.

Your adjusted¹ cost per active member and annuitant of \$50 for governance and support activities was above the peer average of \$46. Paying more for Governance and support activities increased your total cost per member by \$4 relative to the peer average.

Governance and support activities	Cost per Active Member and Annuitant		Adjusted ¹ Cost per Active Member and Annuitant	
	You	Peer Avg	You	Peer Avg
Governance and Financial Control	\$5	\$7	\$6	\$7
Major Projects	\$6	\$8	\$6	\$8
IT Strategy, Database, Applications (excl. major)	\$27	\$19	\$30	\$21
Actuarial, Legal, Audit, Other Support Services	\$8	\$10	\$9	\$11
Support Services that Vary per FTE	\$5	\$6		
Total	\$50	\$49	\$50	\$46

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

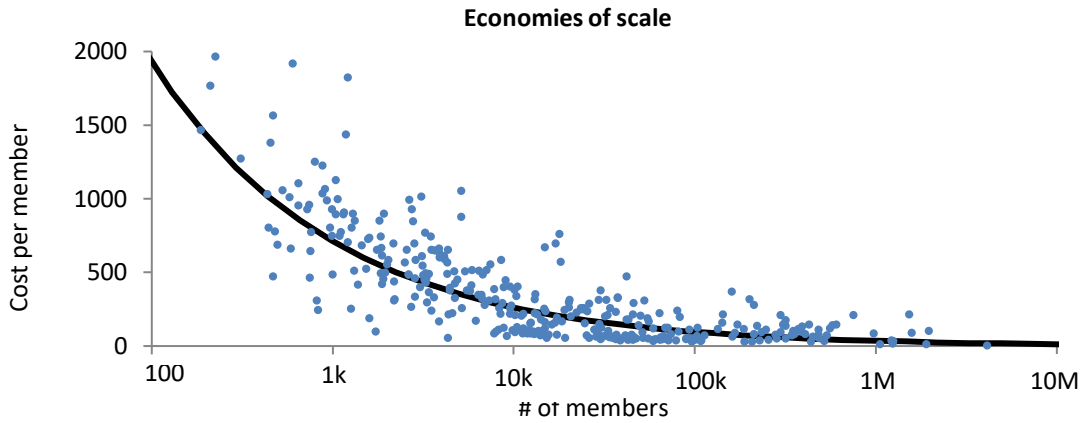
Differences in the adjusted cost per member for non-administration activities reflects differences in:

- 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

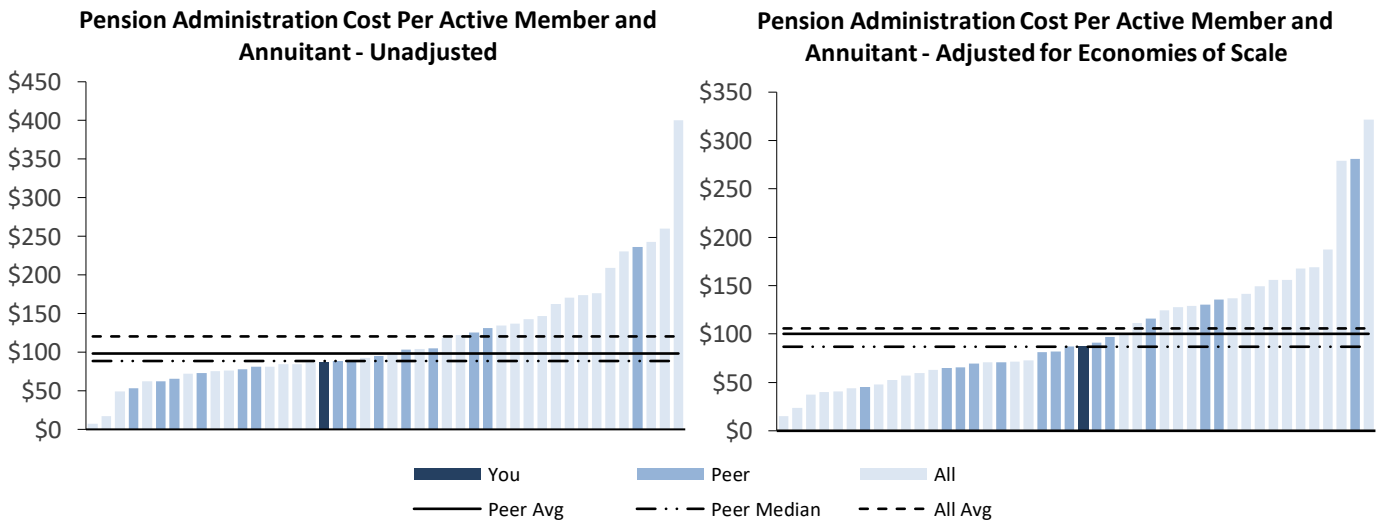
Your peer group is comprised of funds as close to your size as possible because size matters. According to CEM research using cost and membership data from 370 global pension plans, approximately 70% of differences in cost per member can be explained by differences in size.



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%	116,743	\$141	\$54
-50%	233,485	\$111	\$24
-25%	350,228	\$96	\$9
0%	466,970	\$87	\$0
25%	583,713	\$80	-\$7
50%	700,455	\$75	-\$12
75%	817,198	\$71	-\$15

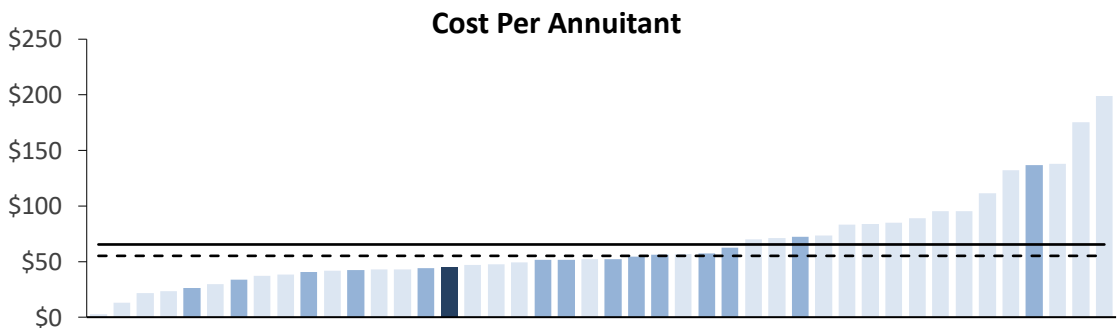
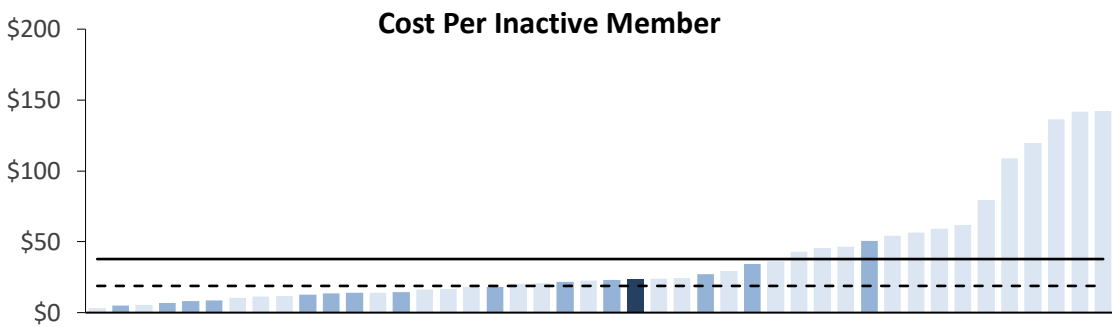
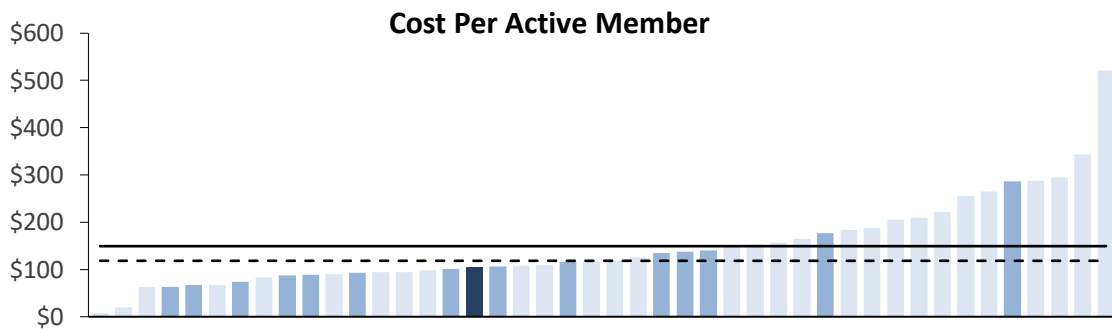
After adjusting your peers' costs for their scale advantage/disadvantage relative to your system, the peer average cost increased from \$98 per member to \$100 per member.



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	Peer				All			
		Average	Max	Median	Min	Average	Max	Median	Min
Active Member	\$105	\$118	\$287	\$105	\$63	\$149	\$521	\$117	\$8
Inactive Member	\$24	\$19	\$51	\$14	\$5	\$38	\$142	\$23	\$3
Annuitant	\$45	\$55	\$137	\$52	\$26	\$65	\$199	\$52	\$3



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

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 ¹	\$000s attributed to:			% attributed to:		
		Active	Inactive	Annuitant	Active	Inactive	Annuitant
1. Member Transactions							
a. Pension Payments	913	0	0	913	0.0%	0.0%	100.0%
b. Pension Inceptions	1,133	581	380	171	51.3%	33.6%	15.1%
c. Refunds, Withdrawals, and Transfers-out	304	155	150	0	50.8%	49.2%	0.0%
d. Purchases and Transfers-in	130	130	0	0	100.0%	0.0%	0.0%
e. Disability	620	620	0	0	100.0%	0.0%	0.0%
2. Member Communication							
a. Call Center	2,558	1,362	92	1,104	53.2%	3.6%	43.2%
b. Mail Room, Imaging	1,193	635	43	515	53.2%	3.6%	43.2%
c. 1-on-1 Counseling	755	690	65	0	91.4%	8.5%	0.1%
d. Member Presentations	488	446	42	0	91.4%	8.5%	0.1%
e. Written Pension Estimates	985	671	314	0	68.1%	31.9%	0.0%
f. Mass Communication	1,512	1,097	149	267	72.5%	9.8%	17.6%
3. Collections and Data Maintenance							
a. Data and Money from Employers	876	876	0	0	100.0%	0.0%	0.0%
b. Service to Employers	1,530	1,530	0	0	100.0%	0.0%	0.0%
c. Data Not from Employers	544	236	140	167	43.4%	25.8%	30.8%
4. Governance and Financial Control							
a. Financial Administration and Control	975	650	99	226	66.7%	10.1%	23.2%
b. Board, Strategy, Policy	1,169	779	119	271	66.7%	10.1%	23.2%
c. Government and Public Relations	194	129	20	45	66.7%	10.1%	23.2%
5. Major Projects							
a. Amortization of non-IT Major Projects	0	0	0	0	66.7%	10.1%	23.2%
b. Non-IT Major Projects (if you don't capitalize)	0	0	0	0	66.7%	10.1%	23.2%
c. Amortization of IT Major Projects	2,864	1,909	291	664	66.7%	10.1%	23.2%
d. IT Major Projects (if you don't capitalize)	0	0	0	0	66.7%	10.1%	23.2%
6. Information Technology							
a. IT Strategy, Database, Applications (excl. major projects)	12,457	8,305	1,264	2,887	66.7%	10.1%	23.2%
b. IT Desktop, Networks, Telecom	2,941	1,961	298	682	66.7%	10.1%	23.2%
7. Support Services and Other							
a. Building and Utilities	1,842	1,228	187	427	66.7%	10.1%	23.2%
b. Human Resources	1,069	713	108	248	66.7%	10.1%	23.2%
c. Actuarial	347	231	35	80	66.7%	10.1%	23.2%
d. Legal and Rule Interpretation	1,348	899	137	312	66.7%	10.1%	23.2%
e. Internal and External Audit	734	489	74	170	66.7%	10.1%	23.2%
f. Pay-as-you-go Benefits for Retired Staff	0	0	0	0	66.7%	10.1%	23.2%
g. Other Support Services	1,089	726	111	252	66.7%	10.1%	23.2%
Total Pension Administration Cost (A)	40,568	27,049	4,117	9,402	66.7%	10.1%	23.2%
# of members by type (B)		257,911	174,922	209,059			
Cost per Member Type (A ÷ B)		\$105	\$24	\$45			

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

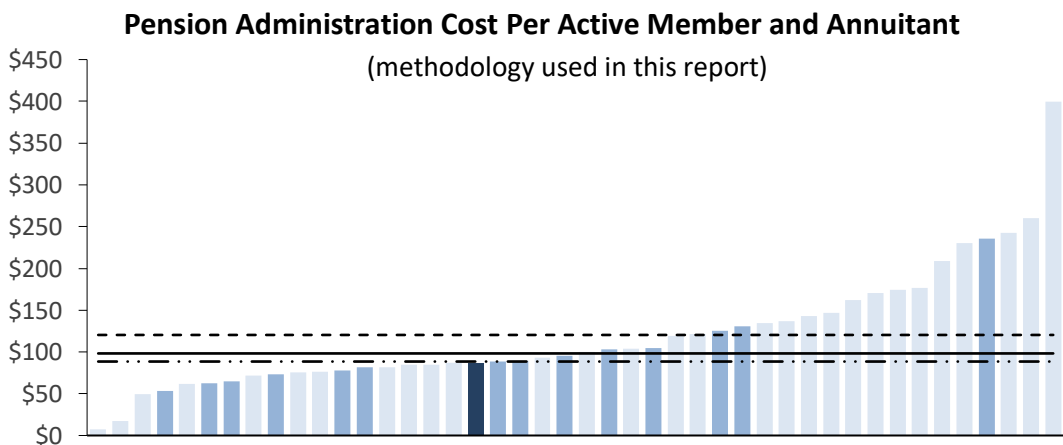
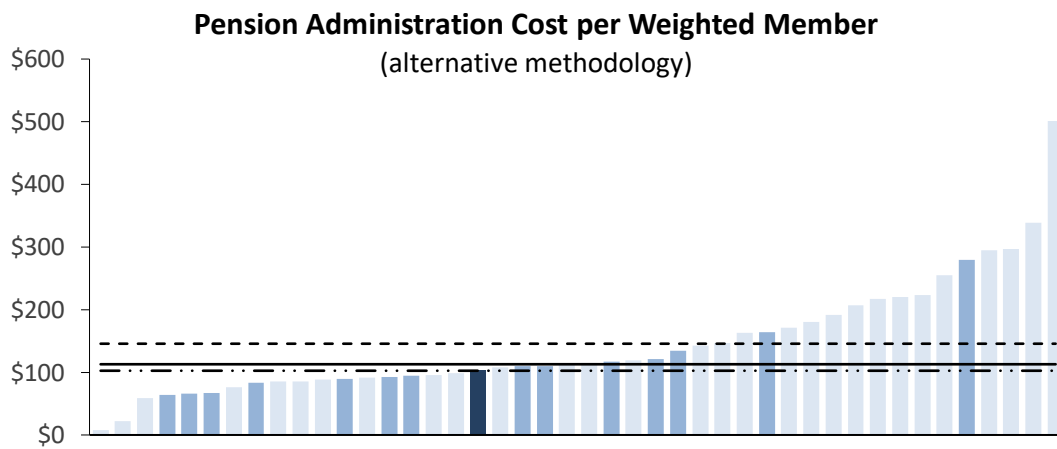
Activity	Attribution Method
1a. Pension Payments	100% annuitants
1b. Pension Inceptions	Pro rata based on weighted inceptions: <ul style="list-style-type: none"> • service retirements of active members weighted 100% • new inceptions annuitants weighted 50% + changes in gross caused by annuitants circumstances weighted 25% • retirements of inactive members weighted 70%
1c. Refunds, Withdrawals, and Transfers-out	Pro rata based on: <ul style="list-style-type: none"> • active members weighted 70% • inactive members weighted 100%
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"> • active members weighted 100% • annuitants weighted 100% • inactive members weighted 10%
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"> • service retirements of active members weighted 100% • retirements of inactive members weighted 10% • survivor inceptions of annuitants weighted 5%
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"> • service retirements of active members weighted 100% • retirements of inactive members weighted 50%
2f. Mass Communication	Pro rata based on weighted membership: <ul style="list-style-type: none"> • active members weighted 100% • annuitants weighted up to 30% (20% for website, etc + 10% if you send them newsletters) • inactive members weighted up to 30% (10% for website, etc + 10% if you send them member statements annually + 10% if you send them newsletters)
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"> • active members weighted up to 100% (33% because of divorce + 33% if you maintain their addresses + 33% if you collect contributions directly from members) • annuitants weighted up to 58% (25% because of divorce + 33% for maintaining their addresses) • inactive members weighted up to 58% (25% because of divorce + 33% if you maintain their addresses)
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 \$102.52. This was below the peer average of \$112.88. 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.

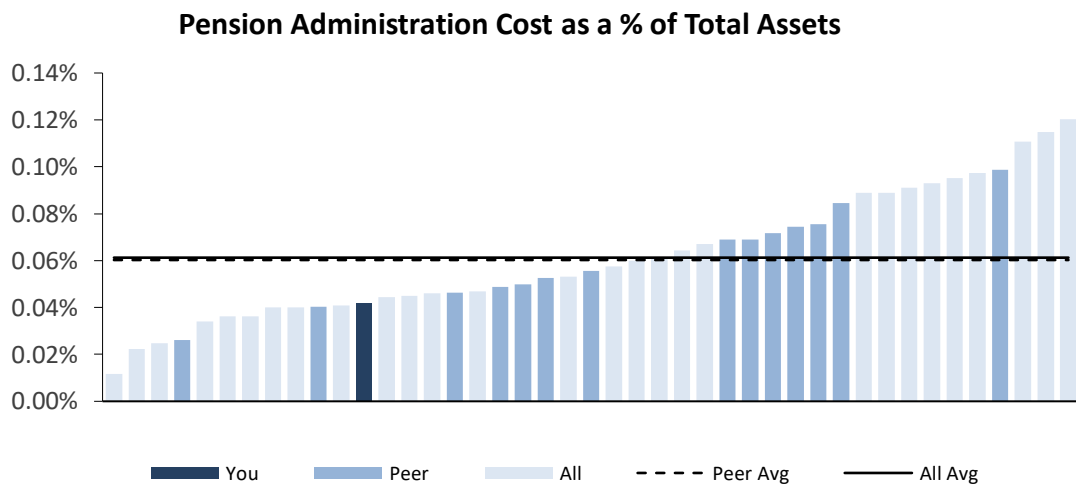


■ You ■ Peer ■ All — Peer Avg - · - Peer Median - - - All Avg

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 0.04% of total assets (or 4 basis points). This was below the peer average of 0.06%.



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, 5, 6 and 7 have been reduced by attributions to activities 1F and 1G that add up to \$3,802 thousand.

Activity	Your Costs in \$000s			Total	\$s per Active Member and Annuitant
	Salaries & Benefits	Third Party & Other	Attributions ¹ to 1f & 1g		
1. Member Transactions					
a. Pension Payments	907	7		913	1.96
b. Pension Inceptions	1,132	1		1,133	2.43
c. Refunds, Withdrawals, and Transfers-out	302	3		304	0.65
d. Purchases and Transfers-in	129	1		130	0.28
e. Disability	615	5		620	1.33
f. Healthcare Administration	1,782	790	2,906	5,478	11.73
g. Optional and Third Party Administered Benefits	458	68	896	1,422	3.05
2. Member Communication					
a. Call Center	2,539	19		2,558	5.48
b. Mail Room, Imaging	885	308		1,193	2.55
c. 1-on-1 Counseling	747	8		755	1.62
d. Member Presentations	480	8		488	1.05
e. Written Pension Estimates	974	11		985	2.11
f. Mass Communication	796	717		1,512	3.24
3. Collections and Data Maintenance					
a. Data and Money from Employers	870	6		876	1.88
b. Service to Employers	1,447	83		1,530	3.28
c. Data Not from Employers	539	4		544	1.16
4. Governance and Financial Control					
a. Financial Administration and Control	1,041	71	-137	975	2.09
b. Board, Strategy, Policy	1,156	177	-164	1,169	2.50
c. Government and Public Relations	189	32	-27	194	0.42
5. Major Projects					
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		3,267	-403	2,864	6.13
d. IT Major Projects (if you don't capitalize)	0	0	0	0	0.00
6. Information Technology					
a. IT Strategy, Database, Applications (excl. major projects)	8,321	5,888	-1,752	12,457	26.68
b. IT Desktop, Networks, Telecom	2,063	1,291	-414	2,941	6.30
7. Support Services and Other					
a. Building and Utilities	142	1,959	-259	1,842	3.94
b. Human Resources	908	311	-150	1,069	2.29
c. Actuarial	114	282	-49	347	0.74
d. Legal and Rule Interpretation	1,403	135	-190	1,348	2.89
e. Internal and External Audit	438	399	-103	734	1.57
f. Pay-as-you-go Benefits for Retired Staff	0		0	0	0.00
g. Other Support Services	931	311	-153	1,089	2.33
Total Administration	31,308	16,160	0	47,468	101.65
less:					
f. Healthcare Administration	-1,782	-790	-2,906	-5,478	-11.73
g. Optional and Third Party Administered Benefits	-458	-68	-896	-1,422	-3.05
Total Pension Administration				40,568	86.88

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 ¹	Cost ² in \$000s (A)		Activity Volume (B)	\$s per Unit (A / B)
1. Member Transactions				
a. Pension Payments	913	209,059	annuitants	4.37
b. Pension Inceptions	1,133	10,035	new payee inceptions	112.87
c. Refunds, Withdrawals, and Transfers-out	304	8,498	refunds, withdrawals, and transfers-out	35.81
d. Purchases and Transfers-in	130	383	purchases and transfers-in	340.18
e. Disability	620	1,912	disability applications	324.18
2. Member Communication				
a. Call Center	2,558	193,145	calls and emails	13.24
b. Mail Room, Imaging	1,193	163,583	incoming mail	7.29
c. 1-on-1 Counseling	755	7,914	members counseled 1-on-1	95.41
d. Member Presentations	488	616	member presentations	792.47
e. Written Pension Estimates	985	24,003	written estimates	41.03
f. Mass Communication	1,512	466,970	active members and annuitants	3.24
3. Collections and Data Maintenance				
a. Data and Money from Employers	876	257,911	active members	3.40
b. Service to Employers	1,530	257,911	active members	5.93
c. Data Not from Employers	544	641,892	actives, inactives, annuitants	0.85
4. Governance and Financial Control ⁴				
a. Financial Administration and Control	975	466,970	active members and annuitants	2.09
b. Board, Strategy, Policy	1,169	466,970	active members and annuitants	2.50
c. Government and Public Relations	194	466,970	active members and annuitants	0.42
5. Major Projects ⁴				
a. Amortization of non-IT Major Projects	0	466,970	active members and annuitants	0.00
b. Non-IT Major Projects (if you don't capitalize)	0	466,970	active members and annuitants	0.00
c. Amortization of IT Major Projects	2,864	466,970	active members and annuitants	6.13
d. IT Major Projects (if you don't capitalize)	0	466,970	active members and annuitants	0.00
6. Information Technology ⁴				
a. IT Strategy, Database, Applications (excl. major projects)	12,457	466,970	active members and annuitants	26.68
b. IT Desktop, Networks, Telecom	2,941	275	pension admin FTE	10,674.89
7. Support Services and Other ⁴				
a. Building and Utilities	1,842	275	pension admin FTE	6,686.32
b. Human Resources	1,069	275	pension admin FTE	3,879.71
c. Actuarial	347	466,970	active members and annuitants	0.74
d. Legal and Rule Interpretation	1,348	466,970	active members and annuitants	2.89
e. Internal and External Audit	734	466,970	active members and annuitants	1.57
f. Pay-as-you-go Benefits for Retired Staff	0	275	pension admin FTE	0.00
g. Other Support Services	1,089	466,970	active members and annuitants	2.33
Total Pension Administration ³	40,568	466,970	active members and annuitants	86.88

1. Refer to Appendix C for activity definitions.

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

- 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.
- 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, 5, 6, and 7 have been reduced by attributions to 1f. Healthcare Administration and 1g. Optional and Third Party Administered Benefits that add up to \$3,802k. Refer to the last page of this section for details.

Summary comparisons of activity costs by quartile breakdown

Comparisons of Direct Activity Costs ¹														
Activity	Cost per:	Peer							All Participant					
		You	Avg	Max	Q3	Med	Q1	Min	Avg	Max	Q3	Med	Q1	Min
1. Member Transactions														
a. Pension Payments	annuitant	4.37	9.22	24.15	12.40	7.96	4.34	1.07	10.38	36.06	12.53	8.29	4.57	0.23
b. Pension Inceptions	new payee inception	112.87	155.76	462.96	174.79	112.87	82.99	64.82	224.17	1,078.49	268.80	148.52	95.95	10.47
c. Refunds, Withdrawals, and Transfers-out	withdrawal & transfer-out	35.81	106.02	689.36	114.11	47.00	31.94	5.57	276.33	2,468.20	319.97	132.24	39.85	5.57
d. Purchases and Transfers-in	purchase & transfer-in	340.18	574.56	3,012.90	546.90	236.41	130.16	65.70	840.30	18,875.00	532.89	207.85	120.65	12.72
e. Disability	disability application	324.18	2,043.32	4,712.11	3,230.63	1,803.48	514.19	312.07	2,174.18	15,000.16	3,077.17	1,343.66	628.93	163.13
2. Member Communication														
a. Call Center	call & email	13.24	12.74	39.65	13.48	12.02	8.81	3.59	10.57	39.65	13.28	9.06	6.12	0.00
b. Mail Room, Imaging	incoming mail	7.29	8.25	31.46	10.80	5.34	3.36	1.87	10.47	49.38	12.05	7.62	2.95	0.83
c. 1-on-1 Counseling	member counseled 1-on-1	95.41	142.35	369.87	153.31	110.42	76.44	52.51	91.81	369.87	106.05	69.50	44.33	1.44
d. Member Presentations	member presentation	792.47	1,263.90	3,293.14	1,633.53	831.79	690.69	203.62	1,385.04	3,369.36	1,851.09	1,224.99	766.45	109.83
e. Written Pension Estimates	written estimate	41.03	81.17	354.29	97.02	53.83	34.91	0.00	101.42	499.96	104.54	53.43	29.39	0.00
f. Mass Communication	active member & annuitant	3.24	3.38	7.01	4.66	2.95	2.46	1.02	4.13	21.07	4.85	3.53	2.16	0.17
3. Collections and Data Maintenance														
a. Data and Money from Employers	active member	3.40	7.45	27.48	9.73	3.74	2.83	1.22	7.61	27.48	9.02	5.59	3.40	0.54
b. Service to Employers	active member	5.93	3.59	8.51	5.02	2.76	2.07	0.86	4.05	16.82	5.41	3.44	2.14	0.02
c. Data Not from Employers	active, inactive & annuitant	0.85	0.92	1.65	1.49	0.85	0.36	0.24	1.37	6.87	1.54	0.93	0.42	0.00
4. Governance and Financial Control														
a. Financial Administration and Control	active member & annuitant	2.09	3.04	6.76	3.56	3.06	2.13	0.92	4.92	21.55	5.55	3.93	2.46	0.26
b. Board, Strategy, Policy	active member & annuitant	2.50	2.37	6.94	2.89	2.42	1.31	0.13	4.74	19.29	6.73	3.17	1.53	-1.95
c. Government and Public Relations	active member & annuitant	0.42	1.18	4.00	1.47	0.78	0.21	0.10	1.66	10.59	2.23	1.13	0.60	0.10
5. Major Projects														
a. Amortization of non-IT Major Projects	active member & annuitant	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.21	5.56	0.00	0.00	0.00	0.00
b. Non-IT Major Projects (if you don't capitalize)	active member & annuitant	0.00	1.42	6.83	1.37	0.04	0.00	0.00	1.61	15.10	1.51	0.00	0.00	0.00
c. Amortization of IT Major Projects	active member & annuitant	6.13	2.28	11.08	4.23	0.42	0.00	0.00	2.95	27.45	4.23	0.00	0.00	0.00
d. IT Major Projects (if you don't capitalize)	active member & annuitant	0.00	3.84	11.49	6.70	2.05	0.00	0.00	4.90	59.99	6.04	1.54	0.00	0.00
6. Information Technology														
a. IT Strategy, Database Management and Applications (excl. major projects)	active member & annuitant	26.68	19.50	40.00	24.98	20.89	12.10	6.12	20.24	48.16	26.92	18.52	12.08	2.18
b. IT Desktop, Networks, Telecom	pension admin fte	10,675	15,253	30,946	18,956	13,471	10,768	7,252	12,955	33,893	15,774	11,155	8,764	1,660
7. Support Services and Other														
a. Building and Utilities	pension admin fte	6,686	9,184	16,376	10,890	8,959	7,149	2,959	10,423	21,177	14,115	9,204	6,782	1,333
b. Human Resources	pension admin fte	3,880	3,380	7,223	4,237	2,916	2,351	795	4,699	14,886	6,475	3,405	2,323	795
c. Actuarial	active member & annuitant	0.74	1.77	6.87	1.91	1.33	0.95	0.74	2.14	6.87	2.59	1.49	0.80	0.00
d. Legal and Rule Interpretation	active member & annuitant	2.89	3.31	6.54	5.01	2.44	2.00	1.35	4.89	35.47	5.69	3.30	2.06	0.12
e. Internal and External Audit	active member & annuitant	1.57	1.83	4.35	2.20	1.57	0.98	0.66	2.81	27.64	3.09	1.81	1.41	0.06
f. Pay-as-you-go Benefits for Retired Staff	pension admin fte	0.00	881.47	10,592.59	204.44	0.00	0.00	0.00	1,063.09	14,100.86	185.80	0.00	0.00	0.00
g. Other Support Services	active member & annuitant	2.33	2.61	6.22	3.98	2.33	1.46	0.00	3.29	15.91	4.49	2.20	0.74	0.00
Total Pension Administration²		86.88	98.20	235.94	104.01	88.50	75.32	53.02	120.34	399.92	143.88	97.74	77.47	7.05

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.

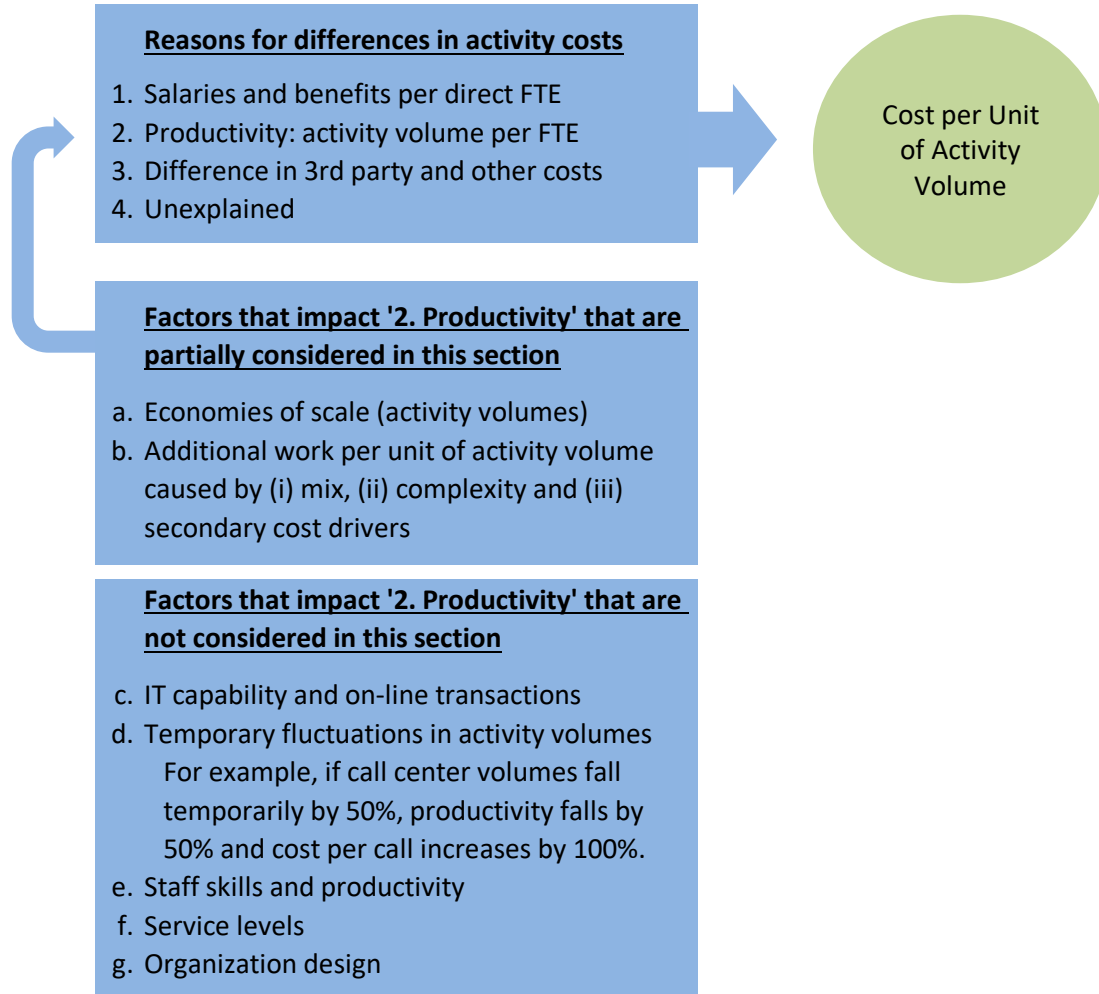
Activity cost history

		Comparisons of Direct Activity Costs ¹											
Activity	Cost per:	You				Peer Average				All Participant Average			
		2019	2018	2017	2016	2019	2018	2017	2016	2019	2018	2017	2016
1. Member Transactions													
a. Pension Payments	annuitant	4.37	3.80	5.93	6.29	9.22	8.75	9.23	9.01	11.41	11.00	10.73	12.63
b. Pension Inceptions	new payee inception	112.87	100.21	103.52	96.65	155.76	148.61	145.78	175.01	228.47	211.46	215.01	220.78
c. Refunds, Withdrawals, and Transfers-out	withdrawal & transfer-out	35.81	34.22	38.49	39.68	106.02	90.52	93.43	91.03	322.57	300.09	309.40	297.50
d. Purchases and Transfers-in	purchase & transfer-in	340.18	306.67	204.64	272.88	574.56	596.75	478.16	316.34	391.09	574.20	571.50	344.65
e. Disability	disability application	324.18	289.78	283.85	439.83	2,043.32	1,861.42	1,728.79	1,708.34	2,310.17	2,666.08	2,247.48	2,265.08
2. Member Communication													
a. Call Center	call & email	13.24	12.86	13.90	10.92	12.74	12.49	11.85	10.97	11.89	11.50	10.98	10.33
b. Mail Room, Imaging	incoming mail	7.29	8.35	4.59	8.32	8.25	7.11	5.98	8.23	11.33	11.83	10.87	13.96
c. 1-on-1 Counseling	member counseled 1-on-1	95.41	73.26	88.97	97.17	142.35	122.42	136.87	124.82	101.62	99.27	105.73	111.37
d. Member Presentations	member presentation	792.47	1,223.81	1,133.81	932.12	1,263.90	1,334.97	1,783.11	1,782.74	1,284.87	1,440.84	1,556.72	1,582.62
e. Written Pension Estimates	written estimate	41.03	38.10	41.79	34.46	81.17	81.23	80.94	46.55	123.43	120.70	105.97	132.12
f. Mass Communication	active member & annuitant	3.24	2.41	2.92	2.58	3.38	3.28	3.21	3.09	4.46	4.26	3.98	4.08
3. Collections and Data Maintenance													
a. Data and Money from Employers	active member	3.40	3.06	3.07	2.29	7.45	7.09	6.94	6.57	7.78	8.33	9.22	8.81
b. Service to Employers	active member	5.93	5.65	5.31	3.02	3.59	3.61	3.32	3.02	4.04	4.29	3.84	3.49
c. Data Not from Employers	active, inactive & annuitant	0.85	0.70	0.71	0.61	0.92	0.96	1.01	0.86	1.60	1.53	1.31	1.13
4. Governance and Financial Control													
a. Financial Administration and Control	active member & annuitant	2.09	1.55	4.17	2.86	3.04	2.76	3.09	2.71	4.88	4.86	5.03	5.20
b. Board, Strategy, Policy	active member & annuitant	2.50	2.61	2.33	1.93	2.37	2.18	2.17	1.98	4.86	5.01	4.89	4.78
c. Government and Public Relations	active member & annuitant	0.42	0.43	1.98	1.64	1.18	1.11	1.23	1.22	1.82	1.75	1.73	1.92
5. Major Projects													
a. Amortization of non-IT Major Projects	active member & annuitant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.23	0.18	0.07	0.06
b. Non-IT Major Projects (if you don't capitalize)	active member & annuitant	0.00	0.00	0.00	0.64	1.42	0.97	1.53	0.44	1.86	1.95	1.44	1.11
c. Amortization of IT Major Projects	active member & annuitant	6.13	1.43	1.14	0.72	2.28	2.14	2.63	2.71	3.35	8.91	9.46	10.34
d. IT Major Projects (if you don't capitalize)	active member & annuitant	0.00	0.00	0.00	9.63	3.84	5.25	4.32	4.32	5.40	6.14	8.87	12.83
6. Information Technology													
a. IT Strategy, Database, Applications (excl. major projects)	active member & annuitant	26.68	16.19	13.98	9.67	19.50	16.61	16.26	15.59	22.10	20.42	20.45	19.43
b. IT Desktop, Networks, Telecom	pension admin fte	10,675	9,428	17,237	8,355	15,253	13,721	13,572	13,358	14,071	12,766	12,186	11,959
7. Support Services and Other													
a. Building and Utilities	pension admin fte	6,686	7,304	7,121	6,421	9,184	9,044	9,613	9,120	10,548	10,268	10,366	10,140
b. Human Resources	pension admin fte	3,880	3,258	5,881	2,715	3,380	3,196	3,300	2,964	4,823	4,066	4,069	4,178
c. Actuarial	active member & annuitant	0.74	0.50	0.60	0.51	1.77	1.54	1.55	1.63	1.91	1.84	1.86	2.14
d. Legal and Rule Interpretation	active member & annuitant	2.89	2.02	1.84	1.47	3.31	2.99	3.27	3.08	5.30	4.89	4.94	4.76
e. Internal and External Audit	active member & annuitant	1.57	1.29	1.34	1.18	1.83	1.73	1.72	1.73	3.09	3.16	2.63	2.73
f. Pay-as-you-go Benefits for Retired Staff	pension admin fte	0.00	0.00	0.00	0.00	881.47	698.15	768.15	590.90	799.33	488.92	503.30	404.93
g. Other Support Services	active member & annuitant	2.33	3.37	0.47	0.72	2.61	2.74	3.12	3.33	3.32	3.19	2.92	4.43
Total Pension Administration²		86.88	67.86	71.66	67.31	98.20	92.68	93.45	91.01	129.37	131.17	131.94	137.30

1. Trend analysis is based on systems that have participated for 4-consecutive years (15 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



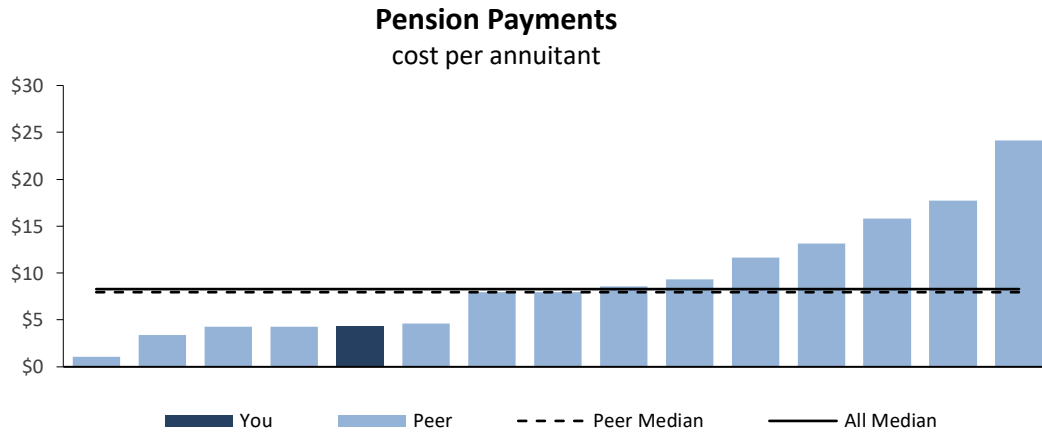
In this section, CEM quantifies the amount by which differences in the four reasons identified in the top box above impact your costs by calculating how your costs would change if you had the peer median salaries/ productivity/ third party and other costs. This methodology results in an unexplained amount, 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 \$4.37. This was \$3.59 below the peer median of \$7.96. The biggest reason why was that you had lower third party costs per annuitant.



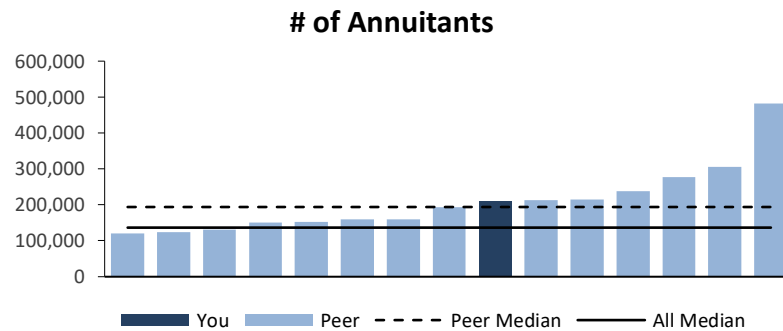
Reasons why your cost was below median	Comparison		Impact ¹ \$s per Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$86,612	\$90,198	-\$0.18
Fewer annuitants per direct FTE (productivity)	19,967	26,668	\$1.09
Lower third party costs per annuitant	\$0.03	\$2.83	-\$2.80
Unexplained ¹			-\$1.70
Cost per annuitant	\$4.37	\$7.96	-\$3.59

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 209,059 annuitants was 8% higher than the peer median of 193,984.

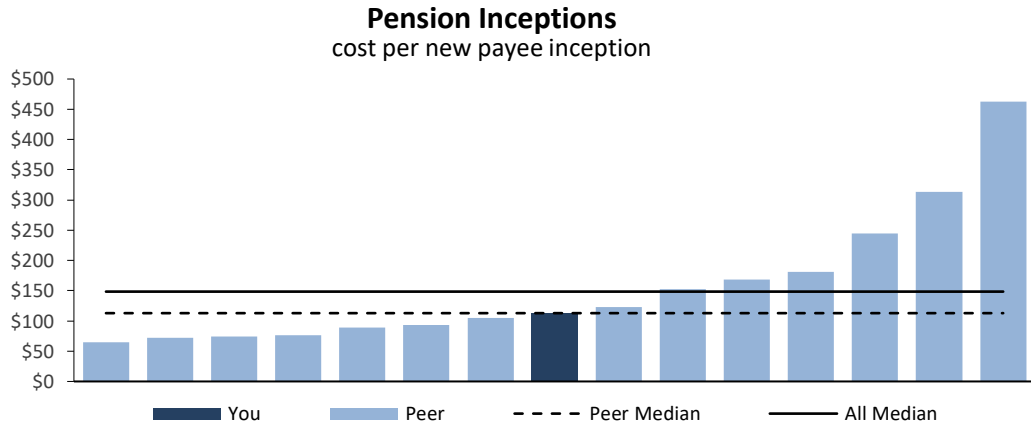


2. Additional pension payments work per annuitant

Causes of additional work	You	Peer Avg	Cost Impact
Percentage of pensioners paid by check (as opposed to Electronic Funds Transfer)	1%	2%	decreasing
Number of times per year you sent payment advices with your EFT payments detailing the gross payment and	6.0	6.0	neutral

1B Pension Inceptions

Your pension inceptions cost per new payee inception was \$112.87. This was equal to the peer median.



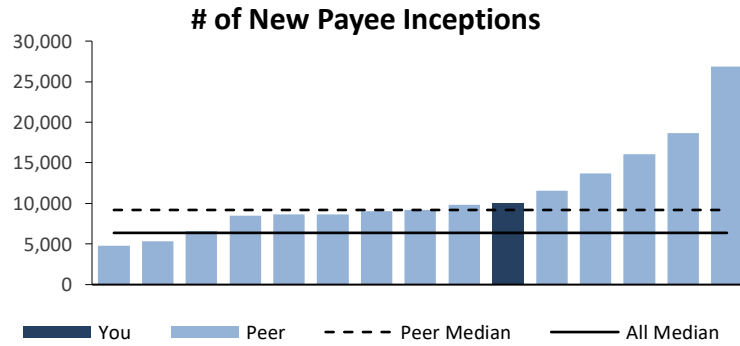
Reasons why your cost was equal to median	Comparison		Impact ¹ \$s per New Payee
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$78,177	\$90,443	-\$17.70
Fewer new payee inceptions per direct FTE (productivity)	693	763	\$10.31
Lower third party costs per new payee inception	\$0.07	\$2.33	-\$2.27
Unexplained ¹			\$9.66
Cost per new payee inception	\$112.87	\$112.87	\$0.00

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 10,035 new payee inceptions was 9% higher than the peer median of 9,196.



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.

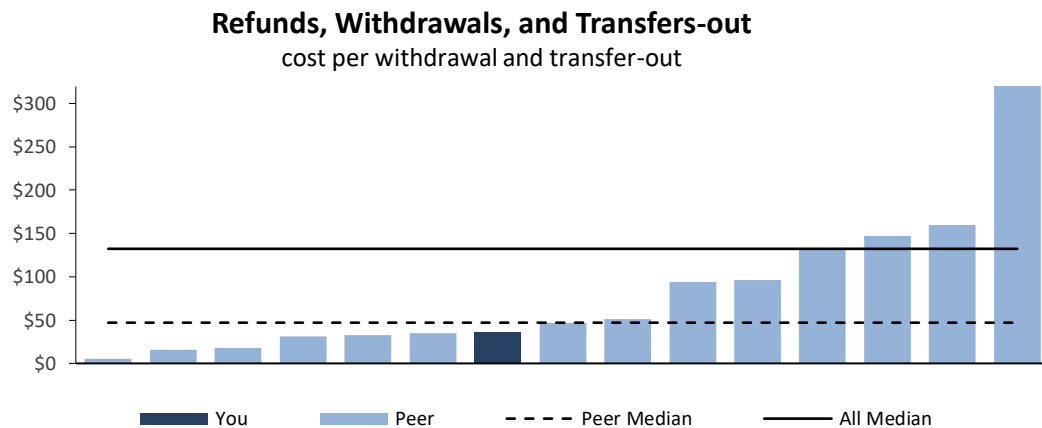
Activity Volume: % by Type	You	Peer Avg	Cost Impact
Annuity inceptions: service retirement (actives)	50%	66%	
Annuity inceptions: service retirement (inactives)	47%	19%	
Annuity inceptions: disability retirement (actives)	2%	3%	
Annuity inceptions: survivor, partner, ex-partner, dependent	1%	13%	increasing
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	100%	59%	increasing
Formal appeals (non-disability) of inceptions as a % of new payee inceptions	0.02%	0.16%	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).	58%	10%	increasing
Joint account reciprocity with other systems	Yes	53%Yes	increasing
Total complexity score (out of 100)	41	42	decreasing

1C Refunds, Withdrawals, and Transfers-out

Your refunds, withdrawals, and transfers-out cost per withdrawal and transfer-out was \$35.81. This was \$11.19 below the peer median of \$47.00. The biggest reason why was that you completed more refunds, withdrawals, and transfers-out per direct FTE (productivity).



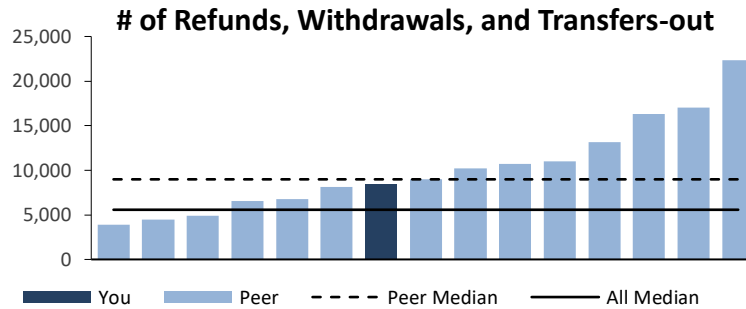
Reasons why your cost was below median	Comparison		Impact ¹ \$s per Withdrawal and Transfer-out
	You	Peer Median	
Equal salaries and benefits per direct FTE	\$83,531	\$83,531	\$0.00
More refunds, withdrawals, and transfers-out per direct FTE	2,354	2,040	-\$5.46
Lower third party costs per withdrawal and transfer-out	\$0.33	\$1.74	-\$1.41
Unexplained ¹			-\$4.32
Cost per withdrawal and transfer-out	\$35.81	\$47.00	-\$11.19

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 disadvantage. Your 8,498 refunds, withdrawals, and transfers-out was 5% lower than the peer median of 8,983.



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.

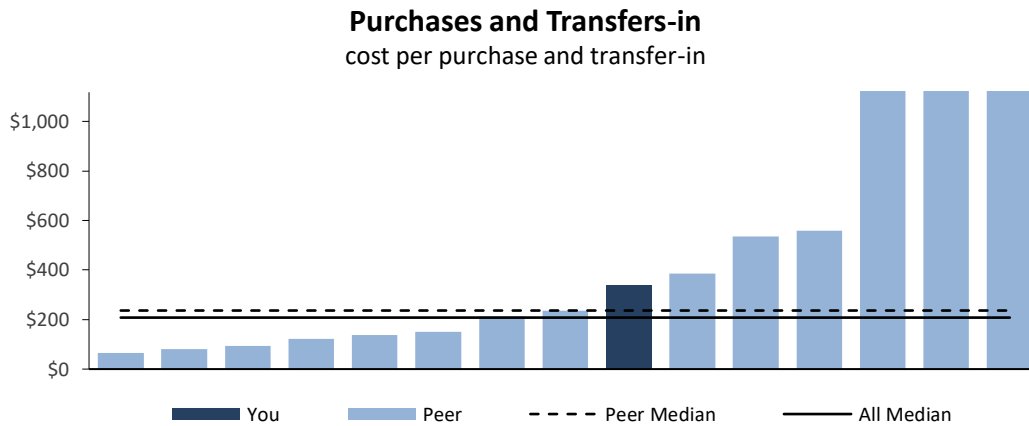
Activity Volume: % by Type	You	Peer Avg	Cost Impact
Full refunds/ withdrawals/ commuted value/ lump sums	100%	97%	
Transfers-out	0%	3%	decreasing
Total refunds, withdrawals, and transfers-out	100%	100%	

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	60%	72%	decreasing
Do you pay a one-time death payment when a member, retiree or the retiree's beneficiary dies (separate from the survivor pension)?	No	60%Yes	decreasing

1D Purchases and Transfers-in

Your purchases and transfers-in cost per purchase and transfer-in was \$340.18. This was \$103.77 above the peer median of \$236.41. The biggest reason why was that you completed fewer purchases and transfers-in per direct FTE (productivity).



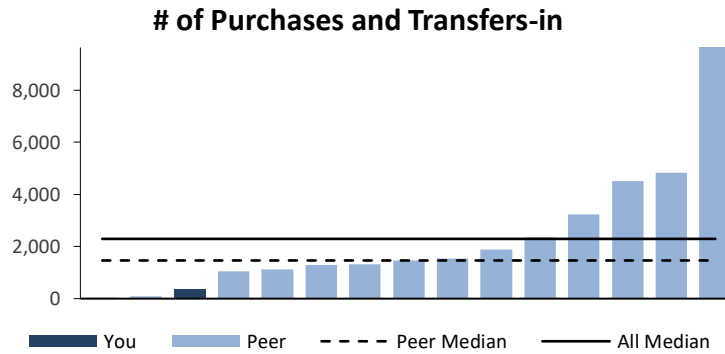
Reasons why your cost was above median	Comparison		Impact ¹
	You	Peer Median	\$s per Purchase and Transfer-in
Equal salaries and benefits per direct FTE	\$86,644	\$86,644	\$0.00
Fewer purchases and transfers-in per direct FTE (productivity)	257	410	\$125.55
Lower third party costs per purchase and transfer-in	\$3.11	\$7.20	-\$4.09
Unexplained ¹			-\$17.68
Cost per purchase and transfer-in	\$340.18	\$236.41	\$103.77

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 disadvantage. Your 383 purchases and transfers-in was 74% lower than the peer median of 1,465.



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.

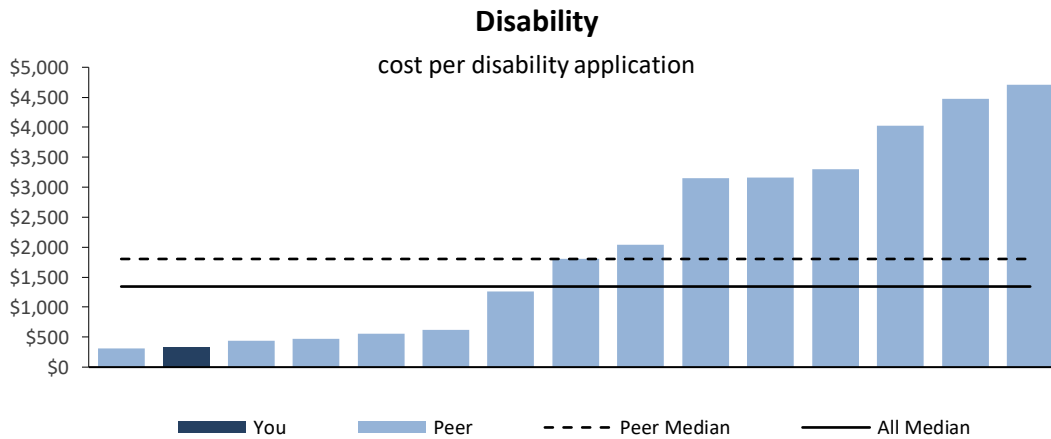
Activity Volume: % by Type	You	Peer Avg	Cost Impact
Service credit purchases	100%	88%	
Upgrades to improve pensionable salary	0%	0%	
Upgrades to a new retirement formula	0%	5%	
Individual transfers-in from external defined benefit systems	0%	7%	decreasing
Total purchases and transfers-in	100%	100%	

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	172%	272%	decreasing
Installment payments permitted	No	80%Yes	decreasing

1E Disability

Your disability cost per disability application was \$324.18. This was \$1,479.30 below the peer median of \$1,803.48.



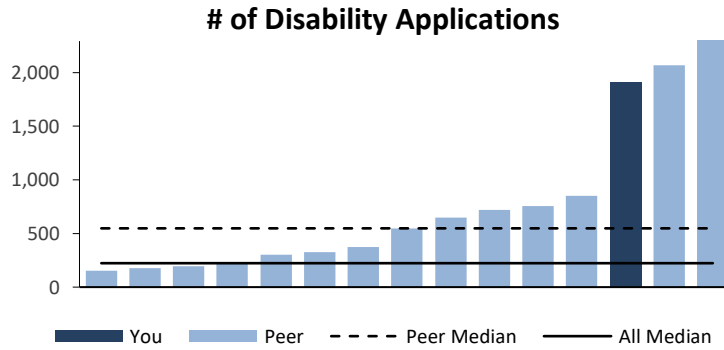
Reasons why your cost was below median	Comparison		Impact ¹ \$s per Disability Application
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$79,068	\$89,583	-\$42.79
More disability applications per direct FTE (productivity)	246	172	-\$137.69
Lower third party costs per disability application	\$2.45	\$606.34	-\$603.89
Unexplained ¹			-\$694.93
Cost per disability application	\$324.18	\$1,803.48	-\$1,479.30

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 1,912 disability applications was 249% higher than the peer median of 548.



2. Mix of activity volume

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

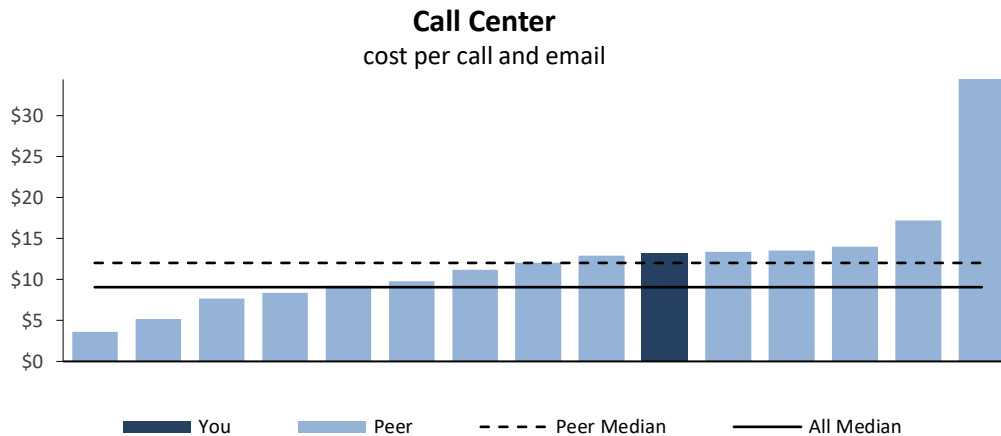
Activity Volume: % by Type	You	Peer Avg	Cost Impact
Applications for short-term disability	71%	11%	
Applications for disability pensions/ long-term disability/ disability lump sums	29%	89%	decreasing
Total disability applications	100%	100%	

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	21%	155%	decreasing
Recertifications as a % of disability recipients	4%	16%	decreasing
Medical exams paid for by you as a % of disability applications	0%	52%	decreasing
New member health reviews as a % of disability applications	15%	35%	decreasing
Disability decision appeals as a % of disability applications	2%	5%	decreasing
Occupational disability as a % of disability applications	0%	8%	decreasing
Disability complexity score (out of 100)	72	68	increasing

2A Call Center

Your call center cost per call and email was \$13.24. This was \$1.22 above the peer median of \$12.02. The biggest reason why was that you completed fewer calls and emails per direct FTE (productivity).



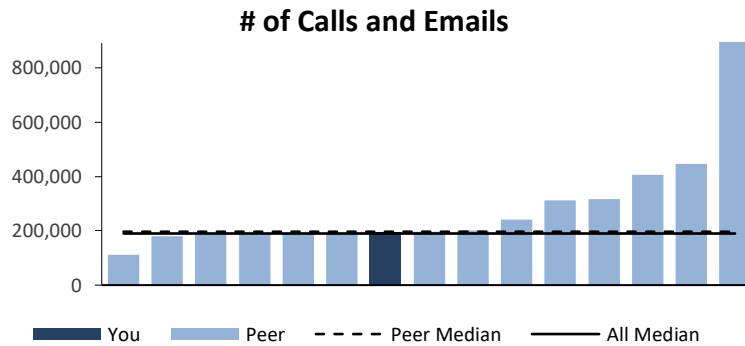
Reasons why your cost was above median	Comparison		Impact ¹ \$s per Call and Email
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$77,101	\$79,809	-\$0.46
Fewer calls and emails per direct FTE (productivity)	5,865	6,571	\$1.41
Lower third party costs per call and email	\$0.10	\$0.31	-\$0.22
Unexplained ¹			\$0.48
Cost per call and email	\$13.24	\$12.02	\$1.22

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 disadvantage. Your 193,145 calls and emails was 2% lower than the peer median of 196,517.

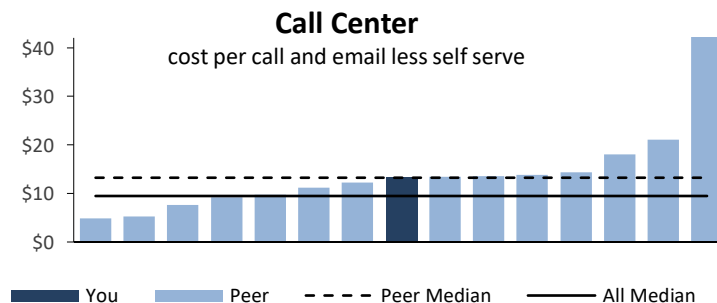


2. Mix of activity volume

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	89%	80%	
Outgoing calls from service representatives	3%	4%	
Calls satisfied by self-serve options	0%	8%	increasing
Email queries from members	8%	8%	
Total calls and emails	100%	100%	

If self-serve calls were excluded from volumes, your cost per active member and annuitant would have remained at \$13.24. This would have been equal to the peer median cost of \$13.24.



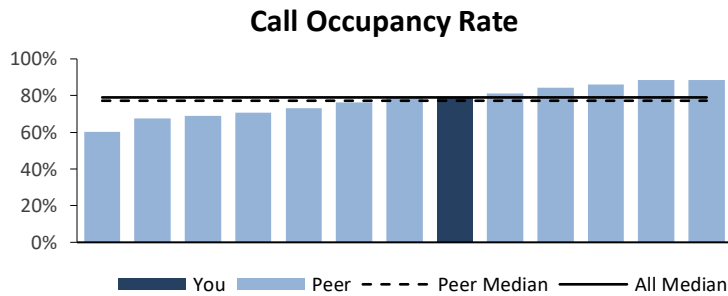
2A Call Center - Factors that impact productivity

continued

3. Additional work per call and email

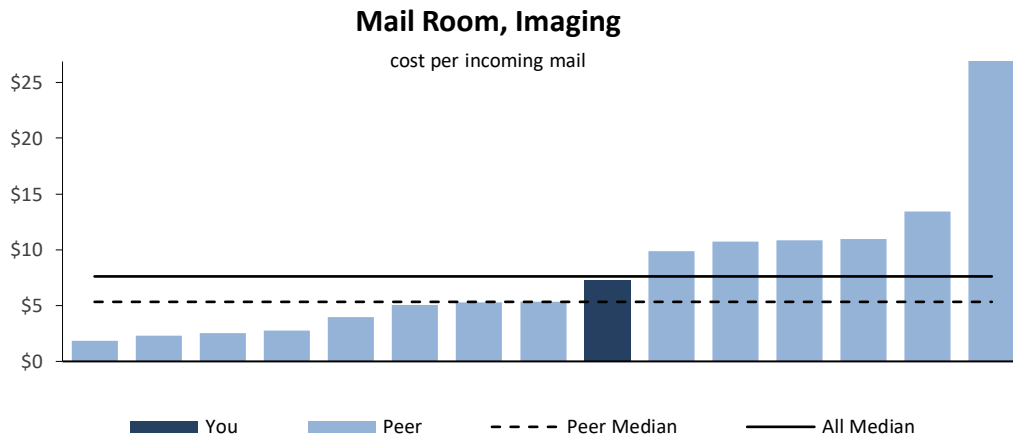
Causes of additional work	You	Peer Avg	Cost Impact
Average talk time of a member call (in seconds)	343	315	increasing
Average after call work time (in seconds)	105	83	increasing
Do you regularly review staff responses to member calls?	Yes	93%Yes	increasing

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 \$7.29. This was \$1.95 above the peer median of \$5.34. The biggest reason why was that you had higher third party costs per incoming mail.



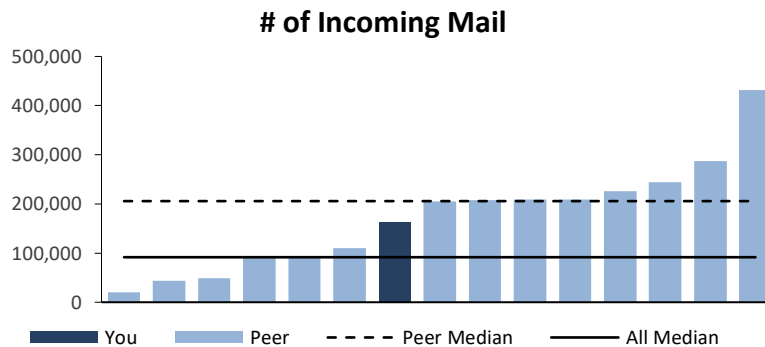
Reasons why your cost was above median	Comparison		Impact ¹
	You	Peer Median	\$s per Incoming Mail
Higher salaries and benefits per direct FTE	\$84,966	\$79,538	\$0.35
Fewer incoming mail per direct FTE (productivity)	15,699	17,984	\$0.69
Higher third party costs per incoming mail	\$1.88	\$1.08	\$0.80
Unexplained ¹			\$0.12
Cost per incoming mail	\$7.29	\$5.34	\$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).

2B Mail Room, Imaging - Factors that impact productivity

1. Economies of scale

You had an economy of scale disadvantage. Your 163,583 incoming mail was 20% lower than the peer median of 205,670.

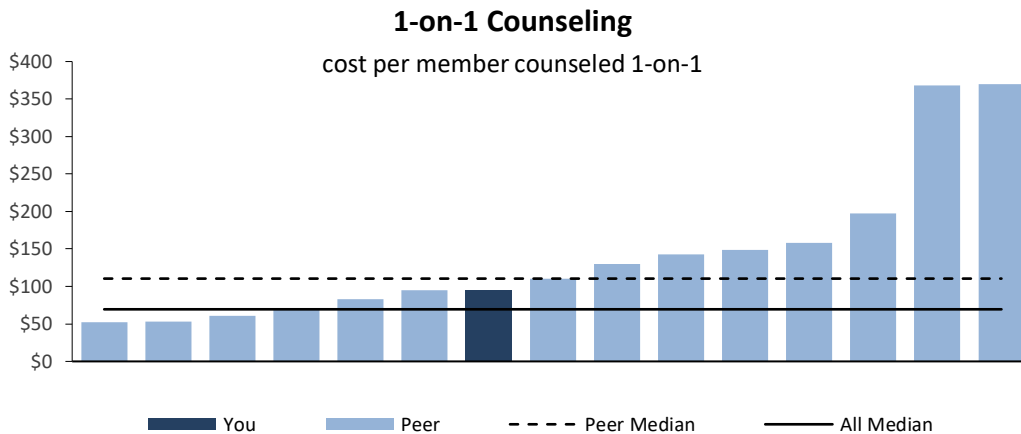


2. Additional work per incoming mail

Causes of additional work	You	Peer Avg	Cost Impact
Outgoing mail as a % of incoming mail (Outgoing mail is not included in activity volume. But it can add work if the mailroom is responsible for outgoing mail).	1060%	785%	increasing
Do you use imaging technology?	Yes	100%Yes	neutral
If yes:			
a) Do you keep images of ALL incoming member correspondence and submitted forms?	Yes	100%Yes	neutral

2C 1-on-1 Counseling

Your 1-on-1 counseling cost per member counseled 1-on-1 was \$95.41. This was \$15.01 below the peer median of \$110.42. The biggest reason why was that you had lower salaries and benefits per direct FTE.



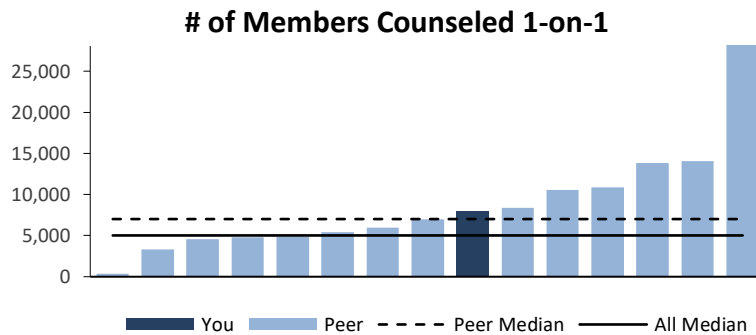
Reasons why your cost was below median	Comparison		Impact ¹
	You	Peer Median	\$s per Member Counseled 1-on-1
Lower salaries and benefits per direct FTE	\$80,845	\$93,568	-\$14.85
More members counseled 1-on-1 per direct FTE (productivity)	856	792	-\$7.68
Lower third party costs per member counseled 1-on-1	\$1.02	\$2.83	-\$1.80
Unexplained ¹			\$9.33
Cost per member counseled 1-on-1	\$95.41	\$110.42	-\$15.01

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 advantage. Your 7,914 members counseled 1-on-1 was 13% higher than the peer median of 7,013.



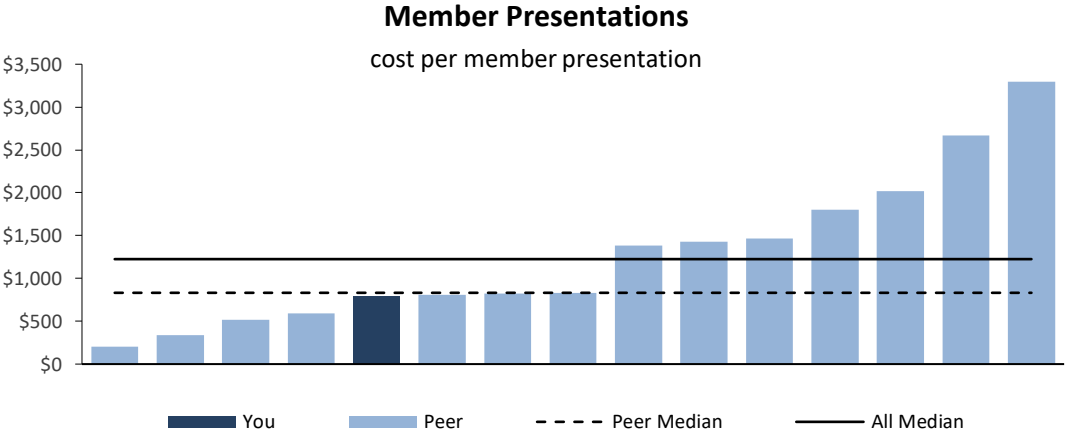
2. Mix of activity volume

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

Activity Volume: % by Type	You	Peer Avg	Cost Impact
In-house	88%	53%	increasing
In the field	1%	42%	decreasing
Via teleconference	11%	5%	increasing
Total members counseled 1-on-1	100%	100%	

2D Member Presentations

Your member presentations cost per member presentation was \$792.47. This was \$39.32 below the peer median of \$831.79. The biggest reason why was that you had lower salaries and benefits per direct FTE.



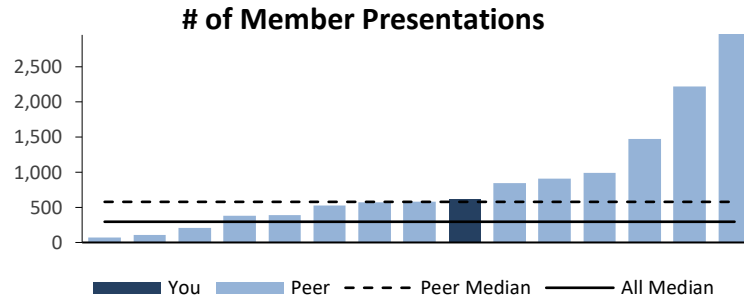
Reasons why your cost was below median	Comparison		Impact ¹
	You	Peer Median	\$s per Member Presentation
Lower salaries and benefits per direct FTE	\$83,040	\$101,377	-\$172.06
Fewer member presentations per direct FTE (productivity)	107	138	\$175.82
Lower third party costs per member presentation	\$13.30	\$154.02	-\$140.72
Unexplained ¹			\$97.63
Cost per member presentation	\$792.47	\$831.79	-\$39.32

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 advantage. Your 616 member presentations was 7% higher than the peer median of 578.



2. Mix of activity volume

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

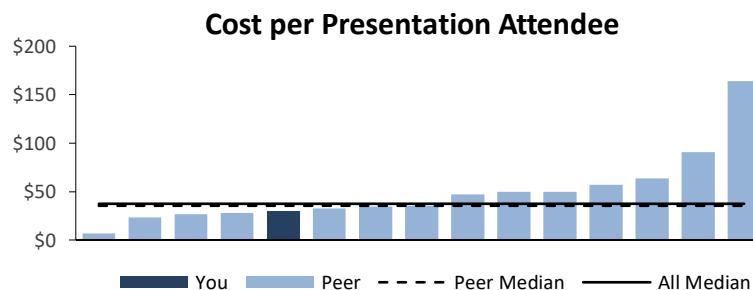
Member Presentations by Location	You	Peer Avg	Cost Impact
In-house and webcast	42%	18%	
In the field	46%	70%	decreasing
Benefit fairs	11%	12%	
Total presentations and group counseling	100%	100%	

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 27 attendees per presentation, versus a peer average of 28.

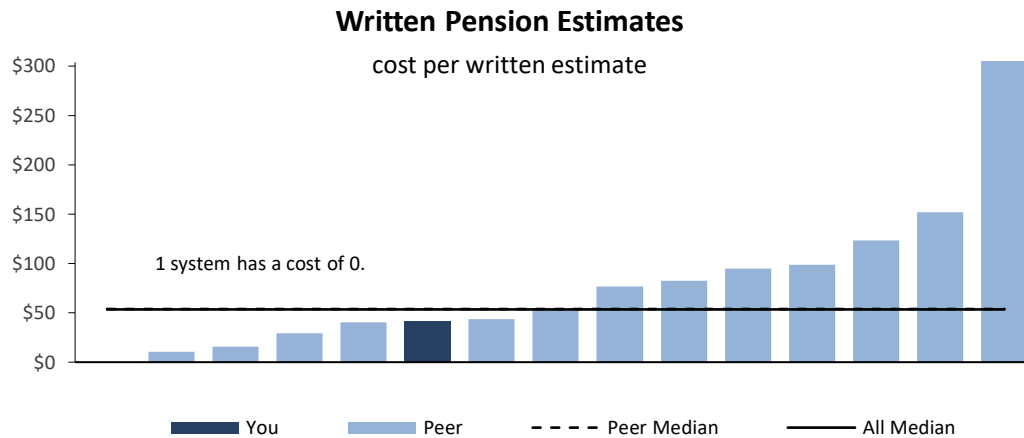
Causes of additional work	You	Peer Avg	Cost Impact
Average attendees per presentation	27	28	increasing

An alternative way of analyzing this activity's cost is on a 'per attendee' basis. Your cost per presentation attendee was \$29. This was below the peer median cost of \$35.



2E Written Pension Estimates

Your written pension estimates cost per written estimate was \$41.03. This was \$12.80 below the peer median of \$53.83. The biggest reason why was that you completed more written estimates per direct FTE (productivity).



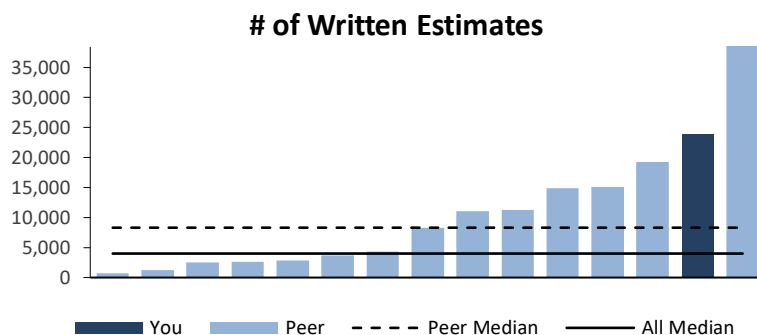
Reasons why your cost was below median	Comparison		Impact ¹
	You	Peer Median	\$s per Written Estimate
Lower salaries and benefits per direct FTE	\$80,860	\$88,921	-\$4.05
More written estimates per direct FTE (productivity)	1,992	1,573	-\$10.82
Lower third party costs per written estimate	\$0.44	\$0.57	-\$0.13
Unexplained ¹			\$2.20
Cost per written estimate	\$41.03	\$53.83	-\$12.80

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

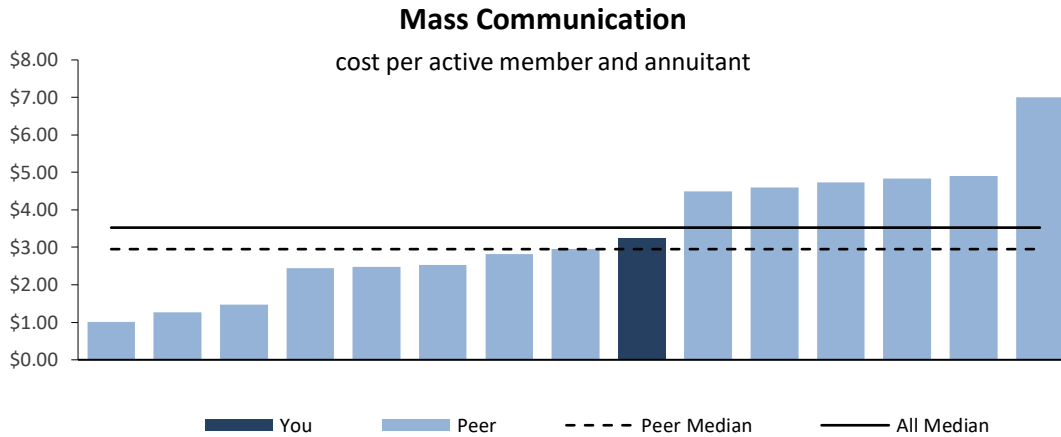
You had an economy of scale advantage. Your 24,003¹ written estimates was 189% higher than the peer median of 8,308.



1. Your number of estimates was adjusted because systems count estimates two different ways. When a member requests multiple different estimate scenarios, you count each scenario as an estimate whereas other systems count the 'multiple request' as a single estimate. Therefore, for comparability, we divided your total estimates of 24,003 by your average number of scenarios per request of 1.0.

2F Mass Communication

Your mass communication cost per active member and annuitant was \$3.24. This was \$0.29 above the peer median of \$2.95.



Reasons why your cost was above median	Comparison		Impact ¹ \$s per Active Member and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE Equal direct FTE per 10,000 active members and annuitants (productivity) ²	\$94,190	\$97,955	-\$0.07
Higher third party costs per active member and annuitant	\$1.53	\$1.52	\$0.01
Unexplained ¹			\$0.32
Cost per active member and annuitant	\$3.24	\$2.95	\$0.29

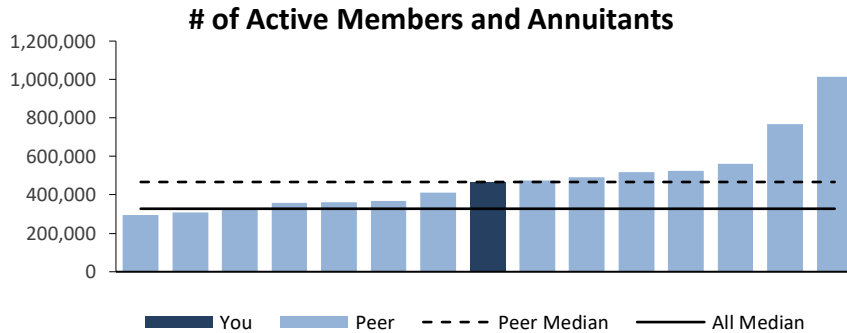
1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 8.5 mass communication FTE which was 21% more than the peer median of 7.0. The difference changes direction and was more favorable on a 'per active members and annuitants' basis (your 0.18 mass communication FTE per 10,000 active members and annuitants was equal to the peer median of 0.18).

2F Mass Communication - Factors that impact productivity

1. Economies of scale

Your 466,970 active members and annuitants was the peer median. Thus the impact of economies of scale was minimized.

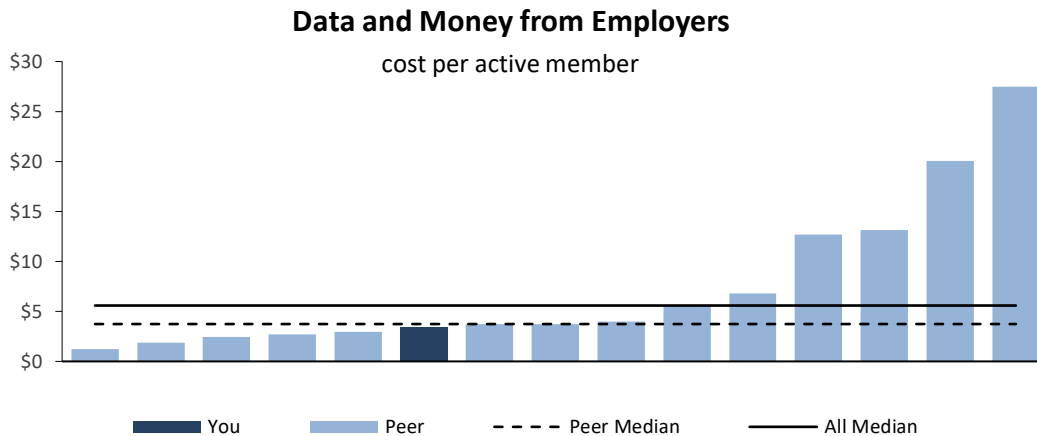


2. Additional mass communication work per active member and annuitant

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.	22	78	decreasing
Times per year you send newsletters to:			
a) All members (active, inactive and annuitants)?	0.0	1.2	decreasing
b) Active and inactive members?	0.0	5.7	decreasing
c) Active members and annuitants?	0.0	n/a	
d) Active members only?	4.0	2.3	increasing
e) Inactive members only?	0.0	0.2	decreasing
f) Annuitants only?	3.0	3.7	decreasing
g) Age segments (i.e., under 35, 35-50, 50 plus)?	0.0	3.9	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	3.3	decreasing
j) Other? (describe your other newsletter segments below)	0.0	2.8	decreasing
# of materials you publish in a language other than English	0.0	0.4	decreasing
Times per year you send member statements to:			
a) Active members?	1.0	1.3	decreasing
b) Inactive members?	1.0	1.3	decreasing
% of member statements mailed to active members' homes	22%	51%	decreasing
Do you send:			
a) Welcome kits to new members?	Yes	93%Yes	increasing
b) Brochure summarizing benefits to active members every	No	27%Yes	decreasing

3A Data and Money from Employers

Your data and money from employers cost per active member was \$3.40. This was \$0.34 below the peer median of \$3.74. The biggest reason why was that you had lower salaries and benefits per direct FTE.



Reasons why your cost was below median	Comparison		Impact ¹ \$s per Active Member
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$79,496	\$88,308	-\$0.37
Equal direct FTE per 10,000 active members (productivity) ²	0.23	0.23	\$0.00
Lower third party costs per active member	\$0.02	\$0.09	-\$0.07
Unexplained ¹			\$0.10
Cost per active member	\$3.40	\$3.74	-\$0.34

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).

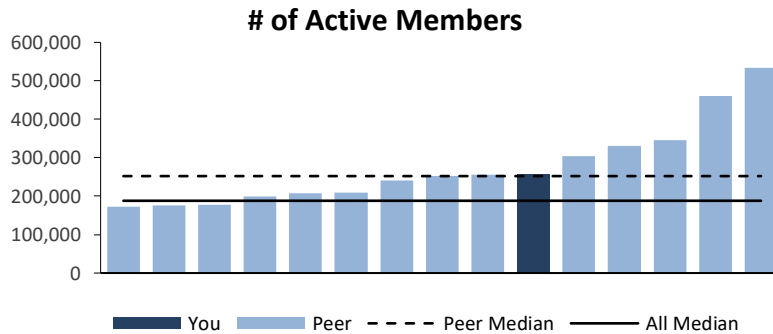
2. You had 10.9 data and money from employers FTE which was 9% more than the peer median of 10.0. The difference changes direction and was more favorable on a 'per active members' basis (your 0.23 data and money from employers FTE per 10,000 active members was equal to the peer median of 0.23) because 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

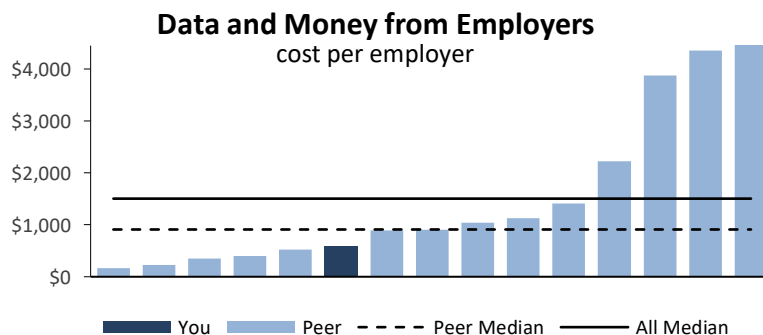
You had an economy of scale advantage. Your 257,911 active members was 2% higher than the peer median of 252,096.



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

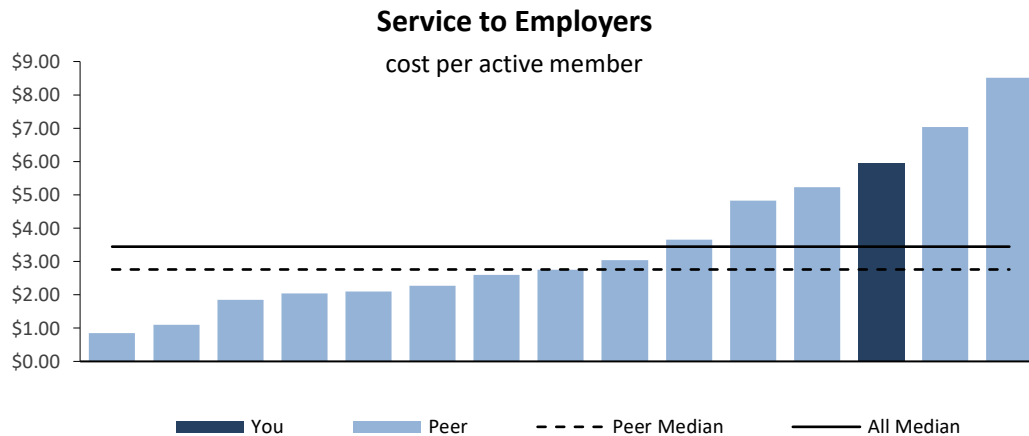
Causes of additional work	You	Peer Avg	Cost Impact
How many 'reconciliation points' (i.e., employers, state agencies, departments and/or service providers, etc.) do you deal with when:			
• Validating member data? (as a % of active members)	0.6%	0.6%	neutral
• Reconciling money issues? (as a % of active members)	0.6%	0.6%	neutral
Active members whose data is provided in paper format (as a % of active members)	0.0%	0.1%	decreasing
Status changes as a % of active members			
• New active members	8.6%	9.9%	decreasing
• Re-hired inactive members	1.3%	2.6%	decreasing
• Re-hired service retirees, if annuity stops	0.0%	0.0%	neutral
• Active members exiting to inactive or withdrawal	6.7%	8.0%	decreasing
• Active member service retirements	2.0%	2.7%	decreasing

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 \$5.93. This was \$3.17 above the peer median of \$2.76.



Reasons why your cost was above median	Comparison		Impact ¹ \$s per Active Member
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$78,370	\$91,667	-\$0.95
More direct FTE per 10,000 active members (productivity) ²	0.40	0.15	\$1.96
Higher third party costs per active member	\$0.32	\$0.14	\$0.18
Unexplained ¹			\$1.98
Cost per active member	\$5.93	\$2.76	\$3.17

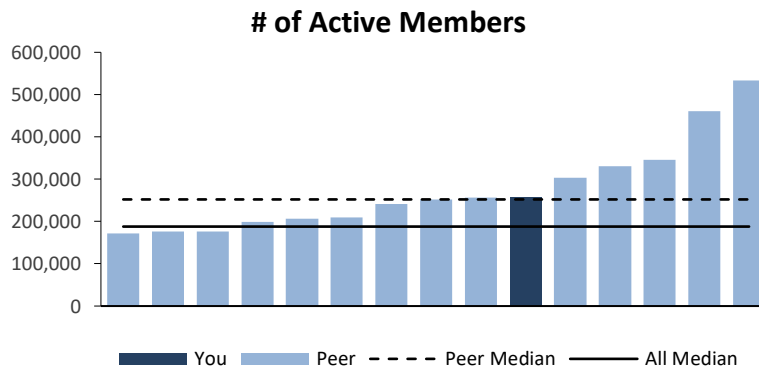
1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 18.5 service to employers FTE which was 156% more than the peer median of 7.2. The percentage difference was less favorable on a 'per active members' basis (your 0.40 service to employers FTE per 10,000 active members was 172% more than the peer median of 0.15).

3B Service to Employers - Factors that impact productivity

1. Economies of scale

You had an economy of scale advantage. Your 257,911 active members was 2% higher than the peer median of 252,096.

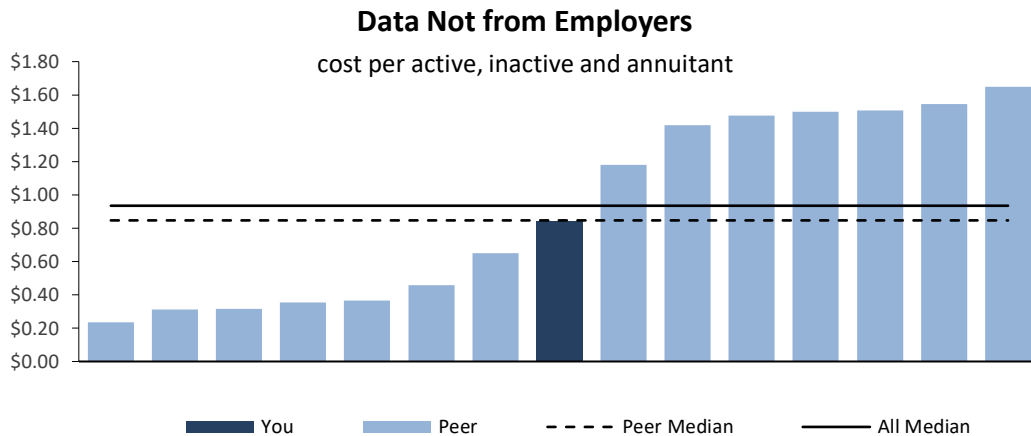


2. Additional service to employers work per active member

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%	0.6%	neutral
Service transactions a % of active members:			
a) Incoming calls from employers?	4.9%	7.5%	decreasing
b) Email queries from employers?	19.0%	9.5%	increasing
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 \$0.85. This was equal to the peer median.



Reasons why your cost was equal to median	Comparison		Impact ¹ \$s per Active, Inactive and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$82,815	\$90,506	-\$0.08
Equal direct FTE per 10,000 actives, inactives, annuitants (productivity) ²	0.14	0.14	\$0.00
Lower third party costs per active, inactive and annuitant	\$0.01	\$0.07	-\$0.07
Unexplained ¹			\$0.14
Cost per active, inactive and annuitant	\$0.85	\$0.85	\$0.00

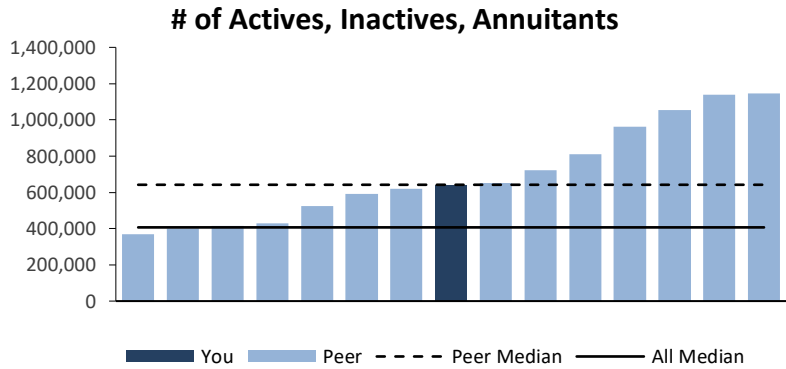
1. Impact equals your activity cost minus what it would have been if your value had equaled the peer median. An unexplained amount occurs using this methodology (refer to page 5 of this section).

2. You had 6.5 data not from employers FTE which was 9% more than the peer median of 6.0. The difference changes direction and was more favorable on a 'per actives, inactives, annuitants' basis (your 0.14 data not from employers FTE per 10,000 actives, inactives, annuitants was equal to the peer median of 0.14).

3C Data Not from Employers - Factors that impact productivity

1. Economies of scale

Your 641,892 actives, inactive, annuitants was the peer median. Thus the impact of economies of scale was minimized.

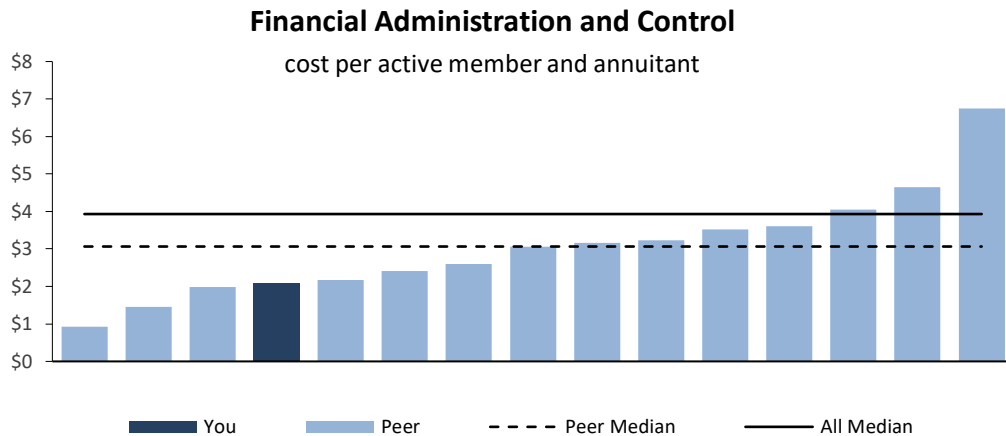


2. Additional data not from employers work per active, inactive and annuitant

Causes of additional work	You	Peer Avg	Cost Impact
Do you actively keep track of the addresses of inactive members?	Yes	93%Yes	increasing
If yes, inactive members as a % of actives, inactive, annuitants	27.3%	28.0%	decreasing
Status changes as a % of actives, inactive, annuitants:			
• Deaths	0.1%	0.1%	neutral

4A Financial Administration and Control

Your financial administration and control cost per active member and annuitant was \$2.09. This was \$0.97 below the peer median of \$3.06.



Reasons why your cost was below median	Comparison		Impact ¹ \$s per Active Member and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$92,432	\$113,320	-\$0.50
Equal direct FTE per 10,000 active members and annuitants (productivity) ²	0.24	0.24	\$0.00
Lower third party costs per active member and annuitant	\$0.15	\$0.25	-\$0.10
Unexplained ¹			-\$0.37
Cost per active member and annuitant	\$2.09	\$3.06	-\$0.97

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).

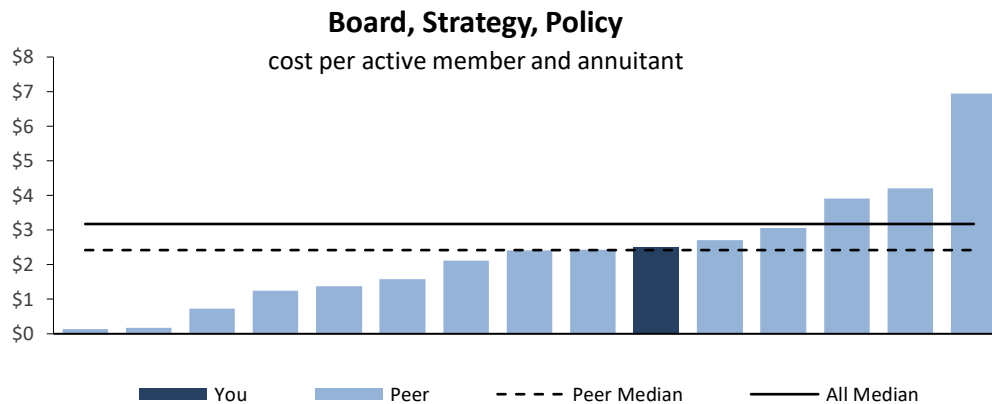
2. You had 11.3 financial administration and control FTE which was 10% more than the peer median of 10.2. The difference changes direction and was more favorable on a 'per active members and annuitants' basis (your 0.24 financial administration and control FTE per 10,000 active members and annuitants was equal to the peer median of 0.24).

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 - Your 466,970 active members and annuitants was the peer median. Thus the impact of economies of scale was minimized.
- 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 \$2.50. This was \$0.08 above the peer median of \$2.42.



Reasons why your cost was above median	Comparison		Impact ¹ \$s per Active Member and Annuitant
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$148,585	\$150,481	-\$0.03
More direct FTE per 10,000 active members and annuitants (productivity) ²	0.17	0.10	\$1.00
Equal third party costs per active member and annuitant	\$0.38	\$0.38	\$0.00
Unexplained ¹			-\$0.89
Cost per active member and annuitant	\$2.50	\$2.42	\$0.08

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 7.8 board, strategy, policy FTE which was 59% more than the peer median of 4.9. The percentage difference was less favorable on a 'per active members and annuitants' basis (your 0.17 board, strategy, policy FTE per 10,000 active members and annuitants was 68% more than the peer median of 0.10).

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:

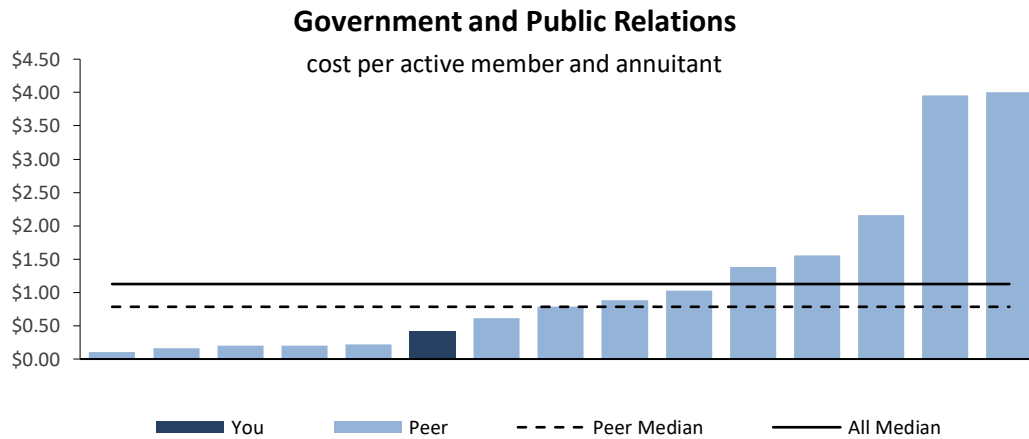
- Economies of scale - Your 466,970 active members and annuitants was the peer median. Thus the impact of economies of scale was minimized. Activity volume is a very important driver of productivity and costs.
- Doing more/less - For example, your 31 oversight meetings last year was above the peer median of 19.

# of meetings last year, including sub-committees	Peer		
	You	Median *	Peer Avg
a) Board of Trustees?	4	12	14.7
b) Non-board legislative oversight committee?	n/a	4	4.5
c) Advisory committee?	14	5	2.9
d) Members' Council?	n/a	n/a	n/a
e) Other?	13	4	3.1
Total	31	19	25

* 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 \$0.42. This was \$0.36 below the peer median of \$0.78.



Reasons why your cost was below median	Comparison		Impact ¹ \$s per Active Member and Annuitant
	You	Peer Median	
Higher salaries and benefits per direct FTE	\$158,824	\$147,875	\$0.03
Fewer direct FTE per 10,000 active members and annuitants (productivity) ²	0.03	0.04	-\$0.24
Equal third party costs per active member and annuitant	\$0.07	\$0.07	\$0.00
Unexplained ¹			-\$0.15
Cost per active member and annuitant	\$0.42	\$0.78	-\$0.36

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).

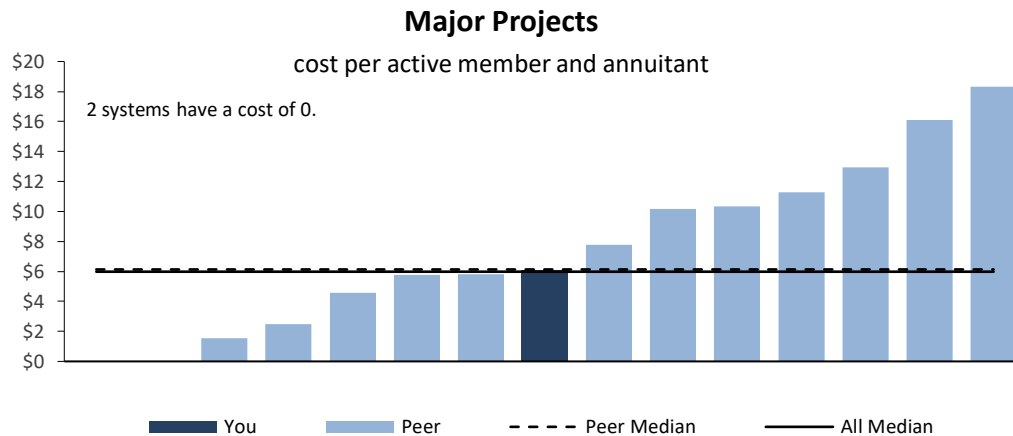
2. You had 1.2 government and public relations FTE which was 41% less than the peer median of 2.0. The percentage difference was less favorable on a 'per active members and annuitants' basis (your 0.03 government and public relations FTE per 10,000 active members and annuitants was 37% less than the peer median of 0.04).

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 - Your 466,970 active members and annuitants was the peer median. Thus the impact of economies of scale was minimized.
- Doing more/less - For example, some systems do not have any government relations staff.

5A-D Major Projects

Your major projects cost per active member and annuitant was \$6.13. This was equal to the peer median. This comparison includes both '5A and 5C Amortized major projects' plus '5B and 5D Major Projects (if you don't capitalize)'.
2 systems have a cost of 0.

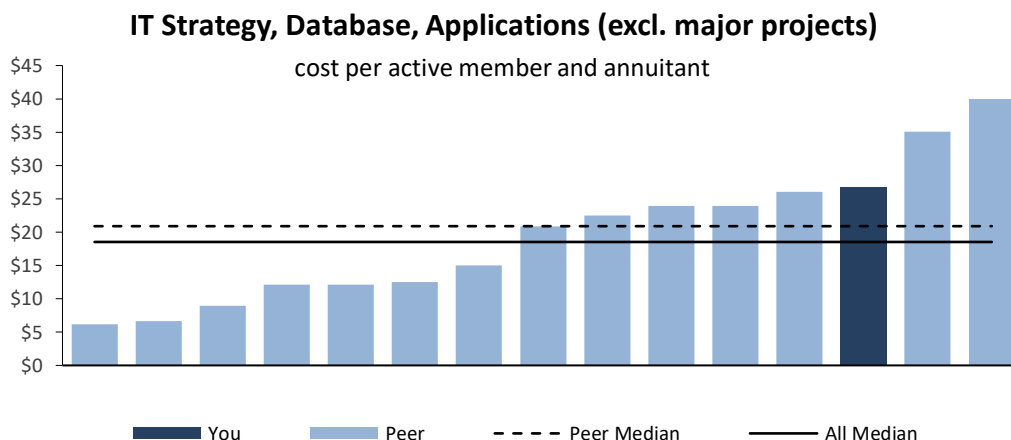


Reasons for differences in the cost for major projects include:

- 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. Your 466,970 active members and annuitants was the peer median. Thus the impact of economies of scale was minimized. But your largest peers still had more members over which to spread their major projects costs and your smallest peers had
- Plan complexity - It is more expensive to develop and maintain IT systems for plans with complex rule sets. Your total plan complexity score was 41 out of 100. This was equal to 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 \$26.68. This was \$5.79 above the peer median of \$20.89. The biggest reason why was that you had more direct FTE per 10,000 active members and annuitants².



Reasons why your cost was above median	Comparison		Impact ¹ \$s per Active Member and Annuitant
	You	Peer Median	
Higher salaries and benefits per direct FTE	\$128,524	\$124,272	\$0.59
More direct FTE per 10,000 active members and annuitants ²	1.39	0.51	\$11.24
Higher third party costs per active member and annuitant	\$12.61	\$9.97	\$2.64
Unexplained ¹			-\$8.68
Cost per active member and annuitant	\$26.68	\$20.89	\$5.79

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).

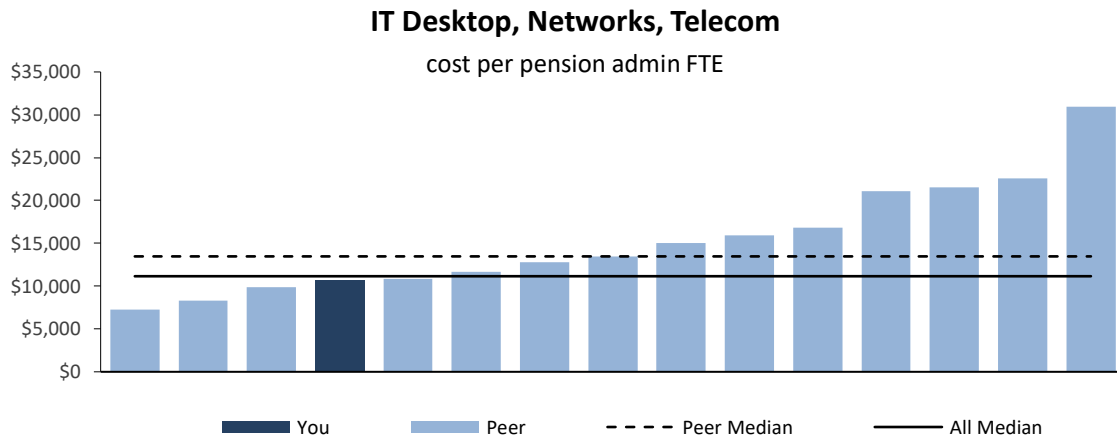
2. You had 64.7 IT strategy, database, applications (excl. major projects) FTE which was 158% more than the peer median of 25.1. The percentage difference was less favorable on a 'per active member and annuitant' basis (your 1.39 FTE per 10,000 active member and annuitant was 171% more than the peer median of 0.51) because you had an economy of scale equal to.

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. Your 466,970 active members and annuitants was the peer median. Thus the impact of economies of scale was minimized. But your largest peers still had more members over which to spread their IT strategy, database, applications (excl. major projects) costs and your smallest peers had fewer members.
- Plan complexity - It is more expensive to develop and maintain IT systems for plans with complex rule sets. Your total plan complexity score was 41 out of 100. This was equal to the peer median of 41.
- IT investment cycle

6B IT Desktop, Networks, Telecom

Your it desktop, networks, telecom cost per pension admin FTE was \$10,675. This was \$2,796 below the peer median of \$13,471.



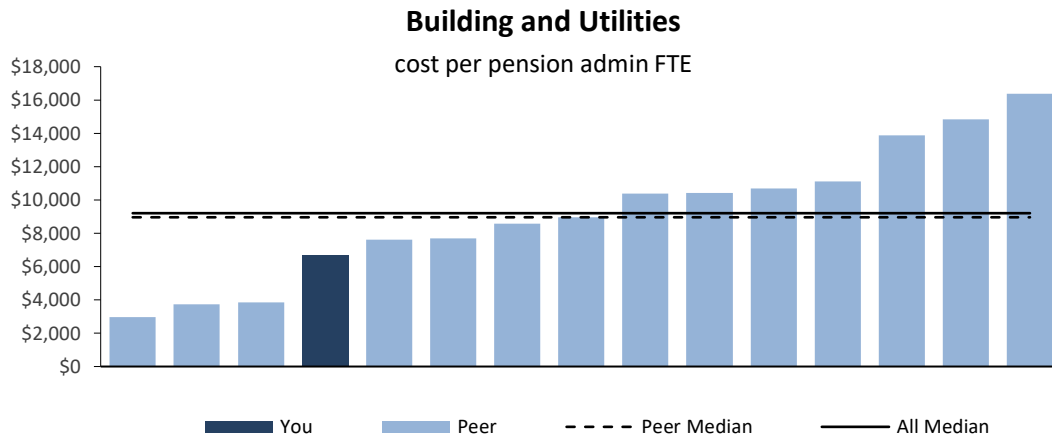
Reasons why your cost was below median	Comparison		Impact ¹ \$s per Pension Admin FTE
	You	Peer Median	
Higher salaries and benefits per direct FTE	\$129,778	\$123,949	336
More direct FTE per 100 pension admin FTE ²	5.77	4.81	1,242
Lower third party costs per pension admin FTE	\$4,686	\$8,834	-4,148
Unexplained ¹			-227
Cost per pension admin FTE	\$10,675	\$13,471	-\$2,796

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 15.9 IT desktop, networks, telecom FTE which was 35% more than the peer median of 11.8. The percentage difference was more favorable on a 'per pension admin FTE' basis (your 5.77 FTE per 100 pension admin FTE was 20% more than the peer median of 4.81) because you had an economy of scale advantage.

7A Building and Utilities

Your building and utilities cost per pension admin FTE was \$6,686. This was \$2,273 below the peer median of \$8,959.



Reasons why your cost was below median	Comparison		Impact ¹ \$s per Pension Admin FTE
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$85,117	\$94,000	-\$54
Fewer direct FTE per 100 pension admin FTE ²	0.61	0.75	-\$123
Lower third party costs per pension admin FTE	\$7,111	\$8,872	-\$1,761
Unexplained ¹			-\$334
Cost per pension admin FTE	\$6,686	\$8,959	-\$2,273

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).

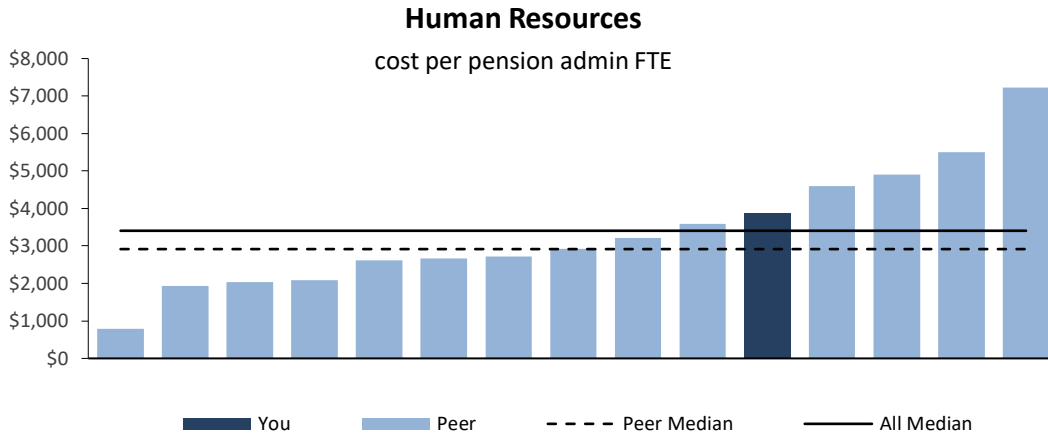
2. You had 1.7 building and utilities FTE which was equal to the peer median of 1.7. The difference changes direction and was more favorable on a 'per pension admin FTE' basis (your 0.61 building and utilities FTE per 100 pension admin FTE was 19% less than the peer median of 0.75) because you had an economy of scale

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 \$3,880. This was \$964 above the peer median of \$2,916.



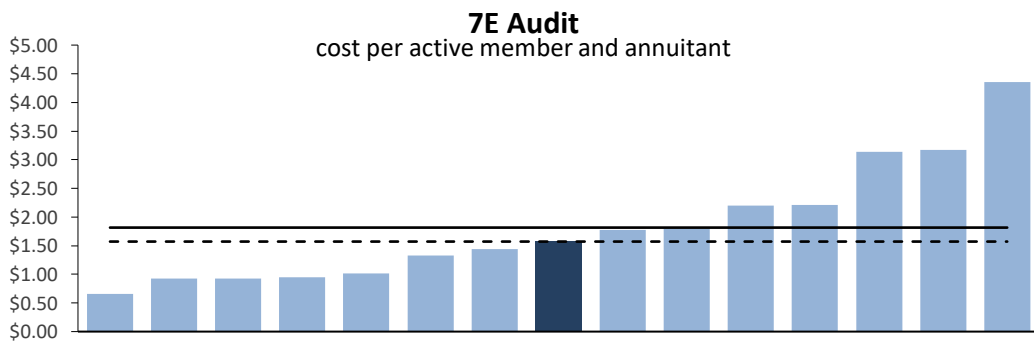
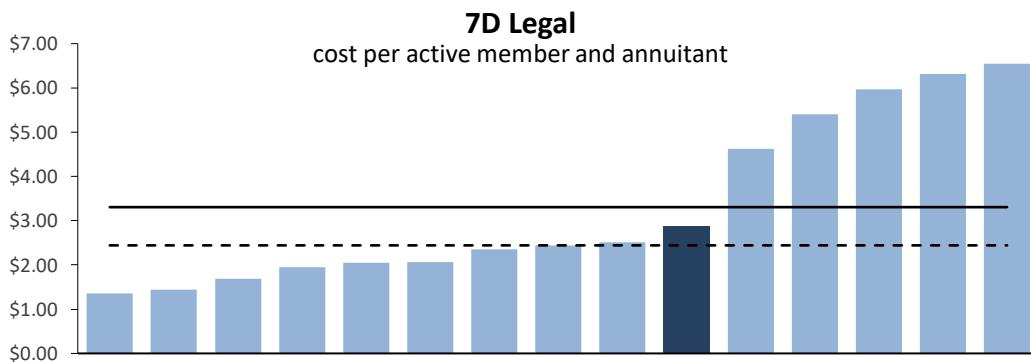
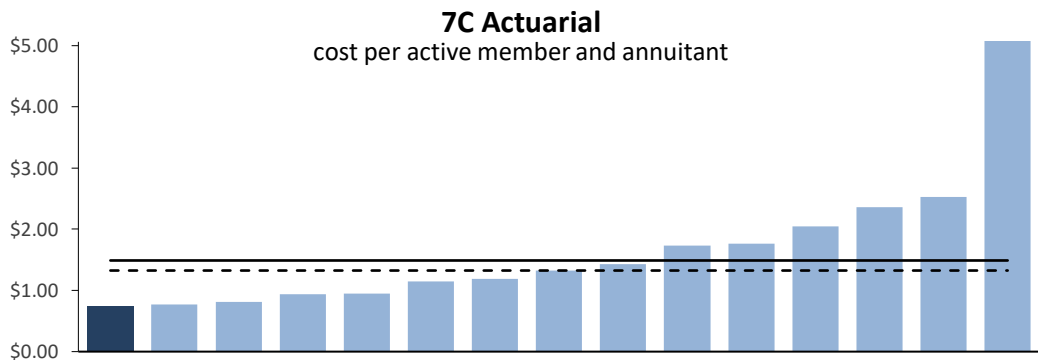
Reasons why your cost was above median	Comparison		Impact ¹ \$s per Pension Admin FTE
	You	Peer Median	
Lower salaries and benefits per direct FTE	\$87,891	\$117,208	-\$1,099
More direct FTE per 100 pension admin FTE ²	3.75	2.34	\$1,241
Higher third party costs per pension admin FTE	\$1,130	\$638	\$492
Unexplained ¹			\$330
Cost per pension admin FTE	\$3,880	\$2,916	\$964

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 10.3 human resources FTE which was 84% more than the peer median of 5.6. The percentage difference was more favorable on a 'per pension admin FTE' basis (your 3.75 FTE per 100 pension admin FTE was 60% more than the peer median of 2.34) because you had an economy of scale advantage.

7C-E Professional Costs

Your cost for activity:

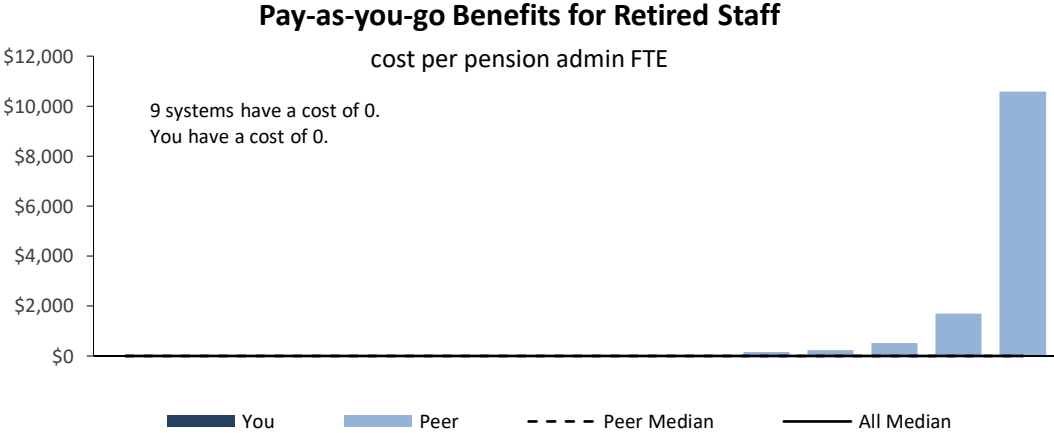
- Your actuarial cost per active member and annuitant was \$0.74. This was \$0.59 below the peer median of \$1.33.
- Your legal cost per active member and annuitant was \$2.89. This was \$0.45 above the peer median of \$2.44.
- Your audit cost per active member and annuitant was \$1.57. This was equal to the peer median



You
 Peer
 Peer Median
 All Median

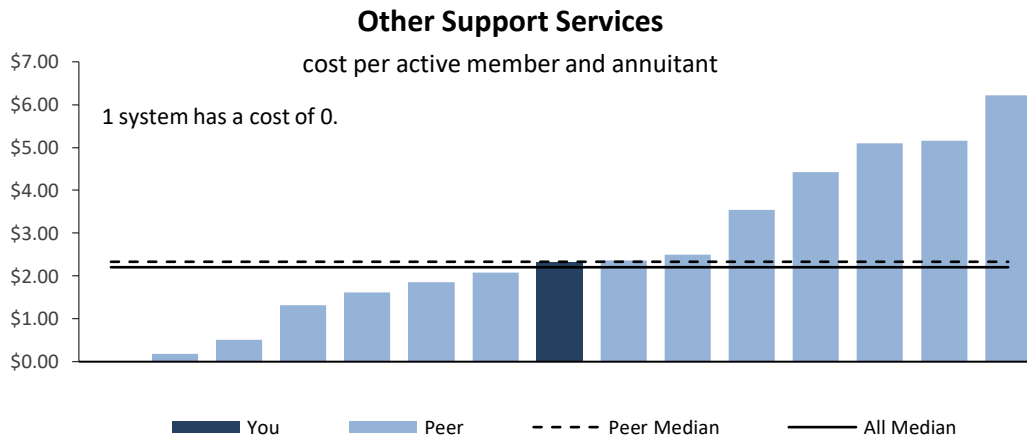
7F Pay-as-you-go Benefits for Retired Staff

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 \$2.33. This was equal to the peer median.



Reasons why your cost was equal to median	Comparison		Impact ¹ \$s per Active Member and Annuitant
	You	Peer Median	
Equal salaries and benefits per direct FTE	\$91,301	\$91,301	\$0.00
Equal direct FTE per 10,000 active members and annuitants ²	0.2	0.2	\$0.02
Higher third party costs per active member and annuitant	\$0.67	\$0.31	\$0.36
Unexplained ¹			-\$0.38
Cost per active member and annuitant	\$2.33	\$2.33	\$0.00

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 10.2 other support services FTE which was 15% more than the peer median of 8.9. The difference changes direction and was more favorable on a 'per active member and annuitant' basis (your 0.22 other support services FTE per 10,000 active member and annuitant was equal to the peer median of 0.22).

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. Your 466,970 active members and annuitants was the peer median. Thus the impact of economies of scale was minimized. But your largest peers still had more members over which to spread their other support services costs and your smallest peers had fewer members.
- Plan complexity - It is more expensive to develop and maintain IT systems for plans with complex rule sets. Your total plan complexity score was 41 out of 100. This was equal to 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 inceptions, 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	#
1. Member Transactions																
a. Pension Payments	annuitant	13	19	48	25	15	13	3	15	25	108	27	18	13	1	44
b. Pension Inceptions	new payee inception	368	494	1,255	658	369	270	196	15	655	2,453	842	549	332	79	44
c. Refunds, Withdrawals, and Transfers-out	withdrawal and transfer-out	111	286	1,904	260	156	100	24	15	778	5,749	919	276	145	24	43
d. Purchases and Transfers-in	purchase and transfer-in	1,029	1,897	13,309	1,276	659	427	294	15	2,587	56,622	1,156	659	329	97	42
e. Disability	disability application	1,045	4,400	11,332	5,455	3,773	1,173	725	15	5,067	27,118	5,363	3,905	1,267	0	35
2. Member Communication																
a. Call Center	call and email	43	38	108	43	33	22	14	15	34	108	45	26	17	0	44
b. Mail Room, Imaging	incoming mail	19	25	139	30	13	11	4	15	30	139	35	19	11	1	44
c. 1-on-1 Counseling	member counseled 1-on-1	302	385	982	449	347	183	80	15	270	982	354	182	96	5	43
d. Member Presentations	member presentation	2,454	3,254	10,194	3,742	2,454	1,654	449	15	3,596	12,645	5,109	3,083	1,805	251	42
e. Written Pension Estimates	written estimate	130	282	1,619	273	181	106	0	15	345	2,319	392	168	88	0	44
f. Mass Communication	active member and annuitant	6	7	13	9	6	4	3	15	8	34	11	7	4	0	44
3. Collections and Data Maintenance																
a. Data and Money from Employers	active member	11	20	70	19	12	9	5	15	23	106	24	16	11	2	44
b. Service to Employers	active member	19	10	24	10	8	5	3	15	11	55	13	9	6	0	44
c. Data Not from Employers	active, inactive and annuitant	3	2	5	4	3	1	1	15	4	13	5	3	1	0	44
Total Pension Administration	active member and annuitant	87	98	236	104	88	75	53	15	120	400	144	98	77	7	44
Non-Pension																
1f. Healthcare Administration	annuitant	26	14	60	25	5	0	0	15	9	137	5	0	0	0	41
1g. Optional and Third Party Administered Benefits	active member	6	10	45	15	6	1	0	15	4	45	5	0	0	0	41

Calculation of fully-attributed front-office costs

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

Activity	Direct Staff (# FTE)	Direct Costs (Salaries + Third Party)	Attributions ¹				Fully-Attributed		
			5. Major Projects	6a IT Strategy, DB Mgmt, Applications	6b + 7a - g Support Services and Other	4. Governance & Financial Control	Cost per unit ³	Cost per Active Member and Annuitant	
1. Member Transactions									
a. Pension Payments	10.5	913	176	766	576	337	2,768	13	5.93
b. Pension Inceptions	14.5	1,133	243	1,059	796	466	3,697	368	7.92
c. Refunds, Withdrawals, and Transfers-out	3.6	304	61	264	199	116	944	111	2.02
d. Purchases and Transfers-in	1.5	130	25	109	82	48	394	1,029	0.84
e. Disability	7.8	620	131	569	428	250	1,998	1,045	4.28
f. Healthcare Administration	16.4	2,571	276	1,200	903	528	5,478	26	11.73
g. Optional and Third Party Administered Benefits	5.1	526	85	370	278	163	1,422	6	3.05
2. Member Communication									
a. Call Center	32.9	2,558	554	2,408	1,811	1,059	8,390	43	17.97
b. Mail Room, Imaging	10.4	1,193	175	762	573	335	3,038	19	6.51
c. 1-on-1 Counseling	9.2	755	155	676	508	297	2,391	302	5.12
d. Member Presentations	5.8	488	97	423	318	186	1,512	2,454	3.24
e. Written Pension Estimates	12.1	985	203	881	663	388	3,119	130	6.68
f. Mass Communication	8.5	1,512	142	618	465	272	3,009	6	6.44
3. Collections and Data Maintenance									
a. Data and Money from Employers	10.9	876	184	800	602	352	2,814	11	6.03
b. Service to Employers	18.5	1,530	310	1,350	1,015	594	4,799	19	10.28
c. Data Not from Employers	6.5	544	109	476	358	209	1,697	3	3.63
4. Governance and Financial Control									
a. Financial Administration and Control	11.3	1,112	189	823	619	-2,744	0		
b. Board, Strategy, Policy	7.8	1,333	131	569	428	-2,461	0		
c. Government and Public Relations	1.2	221	20	87	65	-394	0		
5. Major Projects									
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	3,267	-3,267				0		
d. IT Major Projects (if you don't capitalize)	0.0	0	0				0		
6. Information Technology									
a. IT Strategy, Database, Applications (excl. major project)	64.7	14,209		-14,209			0		
b. IT Desktop, Networks, Telecom	15.9	3,354			-3,354		0		
7. Support Services and Other									
a. Building and Utilities	1.7	2,101			-2,101		0		
b. Human Resources	10.3	1,219			-1,219		0		
c. Actuarial	1.2	395			-395		0		
d. Legal and Rule Interpretation	11.8	1,538			-1,538		0		
e. Internal and External Audit	4.1	837			-837		0		
f. Pay-as-you-go Benefits for Retired Staff	n/a	0			0		0		
g. Other Support Services	10.2	1,242			-1,242		0		
Total Administration	314.2	47,468	0	0	0	0	47,468		101.65
less: ²									
1f. Healthcare Administration							-5,478		-11.73
1g. Optional and Third Party Administered Benefits							-1,422		-3.05
Total Pension Administration							40,568		86.88

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

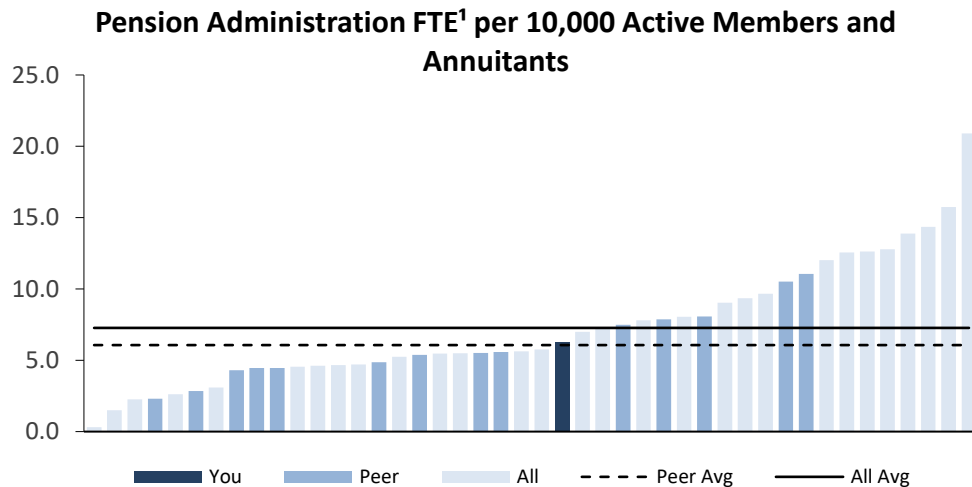
Staff Costs and Productivity

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 6.27 pension administration FTE¹ per 10,000 members. This was above 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 ¹ FTE			# of FTE per 10,000 Active Members and Annuitants		
	You	Peer Avg	All Avg	You	Peer Avg	All Avg
1. Member Transactions						
a. Pension Payments	10.5	13.8	11.9	0.22	0.23	0.33
b. Pension Inceptions	14.5	20.6	22.8	0.31	0.38	0.55
c. Refunds, Withdrawals, and Transfers-out	3.6	8.2	9.2	0.08	0.16	0.31
d. Purchases and Transfers-in	1.5	7.6	12.0	0.03	0.13	0.34
e. Disability	<u>7.8</u>	<u>9.9</u>	<u>7.5</u>	<u>0.17</u>	<u>0.17</u>	<u>0.18</u>
Total Member Transactions	37.8	60.1	63.4	0.81	1.07	1.71
2. Member Communication						
a. Call Center	32.9	42.2	31.3	0.71	0.81	0.71
b. Mail Room, Imaging	10.4	11.3	10.5	0.22	0.22	0.28
c. 1-on-1 Counseling	9.2	11.0	9.5	0.20	0.22	0.23
d. Member Presentations	5.8	7.2	4.9	0.12	0.15	0.12
e. Written Pension Estimates	12.1	5.2	6.3	0.26	0.12	0.17
f. Mass Communication	<u>8.5</u>	<u>8.3</u>	<u>8.0</u>	<u>0.18</u>	<u>0.18</u>	<u>0.22</u>
Total Member Communication	78.9	85.2	70.5	1.69	1.69	1.75
3. Collections and Data Maintenance						
a. Data and Money from Employers	10.9	22.6	18.5	0.23	0.42	0.47
b. Service to Employers	18.5	9.7	10.6	0.40	0.20	0.21
c. Data Not from Employers	<u>6.5</u>	<u>5.5</u>	<u>6.1</u>	<u>0.14</u>	<u>0.13</u>	<u>0.17</u>
Total Collections and Data Maintenance	35.9	37.8	35.3	0.77	0.75	0.86
4. Governance and Financial Control						
a. Financial Administration and Control	11.3	10.6	13.8	0.24	0.22	0.37
b. Board, Strategy, Policy	7.8	5.3	10.0	0.17	0.11	0.19
c. Government and Public Relations	<u>1.2</u>	<u>3.0</u>	<u>3.3</u>	<u>0.03</u>	<u>0.06</u>	<u>0.08</u>
Total Governance and Financial Control	20.2	19.0	27.2	0.43	0.40	0.65
5. Major Projects						
a. Amortization of non-IT Major Projects ²	n/a	n/a	n/a	n/a	n/a	n/a
b. Non-IT Major Projects (if you don't capitalize)	0.0	4.2	3.5	n/a	0.08	0.09
c. Amortization of IT Major Projects ²	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>10.4</u>	<u>7.6</u>	<u>n/a</u>	<u>0.17</u>	<u>0.21</u>
Total Major Projects	0.0	14.6	11.1	0.00	0.26	0.30
6. Information Technology						
a. IT Strategy, Database, Applications (excl. major projects)	64.7	37.9	34.7	1.39	0.84	0.80
b. IT Desktop, Networks, Telecom	<u>15.9</u>	<u>13.4</u>	<u>9.0</u>	<u>0.34</u>	<u>0.28</u>	<u>0.26</u>
Total Information Technology	80.6	51.2	43.7	1.73	1.12	1.05
7. Support Services and Other						
a. Building and Utilities	1.7	5.2	2.9	0.04	0.13	0.08
b. Human Resources	10.3	8.0	8.4	0.22	0.16	0.22
c. Actuarial	1.2	1.7	2.8	0.03	0.03	0.05
d. Legal and Rule Interpretation	11.8	9.8	9.7	0.25	0.19	0.25
e. Internal and External Audit	4.1	3.9	4.9	0.09	0.08	0.15
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>10.2</u>	<u>11.6</u>	<u>8.7</u>	<u>0.22</u>	<u>0.19</u>	<u>0.20</u>
Total Support Services and Other	39.3	40.2	37.5	0.84	0.77	0.95
Total Pension Admin FTE (excludes below)	292.8	308.1	288.7	6.27	6.07	7.27
FTE whose salaries are being capitalized	0.0	14.5	5.5	n/a	0.18	0.07
1f. Healthcare Administration	16.4	6.6	3.1	0.35	0.16	0.09
1g. Optional and Third Party Administered Benefits	5.1	6.9	3.1	0.11	0.14	0.06
Total Administration FTE	314.2	336.0	300.4	6.73	6.54	7.49

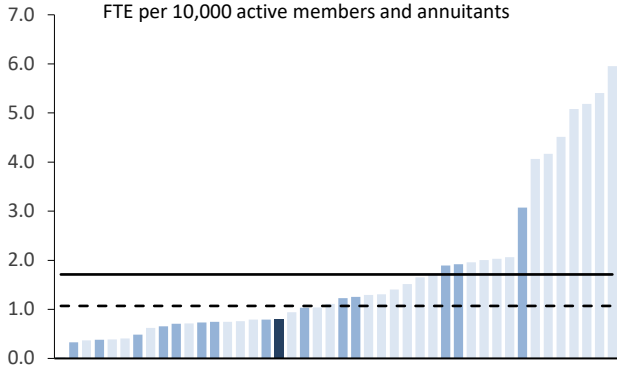
1. Direct staff includes staff directly performing the activity, plus related support and management staff that are in the same department and directly support the activity.

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

1. Member Transactions

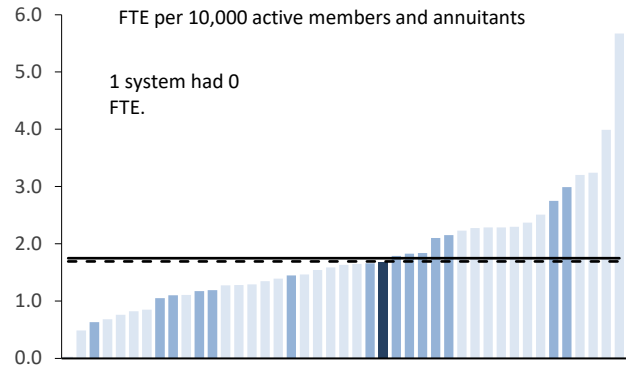
FTE per 10,000 active members and annuitants



2. Member Communication

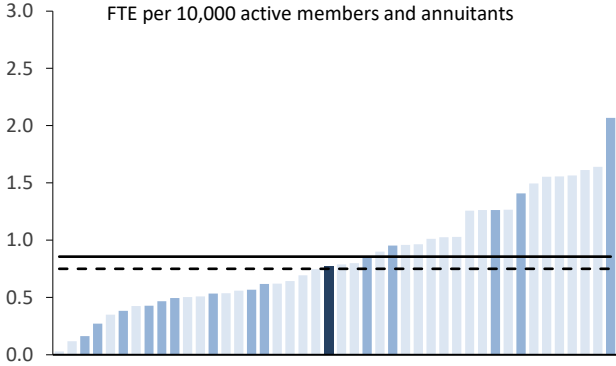
FTE per 10,000 active members and annuitants

1 system had 0 FTE.



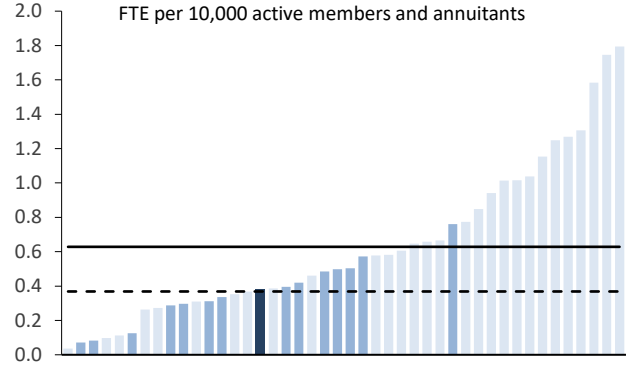
3. Collections and Data Maintenance

FTE per 10,000 active members and annuitants



4. Governance and Financial Control

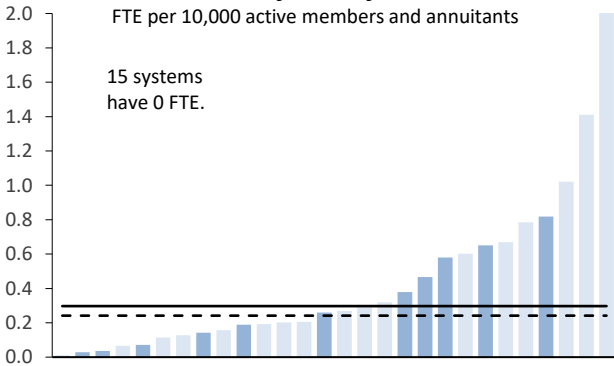
FTE per 10,000 active members and annuitants



5. Major Projects

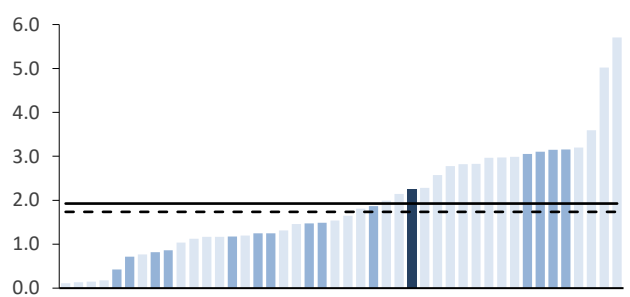
FTE per 10,000 active members and annuitants

15 systems have 0 FTE.



6. IT and 7. Support Services and Other

FTE per 10,000 active members and annuitants



■ You

■ Peer

■ All

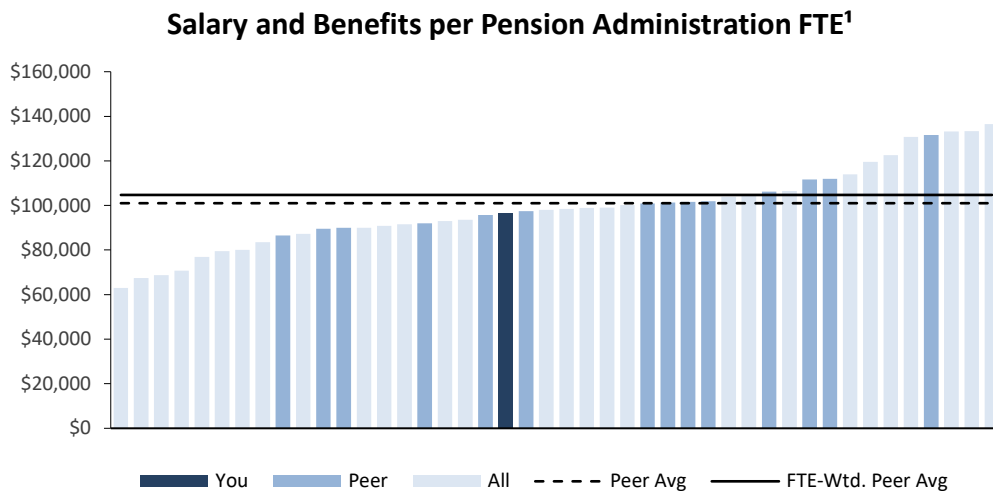
--- Peer Avg

— All Avg

Salaries and benefits

Your salaries and benefits per pension administration FTE¹ was \$96,717. This was 4% below the peer average of \$101,005.

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 \$96,717 was below the FTE-weighted peer average of \$104,710.



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
1. Member Transactions						
a. Pension Payments	\$86,612	\$90,807	\$86,576	99%	60%	64%
b. Pension Inceptions	\$78,177	\$88,007	\$82,564	100%	95%	91%
c. Refunds, Withdrawals, and Transfers-out	\$83,531	\$86,888	\$85,086	99%	92%	89%
d. Purchases and Transfers-in	\$86,644	\$88,912	\$86,090	99%	90%	90%
e. Disability	<u>\$79,068</u>	<u>\$92,605</u>	<u>\$85,854</u>	99%	65%	74%
	\$81,539	\$88,296	\$84,180			
2. Member Communication						
a. Call Center	\$77,101	\$82,974	\$77,574	99%	96%	92%
b. Mail Room, Imaging	\$84,966	\$78,779	\$72,595	74%	78%	74%
c. 1-on-1 Counseling	\$80,845	\$93,243	\$88,140	99%	93%	91%
d. Member Presentations	\$83,040	\$98,986	\$99,755	98%	84%	83%
e. Written Pension Estimates	\$80,860	\$89,742	\$83,777	99%	93%	89%
f. Mass Communication	<u>\$94,190</u>	<u>\$100,062</u>	<u>\$104,091</u>	53%	57%	58%
	\$81,419	\$86,572	\$83,668			
3. Collections and Data Maintenance						
a. Data and Money from Employers	\$79,496	\$93,247	\$85,878	99%	97%	92%
b. Service to Employers	\$78,370	\$95,145	\$92,517	95%	94%	88%
c. Data Not from Employers	<u>\$82,815</u>	<u>\$92,976</u>	<u>\$85,132</u>	99%	82%	83%
	\$79,519	\$93,214	\$87,243			
4. Governance and Financial Control						
a. Financial Administration and Control	\$92,432	\$115,407	\$116,933	94%	79%	81%
b. Board, Strategy, Policy	\$148,585	\$159,749	\$183,452	87%	76%	67%
c. Government and Public Relations	<u>\$158,824</u>	<u>\$154,746</u>	<u>\$153,732</u>	85%	82%	78%
	\$117,932	\$130,050	\$139,996			
5. Major Projects						
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	\$131,066	\$129,307	n/a	77%	61%
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>\$130,205</u>	<u>\$120,780</u>	n/a	62%	60%
	n/a	\$136,887	\$123,989			
6. Information Technology						
a. IT Strategy, Database, Applications (excl. major projects)	\$128,524	\$128,785	\$119,987	59%	52%	48%
b. IT Desktop, Networks, Telecom	<u>\$129,778</u>	<u>\$131,134</u>	<u>\$117,925</u>	62%	40%	36%
	\$128,772	\$130,171	\$118,785			
7. Support Services and Other						
a. Building and Utilities	\$85,117	\$96,435	\$102,959	7%	13%	10%
b. Human Resources	\$87,891	\$116,806	\$115,937	74%	82%	73%
c. Actuarial	\$94,853	\$183,372	\$167,587	29%	30%	35%
d. Legal and Rule Interpretation	\$118,607	\$139,201	\$140,102	91%	70%	69%
e. Internal and External Audit	\$107,972	\$140,264	\$128,497	52%	59%	60%
f. Pay-as-you-go Benefits for Retired Staff	n/a	n/a	n/a	n/a	100%	100%
g. Other Support Services	<u>\$91,301</u>	<u>\$89,482</u>	<u>\$87,155</u>	75%	69%	67%
	\$100,195	\$119,867	\$125,790			
Total Pension Administration ¹	\$98,038	\$103,234	\$101,026	67%	61%	59%
Total Pension Admin excluding activities 6b, 7a, 7b, and 7f ²	\$96,717	\$101,005	\$98,860	70%	66%	65%

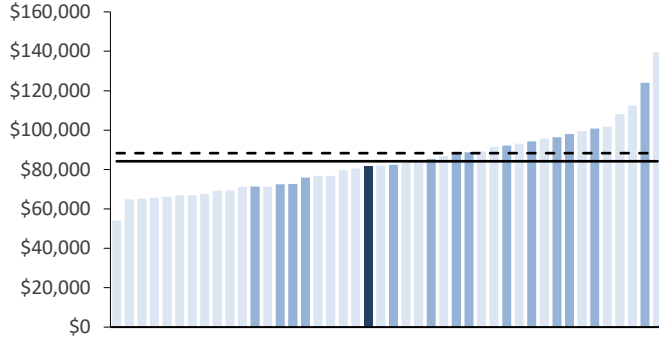
1. Pension administration FTE excludes: FTE whose salaries are being capitalized, FTE administering healthcare and FTE administering optional benefits.

2. Section 3 'Total Costs' and the Executive Summary use the FTE-weighted peer average of \$104,710 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

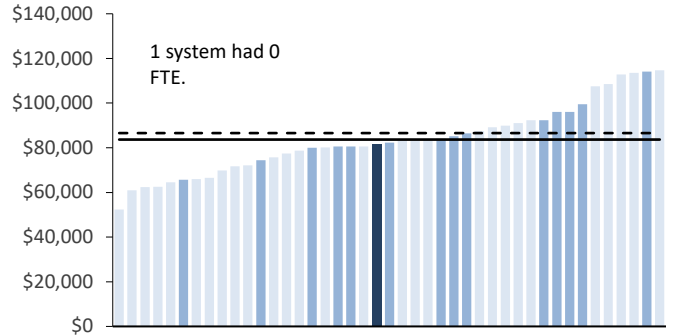
1. Member Transactions

Salary and Benefits per FTE



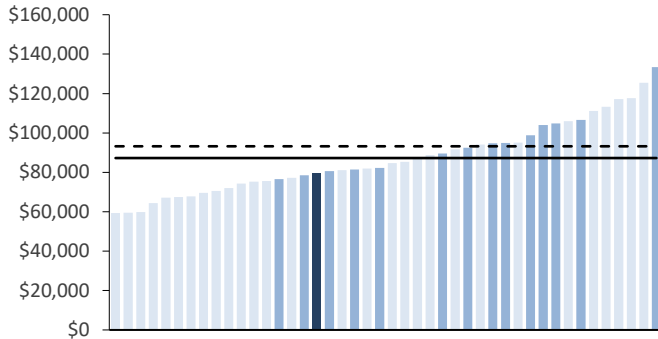
2. Member Communication

Salary and Benefits per FTE



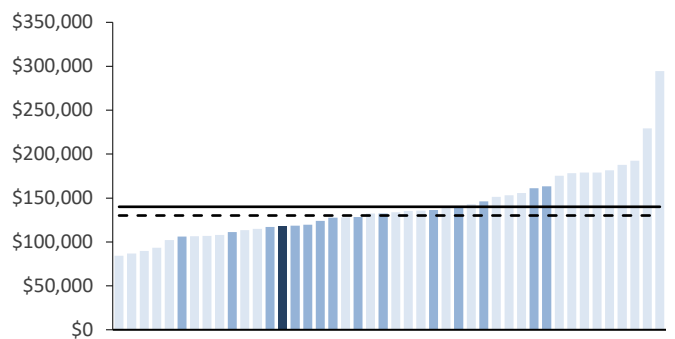
3. Collections and Data Maintenance

Salary and Benefits per FTE



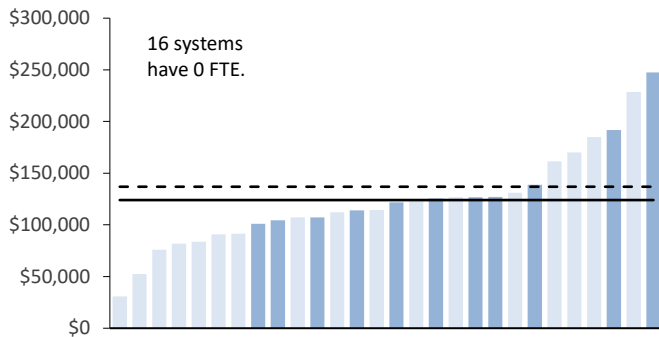
4. Governance and Financial Control

Salary and Benefits per FTE



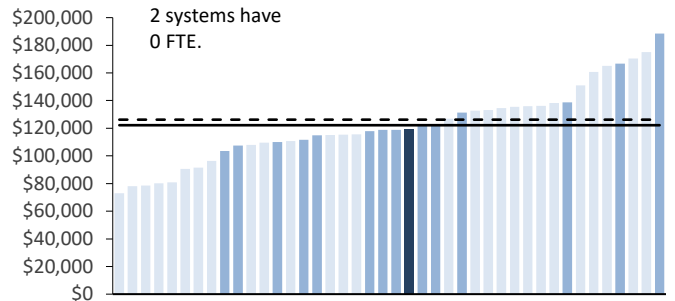
5. Major Projects

Salary and Benefits per FTE



6. IT and 7. Support Services and Other

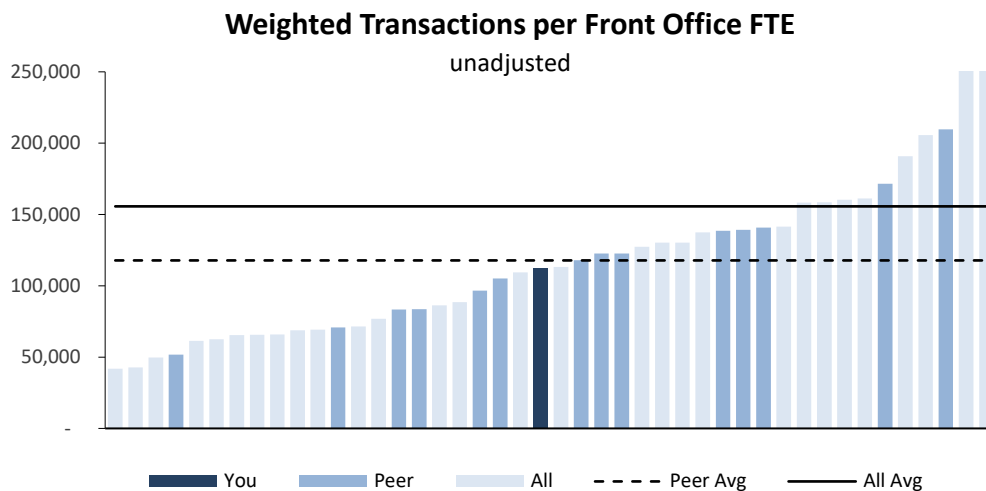
Salary and Benefits per FTE



You
 Peer
 All
 Peer Avg
 All Avg

Productivity

Total productivity is defined as the number of weighted transactions per front-office, full-time-equivalent staff (FTE). Your productivity was 112,412 per front-office FTE. This was below the in-house peer average of 117,776.



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:

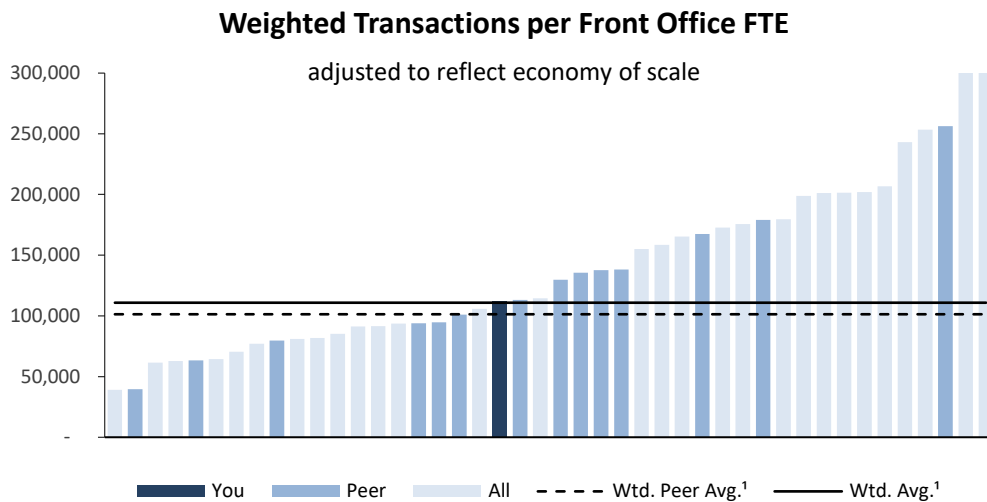
- Economies of scale (see next page)
- Staff skills and staff productivity
- IT capability / online transactions
- Service levels, for example, shorter wait times may require more staff
- Complexity of plan rules
- Using more consultants and third parties to do part of the work
- Projects
- Organization 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 11% 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
1. Member Transactions				
a. Pension Payments	Annuitants	19,967	30,562	56,596
b. Pension Inceptions	New Payee Inceptions	693	801	815
c. Refunds, Withdrawals, and Transfers-out	Refunds, Withdrawals, and Transfers-out	2,354	2,943	1,714
d. Purchases and Transfers-in	Purchases and Transfers-in	257	490	894
e. Disability	Disability Applications	246	181	145
2. Member Communication				
a. Call Center	Calls and Emails	5,865	8,952	10,020
b. Mail Room, Imaging	Incoming Mail	15,699	26,536	20,581
c. 1-on-1 Counseling	Members Counseled 1-on-1	856	1,005	2,565
d. Member Presentations	Member Presentations	107	149	140
e. Written Pension Estimates	Written Estimates	1,992	2,754	2,894
f. Mass Communication	Active Members and Annuitants	55,263	68,214	93,563
3. Collections and Data Maintenance				
a. Data and Money from Employers	Active Members	23,575	25,333	27,667
b. Service to Employers	Active Members	13,971	39,937	153,728
c. Data Not from Employers	Actives, Inactives, Annuitants	98,601	263,456	400,576
Weighted Transactions per Front Office FTE		112,412	117,776	155,672
adjusted for Economies of Scale ^{1, 2}		112,412	101,313	110,833

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:

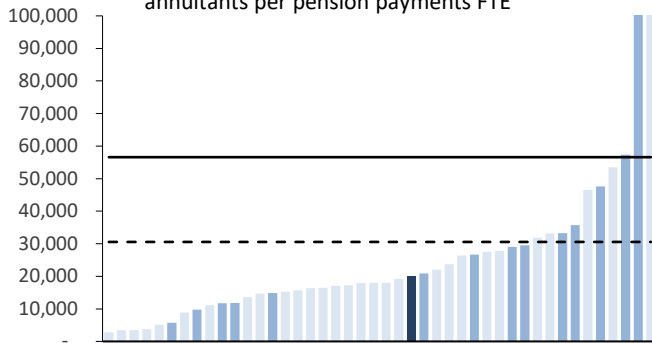
- Economies of scale (see previous page)
- Staff skills and staff productivity
- IT capability / online transactions
- Service levels, for example, shorter wait times may require more staff
- Complexity of plan rules
- Using more consultants and third parties to do part of the work
- Projects
- Organization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

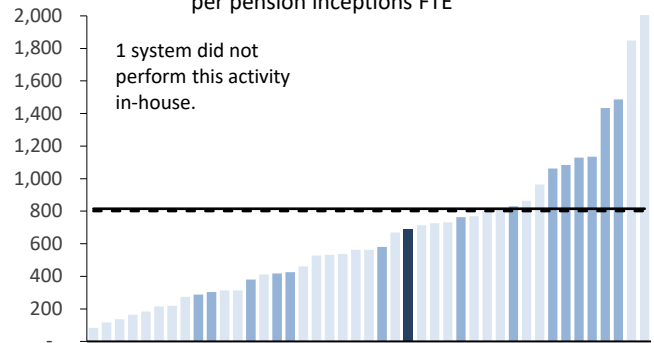
1A Pension Payments

annuitants per pension payments FTE



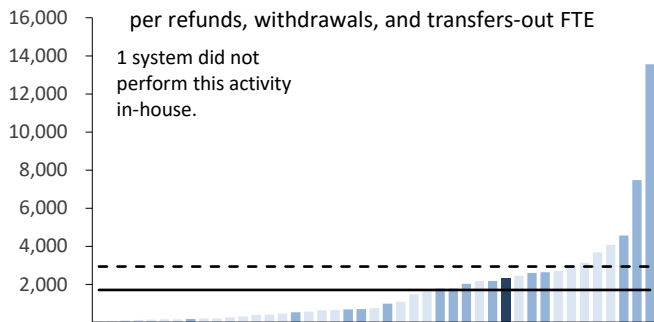
1B New Payee Inceptions

per pension inceptions FTE



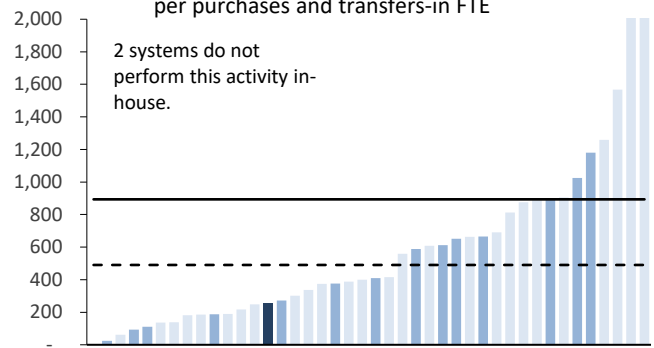
1C Refunds, Withdrawals, and Transfers-out

per refunds, withdrawals, and transfers-out FTE



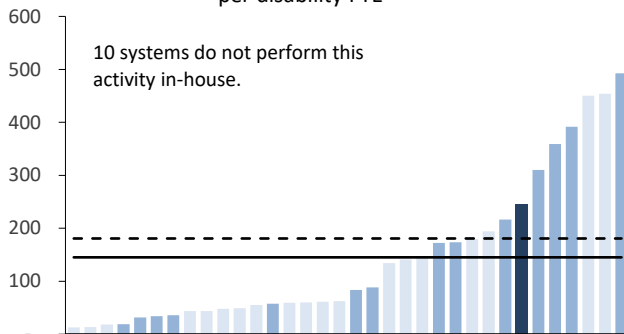
1D Purchases and Transfers-in

per purchases and transfers-in FTE



1E Disability Applications

per disability FTE

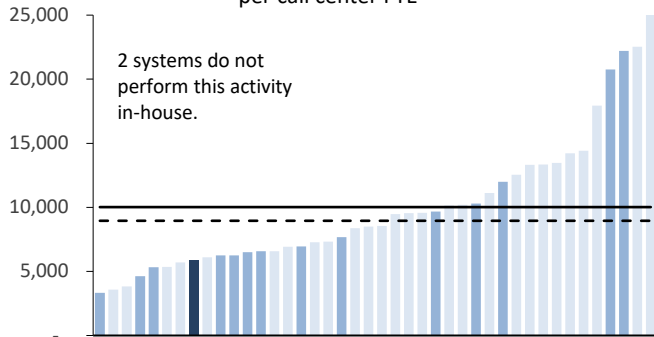


You
 Peer
 All
 Peer Avg
 All Avg

Productivity by activity - member communication

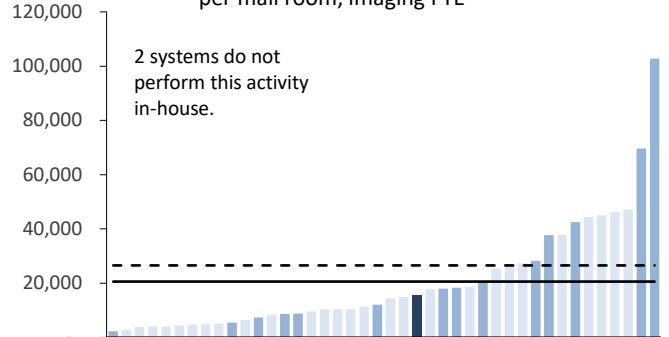
2A Calls and Emails

per call center FTE



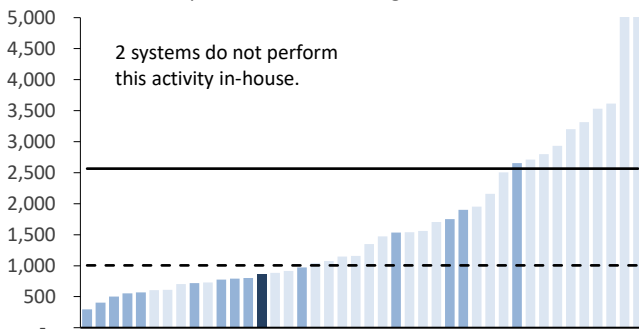
2B Incoming Mail

per mail room, imaging FTE



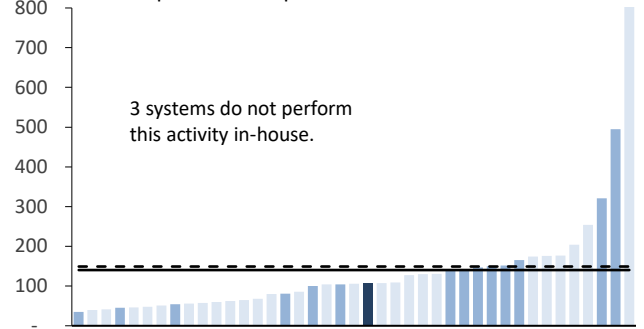
2C Members Counseled 1-on-1

per 1-on-1 counseling FTE



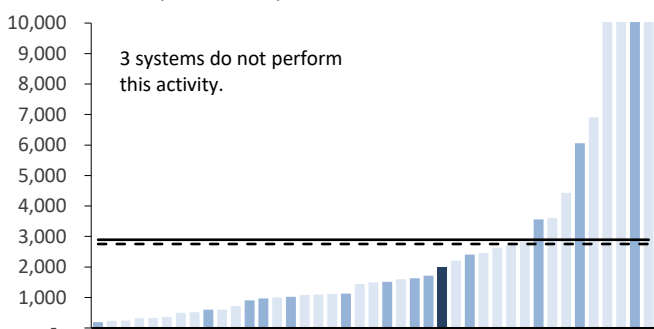
2D Member Presentations

per member presentations FTE



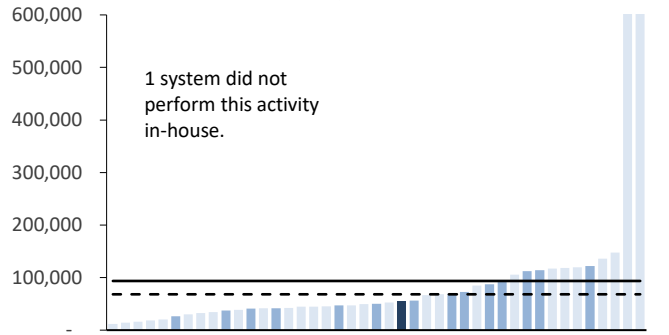
2E Written Estimates

per written pension estimates FTE



2F Mass Communication

active members and annuitants per mass communication FTE

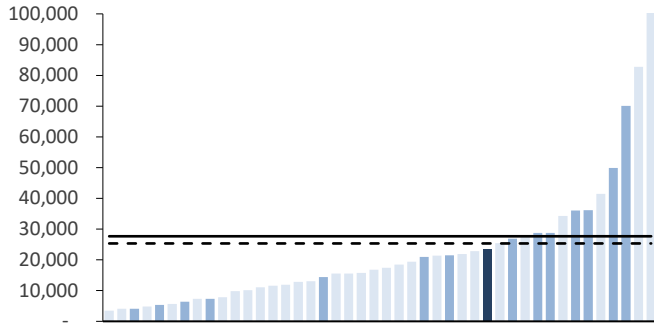


■ You ■ Peer ■ All - - - Peer Avg — All Avg

Productivity by activity - collections and data maintenance

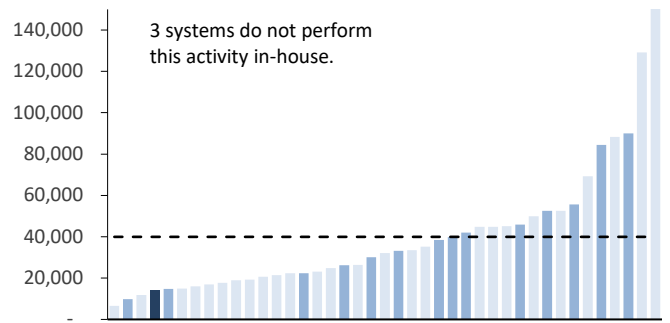
3A Data and Money from Employers

active members per data and money from employers FTE



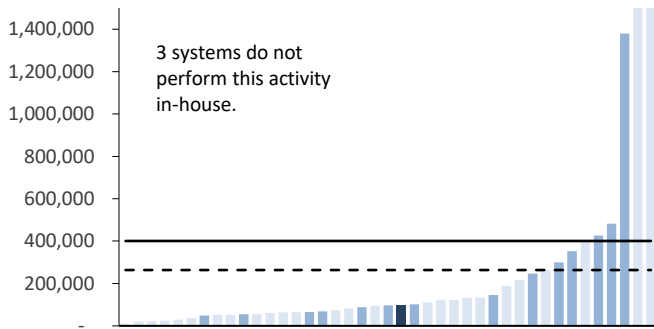
3B Service to Employers

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

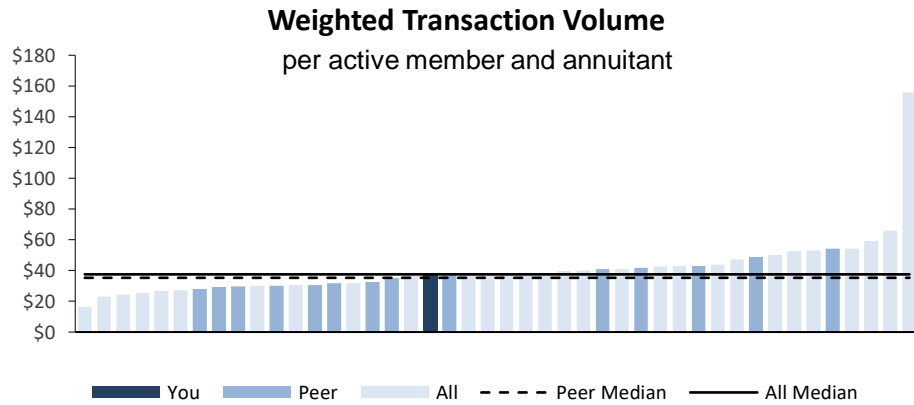
Transaction Volumes

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 \$36.74 per active member and annuitant. This was above the peer median of \$35.28.



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 above average weighted transaction volumes increased your total cost by an estimated \$0.08 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)	209,059	\$8.29	1,732,708
b. New Payee Inceptions	10,035	\$148.52	1,490,366
c. Refunds, Withdrawals, and Transfers-out	8,498	\$132.24	1,123,792
d. Purchases and Transfers-in	383	\$207.85	79,608
e. Disability Applications	1,912	\$1,343.66	2,569,087
2. Member Communication			
a. Calls and Emails	193,145	\$9.06	1,750,392
b. Incoming Mail	163,583	\$7.62	1,245,850
c. Members Counseled 1-on-1	7,914	\$69.50	550,026
d. Member Presentations	616	\$1,224.99	754,595
e. Written Estimates	24,003	\$53.43	1,282,515
f. Mass Communication (Active Members and Annuitants)	466,970	\$3.53	1,646,575
3. Collections and Data Maintenance			
a. Data and Money from Employers (Active Members)	257,911	\$5.59	1,441,535
b. Service to Employers (Active Members)	257,911	\$3.44	888,059
c. Data Not from Employers (Actives, Inactives, Annuitants)	641,892	\$0.93	600,093
Total			17,155,201
Total per active member and annuitant			\$36.74

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 \$69.50 is approximately 8 times higher than the cost per call of \$9.06.
- **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

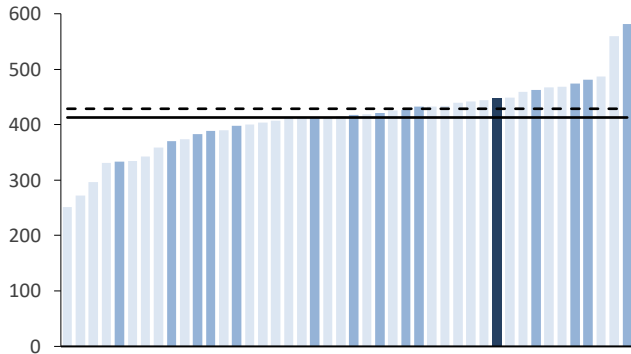
The table below shows whether you are doing more or fewer transactions per member than your peers by front-office activity. All volumes in the table are compared 'per 1,000 active members and annuitants' even if all member types do not always cause the volume. This is because active members and annuitants 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				
Transaction (or Cost Driver) by Front-Office Activity	Your Volume	Volume per 1,000 Active Members and Annuitants		
		You	Peer Avg	All Avg
1. Member Transactions				
a. Pension Payments (Annuitants)	209,059	448	429	413
b. New Payee Inceptions	10,035	21	24	23
c. Refunds, Withdrawals, and Transfers-out	8,498	18	23	19
d. Purchases and Transfers-in	383	1	6	28
e. Disability Applications	1,912	4	2	1
2. Member Communication				
a. Calls and Emails	193,145	414	582	608
b. Incoming Mail	163,583	350	366	342
c. Members Counseled 1-on-1	7,914	17	20	37
d. Member Presentations	616	1	2	1
e. Written Estimates	24,003	51	25	34
f. Mass Communication (Active Members and Annuitants)	466,970	1,000	1,000	1,000
3. Collections and Data Maintenance				
a. Data and Money from Employers (Active Members)	257,911	552	571	587
b. Service to Employers (Active Members)	257,911	552	571	587
c. Data Not from Employers (Actives, Inactives, Annuitants)	641,892	1,375	1,465	1,288
Weighted Total		36,737	36,656	40,881

Member transactions per 1,000 members: Graphical comparisons

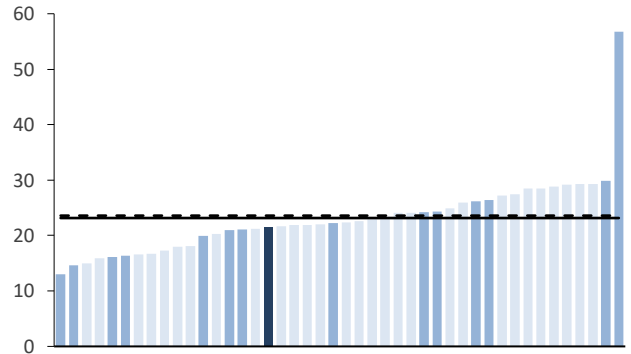
1A Pension Payments (Annuitants)

per 1,000 active members and annuitants



1B New Payee Inceptions

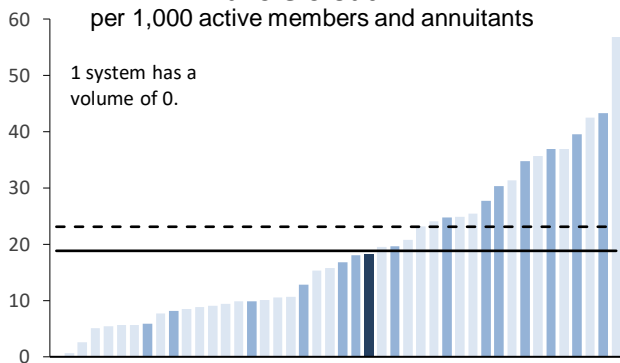
per 1,000 active members and annuitants



1C Refunds, Withdrawals, and Transfers-out

per 1,000 active members and annuitants

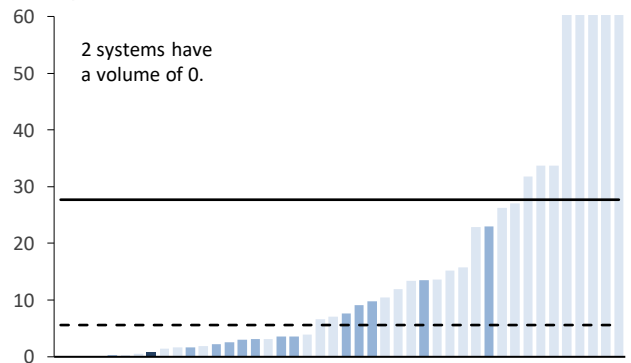
1 system has a volume of 0.



1D Purchases and Transfers-in

per 1,000 active members and annuitants

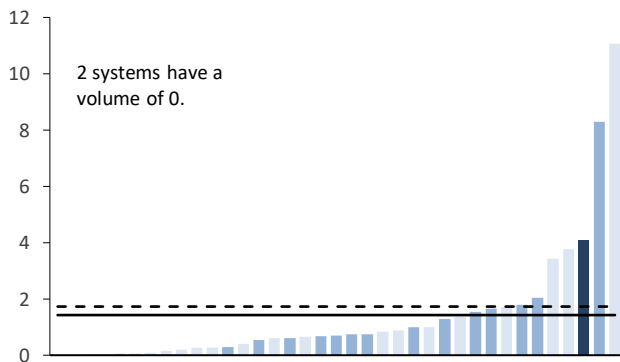
2 systems have a volume of 0.



1E Disability Applications

per 1,000 active members and annuitants

2 systems have a volume of 0.



■ You

■ Peer

■ All

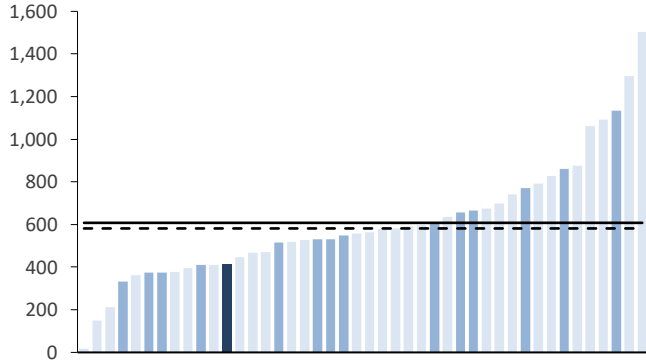
- - - Peer Avg

— All Avg

Communications transactions per 1,000 members: Graphical comparisons

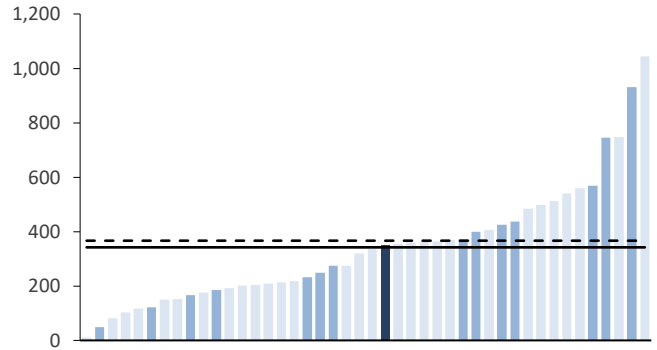
2A Calls and Emails

per 1,000 active members and annuitants



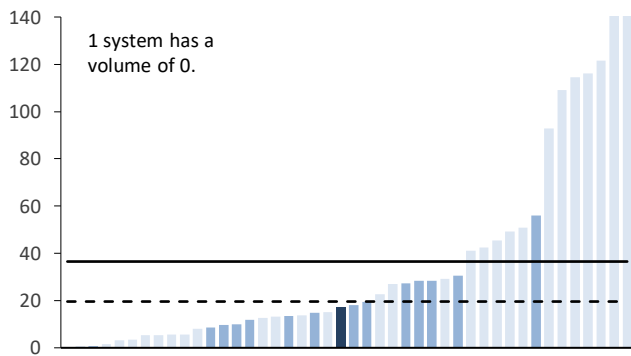
2B Incoming Mail

per 1,000 active members and annuitants



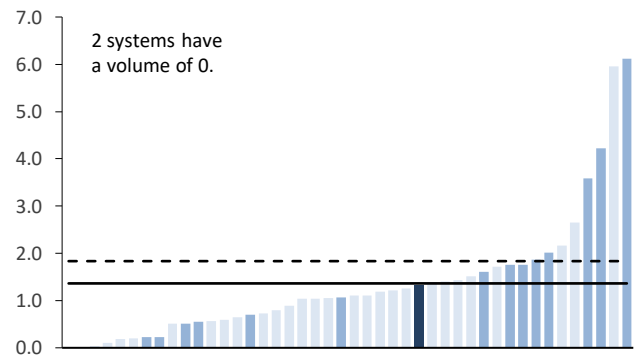
2C Members Counseled 1-on-1

per 1,000 active members and annuitants



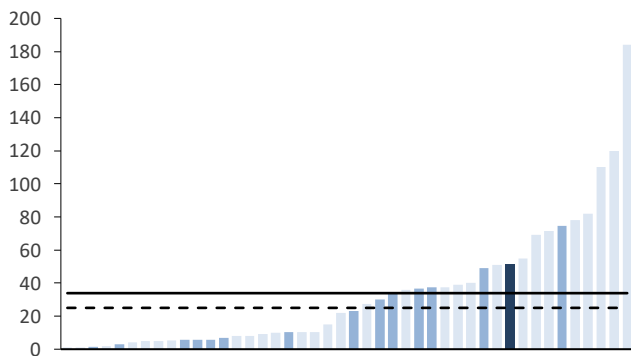
2D Member Presentations

per 1,000 active members and annuitants



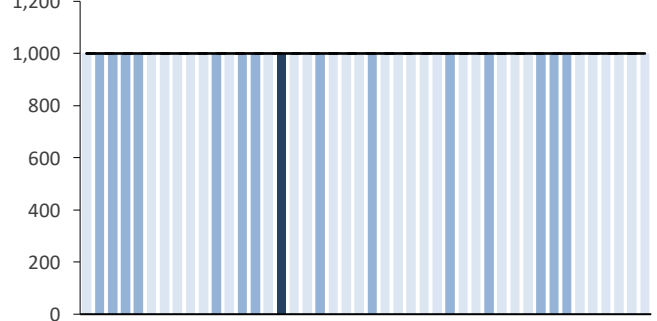
2E Written Estimates

per 1,000 active members and annuitants



2F Mass Communication (Active Members and Annuitants)

per 1,000 active members and annuitants



■ You

■ Peer

■ All

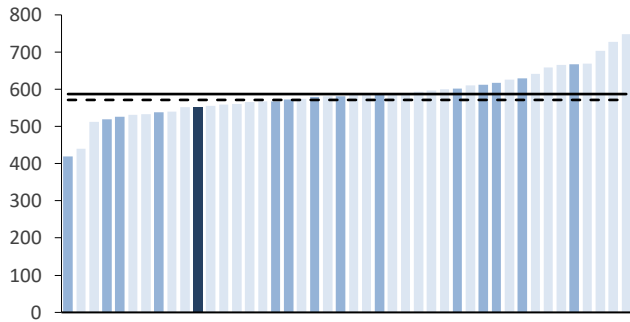
- - - Peer Avg

— All Avg

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

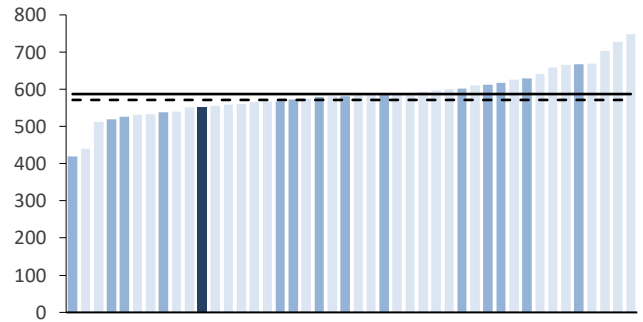
3A Data and Money from Employers (Active Members)

per 1,000 active members and annuitants



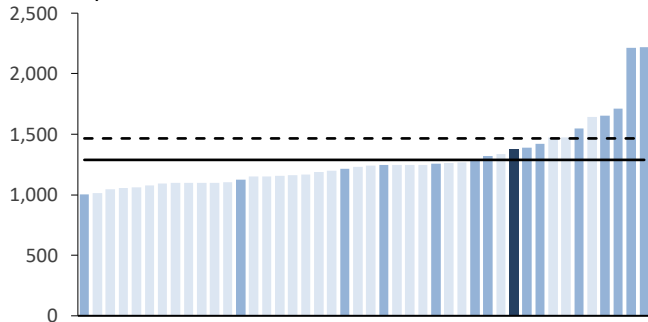
3B Service to Employers (Active Members)

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

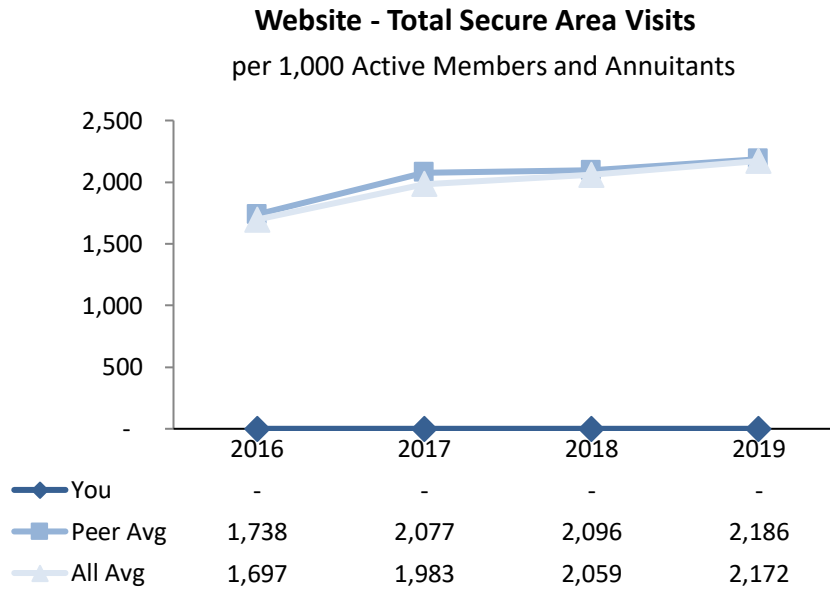
Online transactions

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	60% Yes	50% Yes	606	263	227
In secure area not linked to member data	No	27% Yes	20% Yes	n/a	30	27
In secure area linked to member's salary and service data	No	80% Yes	89% Yes	n/a	407	482
Service credit purchase calculator	Yes	87% Yes	76% Yes	15	31	40
Register for counseling sessions	No	50% Yes	43% Yes	n/a	8	11
Real-time access to available dates and times	n/a	100% Yes	100% Yes			
Register for counseling presentations	Yes	80% Yes	68% Yes	18	17	18
Live chat	No	7% Yes	7% Yes	n/a	n/a	8
Change address	No	93% Yes	90% Yes	n/a	33	46
Change beneficiary	No	80% Yes	69% Yes	n/a	29	46
Change email address	No	93% Yes	91% Yes	n/a	46	39
Reset password	No	93% Yes	91% Yes	n/a	118	110
Tools for annuitants						
Change banking information for direct deposit	No	67% Yes	55% Yes	n/a	14	6
Change tax withholding amount	No	80% Yes	69% Yes	n/a	22	20
Download or print duplicate tax receipts	No	87% Yes	80% Yes	n/a	86	79
View annuity payment details	No	87% Yes	89% Yes	n/a	247	130
Submit a retirement application	No	60% Yes	50% Yes	n/a	13	7
View status of online retirement application	No	53% Yes	42% Yes	n/a	88	21
Apply for a refund or a transfer-out	No	67% Yes	36% Yes	n/a	18	12
Digital file of recent correspondence and member documents	No	73% Yes	58% Yes	n/a	289	332
Download member statement	No	80% Yes	93% Yes	n/a	190	213
Upload documents	No	60% Yes	51% Yes	n/a	3	18
View pensionable earnings and/or service without downloading	No	87% Yes	88% Yes	n/a	1,000	586
If yes:						
Are both salary and service data available?	n/a	92% Yes	95% Yes			
Is online data up-to-date to the most recent pay period?	n/a	85% Yes	82% Yes			
Is a complete annual history from the beginning of employment provided?	n/a	62% Yes	66% Yes			
If you administer a core DC or hybrid DB/ DC plan:						
Switch between investment options	n/a	78% Yes	75% Yes	n/a	3	4
Change deferral percentage selections for regular contributions	n/a	33% Yes	42% Yes	n/a	6	10
Initiate withdrawals	n/a	56% Yes	50% Yes	n/a	3	4
View current valuation of their account	n/a	89% Yes	83% Yes	n/a	320	441

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 7.9% between 2016 and 2019. The all participant average is 8.6%. 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.

7

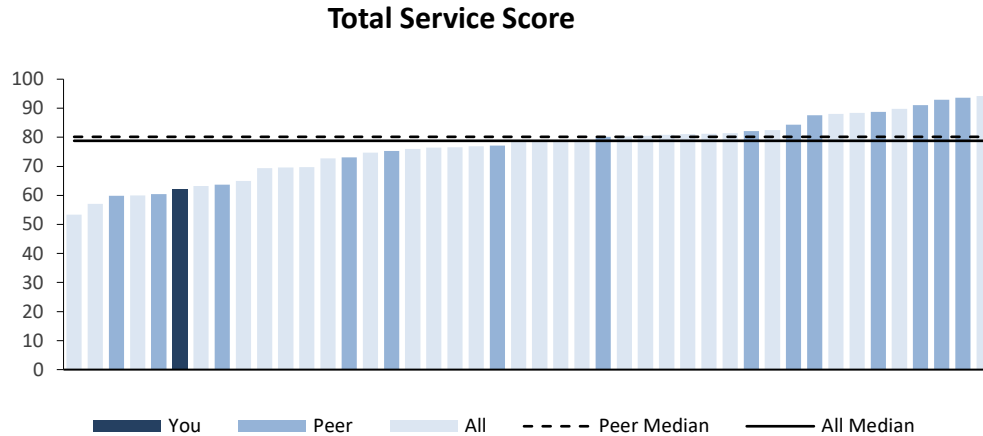
Service Levels

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 62 out of 100. This was below the peer median of 80.



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.

Historic scores have been restated using the new methodology on pages 7-3 and 7-5.

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 ¹	You ^{2,3}				Peer 2019				All 2019			
		2019	2018	2017	2016	Avg	Max	Med	Min	Avg	Max	Med	Min
1. Member Transactions													
a. Pension Payments	10.0%	99	99	99	99	100	100	100	99	100	100	100	99
b. Pension Inceptions	7.4%	92	92	91	91	80	100	88	9	85	100	89	9
c. Refunds, Withdrawals, and Transfers-out	1.3%	100	100	100	28	85	100	95	5	71	100	90	5
d. Purchases and Transfers-in	3.1%	88	82	84	90	83	100	88	20	75	100	85	10
e. Disability	3.8%	82	82	82	82	81	100	82	10	83	100	82	10
2. Member Communication													
a. Call Center	21.0%	46	44	54	39	67	96	72	38	68	96	71	35
c. 1-on-1 Counseling	7.4%	74	73	71	69	82	99	91	43	80	100	83	43
d. Member Presentations	6.5%	100	93	93	100	96	100	100	49	90	100	100	0
e. Written Pension Estimates	4.7%	70	70	67	75	80	100	87	25	83	100	87	25
f. Mass Communication													
• Website ²	21.3%	22	22	22	22	78	98	83	22	76	98	79	22
• News and targeted communication	2.8%	75	75	75	88	82	95	83	68	72	99	78	10
• Member statements	4.7%	91	91	91	91	82	96	88	56	77	96	82	10
3. Quality Indicators													
Customer Experience Surveying	5.0%	32	32	32	32	36	89	30	7	36	93	28	0
Disaster Recovery	1.0%	100	88	88	82	90	100	93	66	91	100	95	60
Total service score	100%	62	61	63	60	78	94	80	60	77	94	79	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 5.1% of its annual budget on member calls versus 1.9% for 1-on-1 counseling. Thus, based solely on relative cost, member calls are 2.6 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 608 member calls for every 1,000 active members and annuitants. Thus, based solely on relative volume, calls are 26.3 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

Activity	Service Score Trends by Activity										4-Year ¹ All Average				
	You					4-Year ¹ Peer Average									
	2016	2017	2018	2019	% ²	2016	2017	2018	2019	% ²	2016	2017	2018	2019	% ²
1. Member Transactions															
a. Pension Payments	99	99	99	99	0.0%	100	100	100	100	0.0%	100	100	100	100	0.0%
b. Pension Inceptions	91	91	92	92	0.4%	81	81	82	80	-0.4%	81	84	86	85	1.6%
c. Refunds, Withdrawals, and Transfers-out	28	100	100	100	52.9%	77	78	85	85	3.3%	63	67	68	69	3.1%
d. Purchases and Transfers-in	90	84	82	88	-0.7%	76	82	82	83	3.0%	71	75	75	75	1.8%
e. Disability	82	82	82	82	0.0%	81	81	80	81	0.0%	84	84	83	84	0.0%
2. Member Communication															
a. Call Center	39	54	44	46	5.7%	66	67	65	67	0.5%	70	72	70	69	-0.5%
c. 1-on-1 Counseling	69	71	73	74	2.4%	82	82	82	82	0.0%	76	79	79	80	1.7%
d. Member Presentations	100	93	93	100	0.0%	96	97	96	96	0.0%	93	93	97	93	0.0%
e. Written Pension Estimates	75	67	70	70	-2.3%	82	82	81	80	-0.8%	81	84	84	84	1.2%
f. Mass Communication															
• Website	22	22	22	22	0.0%	73	75	77	78	2.2%	71	73	75	76	2.3%
• News and targeted communication	88	75	75	75	-5.2%	80	82	82	82	0.8%	76	77	77	75	-0.4%
• Member statements	91	91	91	91	0.0%	82	82	84	82	0.0%	79	79	80	78	-0.4%
3. Quality Indicators															
Customer Experience Surveying	32	32	32	32	0.0%	31	32	33	36	5.1%	38	38	38	38	0.0%
Disaster Recovery	82	88	88	100	6.8%	88	88	90	90	0.8%	92	92	93	93	0.4%
Total Service Score	60	63	61	62	1.1%	76	77	78	78	0.9%	76	78	78	78	0.9%

1. Trend analysis is based on systems that have participated for 4-consecutive years (15 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 ¹
1. Member Transactions			
a. Pension Payments	10.0%	98.5	0.2 points
b. Pension Inceptions	7.4%	92.2	0.6 points
c. Refunds, Withdrawals, and Transfers-out	1.3%	100.0	0.0 points
d. Purchases and Transfers-in	3.1%	88.0	0.4 points
e. Disability	3.8%	82.0	0.7 points
2. Member Communication			
a. Call Center	21.0%	45.7	11.4 points
c. 1-on-1 Counseling	7.4%	74.1	1.9 points
d. Member Presentations	6.5%	100.0	0.0 points
e. Written Pension Estimates	4.7%	70.4	1.4 points
f. Mass Communication			
• Website	21.3%	22.0	16.6 points
• News and targeted communication	2.8%	75.0	0.7 points
• Member statements	4.7%	91.0	0.4 points
3. Quality Indicators			
Customer Experience Surveying	5.0%	31.8	3.4 points
Disaster Recovery	1.0%	100.0	0.0 points
Total	100%	62.3	37.7 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.

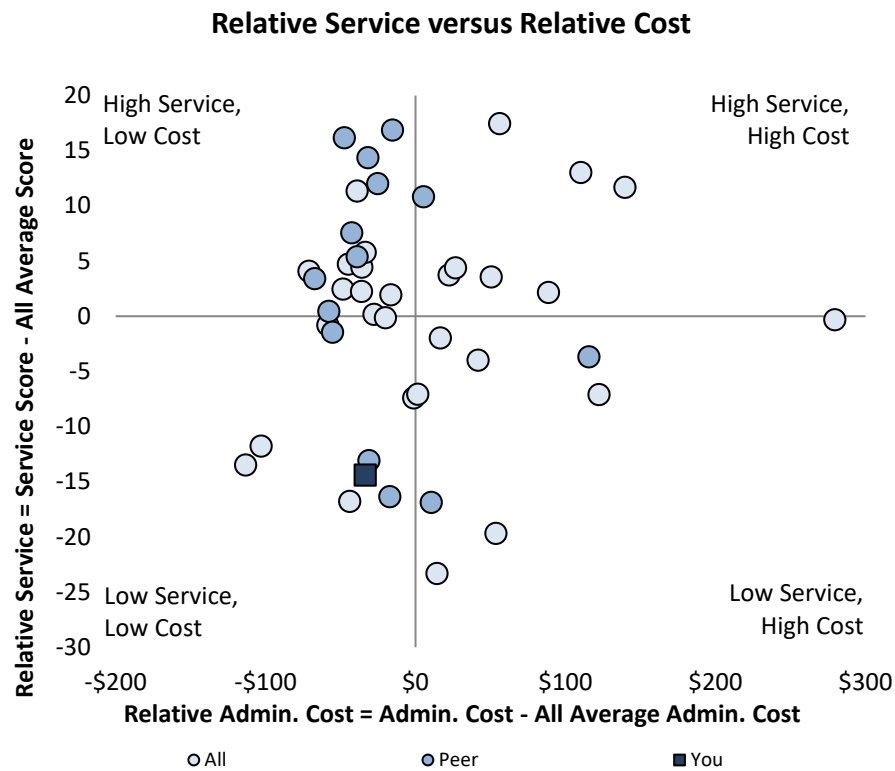
Biggest potential improvements to your total service score

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	Your interactive calculator is not linked to member data. To achieve a perfect service score you must link member data to your interactive calculator.	+ 4.26
# 2	On average, members calling your call center reach a knowledgeable person in 228 seconds. To achieve a perfect service score, members must reach a knowledgeable person on the phone in 60 seconds or less.	+ 3.53
# 3	18.4% of your incoming calls resulted in undesired outcomes. To achieve a perfect service score, members must experience no undesired call outcomes.	+ 3.09
# 4	You did not do any customer experience surveying in the retirement process during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which are: (i) satisfaction, (ii) Net Promoter Score (NPS), (iv) the greatest length of time between the activity and the survey is 14 days or less, (v) surveys are continuous or occur more than 11 times per year.	+ 1.25
# 5	0.8% 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.	+ 1.00

Relationship between service and pension administration cost



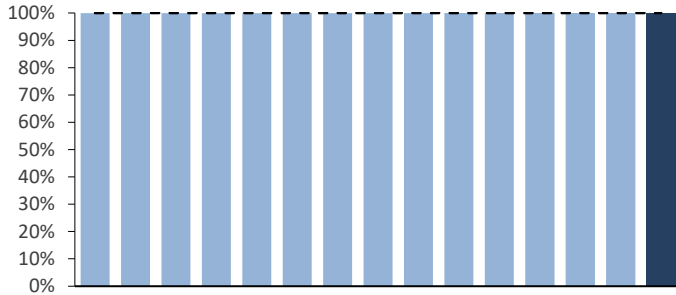
Service scores are not good predictors of costs because:

- 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.

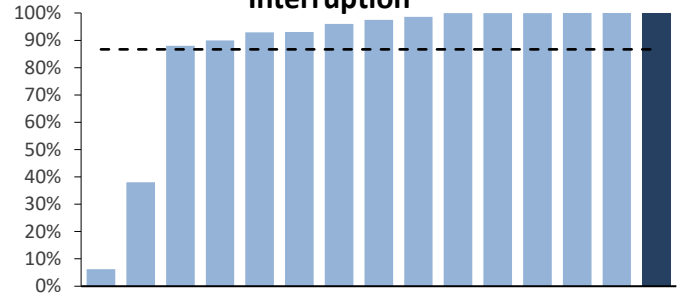
Graphical comparison of key measures

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

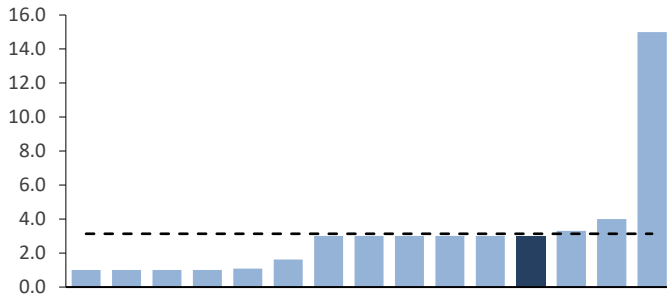
% Payroll on Time



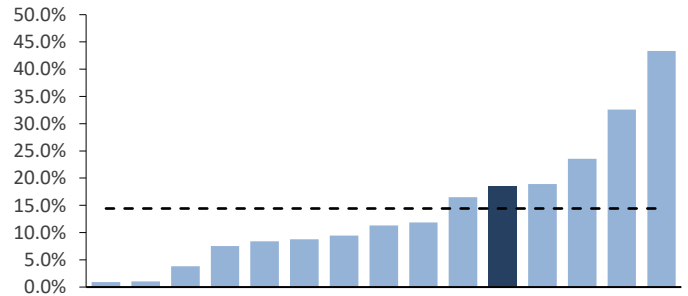
% Inceptions Without a Cash Flow Interruption



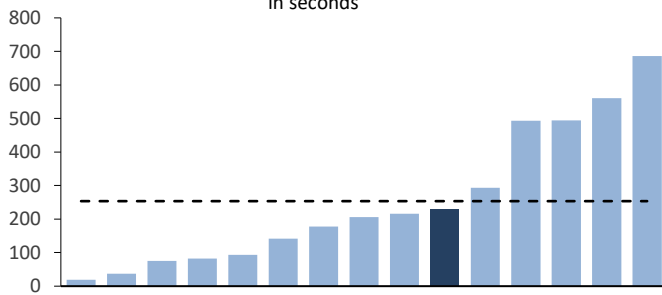
Disability Turnaround Time in months



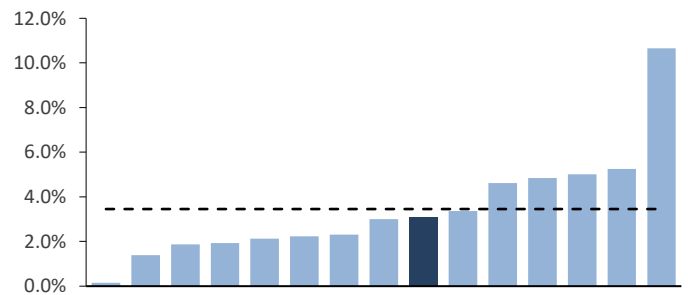
Undesired Call Outcomes as a % of incoming calls



Call Wait plus Menu/Receptionist Time in seconds



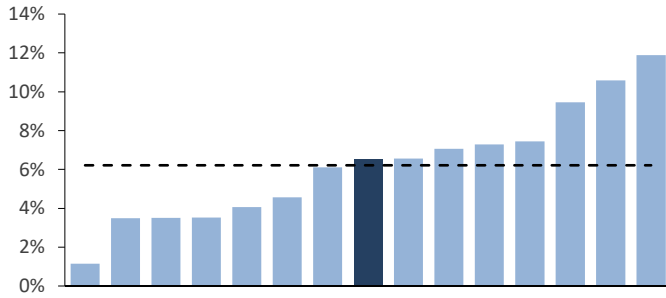
Members Counseled 1-on-1 as a percentage of active members



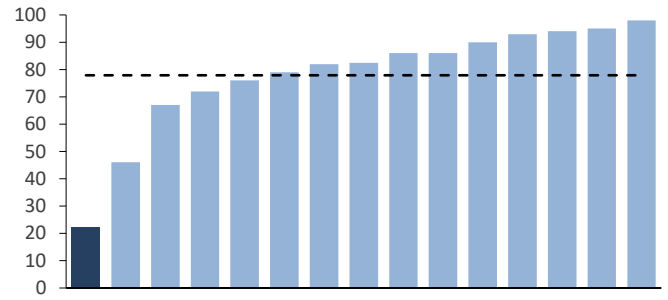
You
 Peer
 Peer Avg

Graphical comparison of key measures

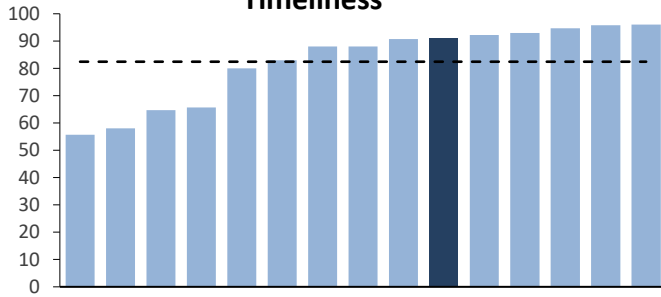
Members Attending Presentations
as a percentage of active members



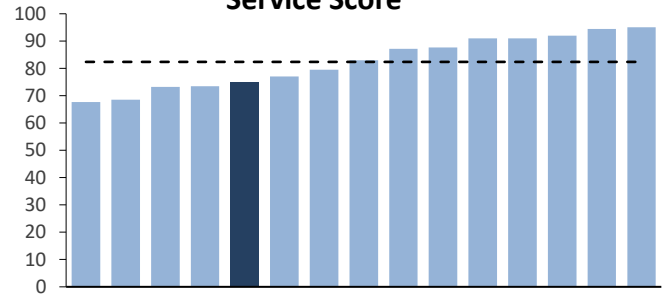
Website Capability



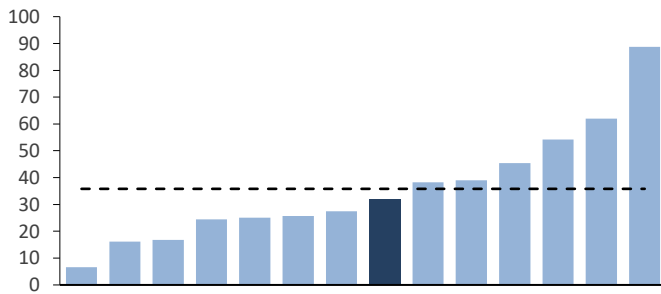
Member Statement Content and Timeliness



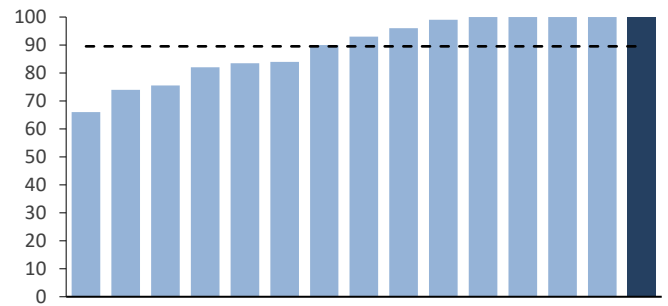
News And Targeted Communication Service Score



Customer Experience Service Score



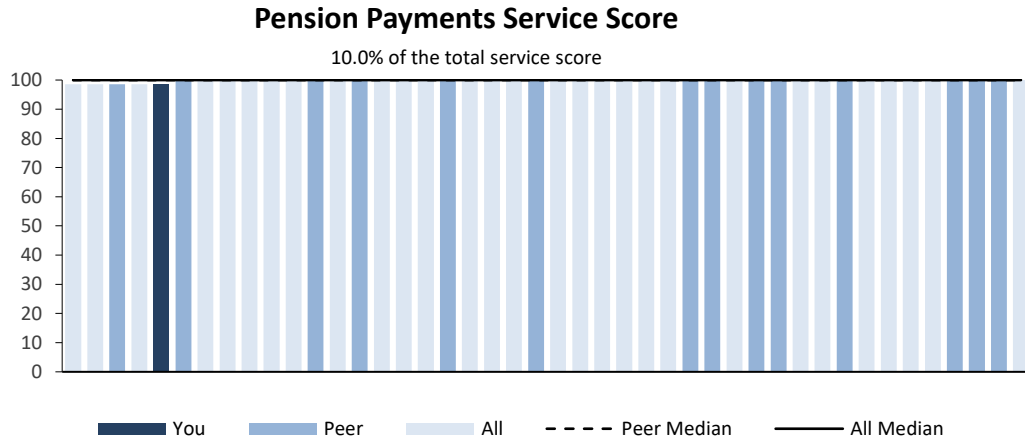
Disaster Recovery Service Score



■ You ■ Peer - - - Peer Avg

1A Pension Payments

Your service score for paying pensions was 99 out of 100. This was below the peer median of 100.

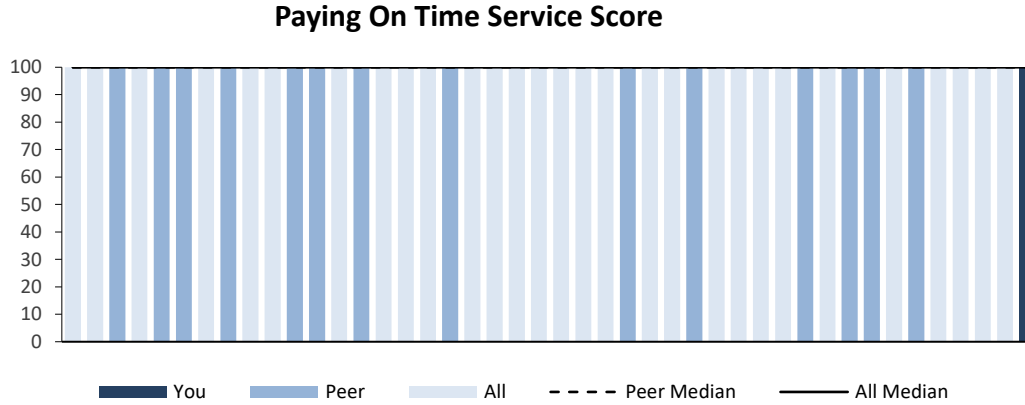


Your service score for 1a pension payments is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Pension Payments Service Score Components		
	Weight	Your Score
a. Paying on time	95%	100.0
b. Payment advices	5%	70.0
Weighted Total	100%	98.5

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

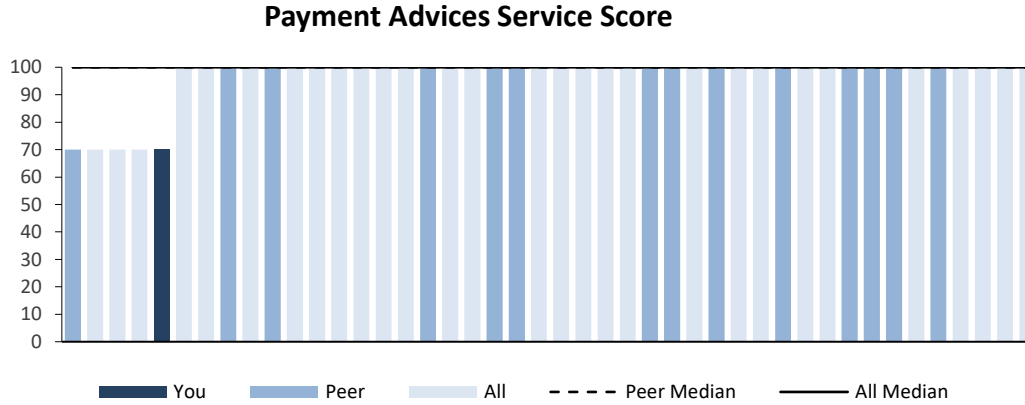
Paying pensions on time is a critical component for all retirement systems. A perfect score requires that all regular payments are paid on time to the correct annuitants.

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 70 out of 100. This was below the peer median of 100.



1. Scoring method	Your Data	Your Score
+ 100 if payment advices can be viewed online	No	0.0
<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	70.0
+ 20 if you can comply with a request not to send a payment advice	No	0.0
Total score		70.0

2. Rationale for the scoring method

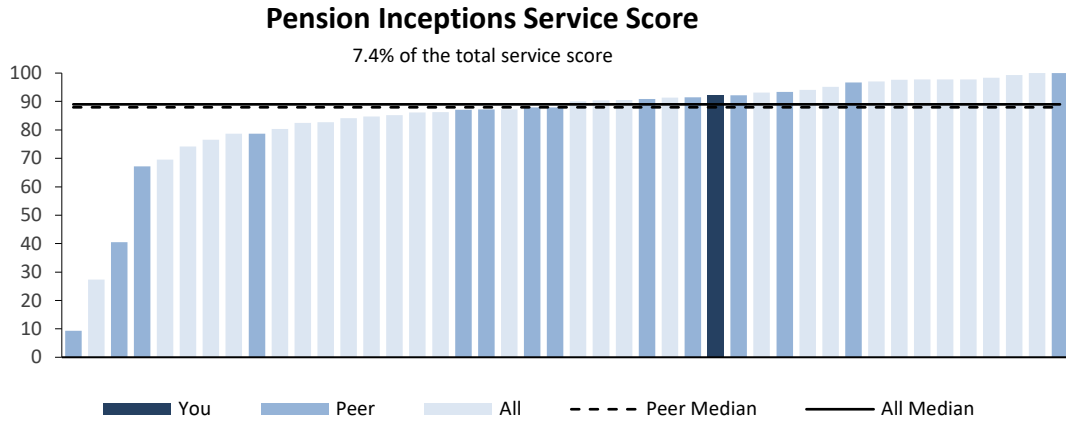
Paperless is most cost-effective. Therefore, systems that provide payment advices online get full points. Alternatively, systems that still send paper and can comply with a members request not to send payment advices, also receive the highest score.

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	87% 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?	No	23% Yes
Q81	Indicate whether the following capabilities are available on your website and provide volumes:		
	o) View pension payment details? [i.e., gross amounts, deductions]	No	87% Yes

1B Pension Inceptions

Your service score for pension inceptions was 92 out of 100. This was above the peer median of 88.

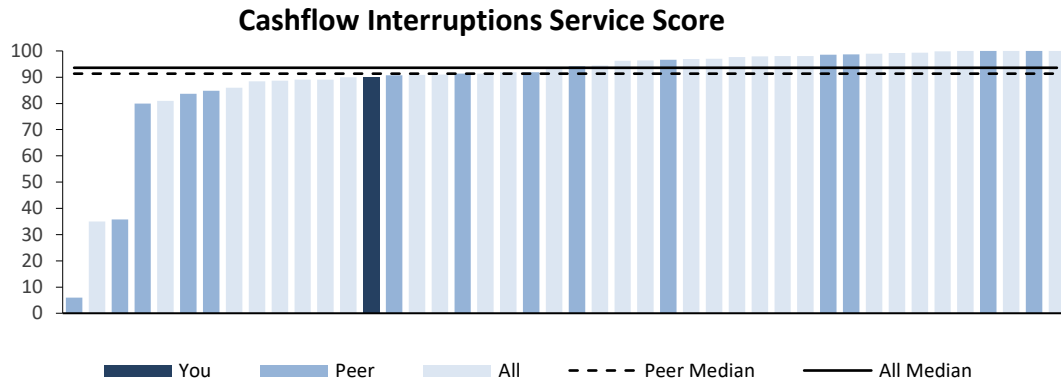


Your service score for 1b pension inceptions is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Pension Inceptions Service Score Components		
	Weight	Your Score
a. Cashflow interruptions	78%	90.0
b. Survivor pensions	11%	99.7
c. Red tape	11%	100.0
Weighted Total	100%	92.2

a. Cashflow interruptions

Your service score for cashflow interruptions was 90 out of 100. This was below the peer median of 91.



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 inceptioned that occur within 1 month of final paycheck	100.0%	100.0
If a service retirement is based on estimates, less: - 10 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 100.0% 4.0	-10.0
Total score		90.0

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.

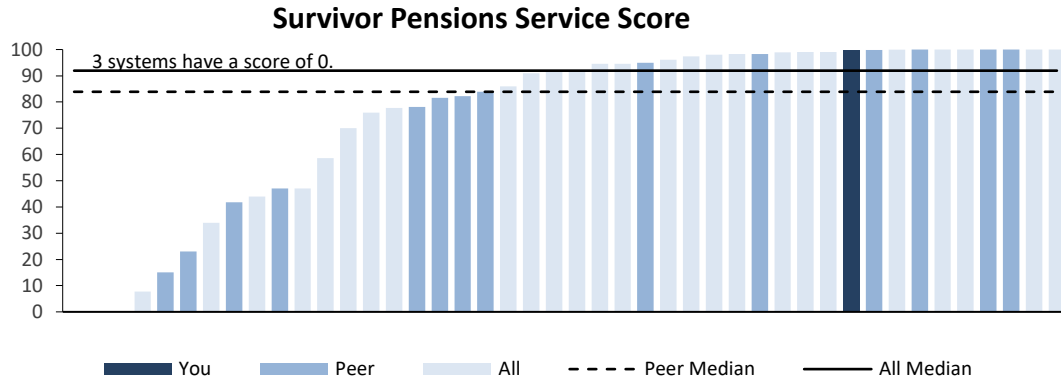
When pension payments are based on estimates, the sooner the amount is finalized, the better because estimates can cause financial uncertainty.

a. Cashflow interruptions

3. Survey questions used		You	Peer Avg
Q17	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?	100.0%	86.7%
Q18	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 100.0%	87% Yes 68.2%
		4.0	4.2 months

b. Survivor pensions

Your service score for survivor pensions was 100 out of 100. This was above the peer median of 84.



1. Scoring method		Your Data	Your Score
+ 100	if all of your survivor pensions were incepted without a cashflow interruption greater than 1 month, otherwise: 100 x percent of pensions paid without interruption to survivors	99.7%	99.7
Total score			99.7

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
Q17	What percentage of annuity inceptions 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?	99.7%	76.4%

c. Red tape

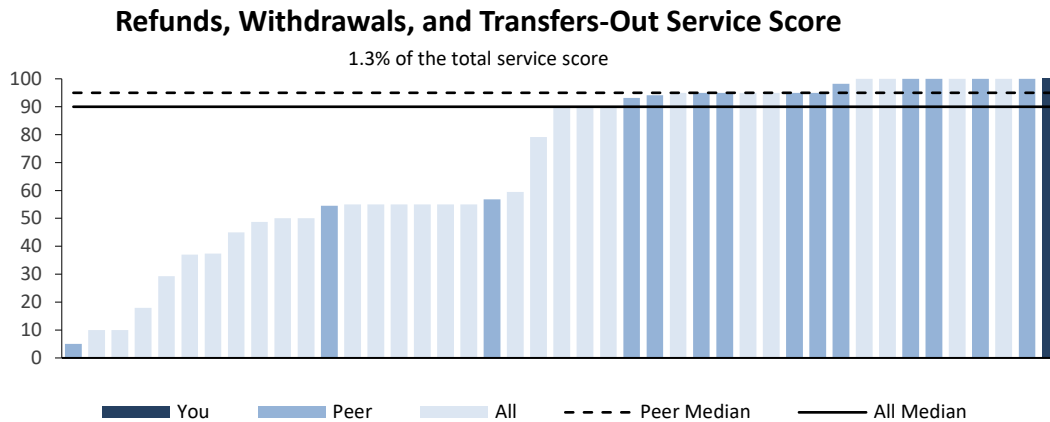
1. Scoring method		Your Data	Your Score
+ 80	if you do not require notarization of retirement applications, or + 40 if you require notarization of some retirement applications	not required	80.0
+ 20	if you do not require birth/marriage certificates before incepting a pension	not required	20.0
Total score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

2. Rationale for the scoring method	
<p>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.</p>	

3. Survey questions used		You	Peer Avg
Q19	Do you require birth certificates and/or marriage certificates before incepting a pension?	No	40% Yes
Q20	Do you require notarization of normal or early retirement applications?	No	20% Yes

1C Refunds, Withdrawals, and Transfers-out

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



1. Scoring method	Your Data	Your Score
<u>Withdrawal timeliness</u> + 45 if withdrawals are completed in 30 days or less, otherwise 45 - 1.8 for each day over 30 days [Subject to a minimum score of 0]	24 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]	27 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	not required	10.0
Total score		100.0

2. Rationale for the scoring method

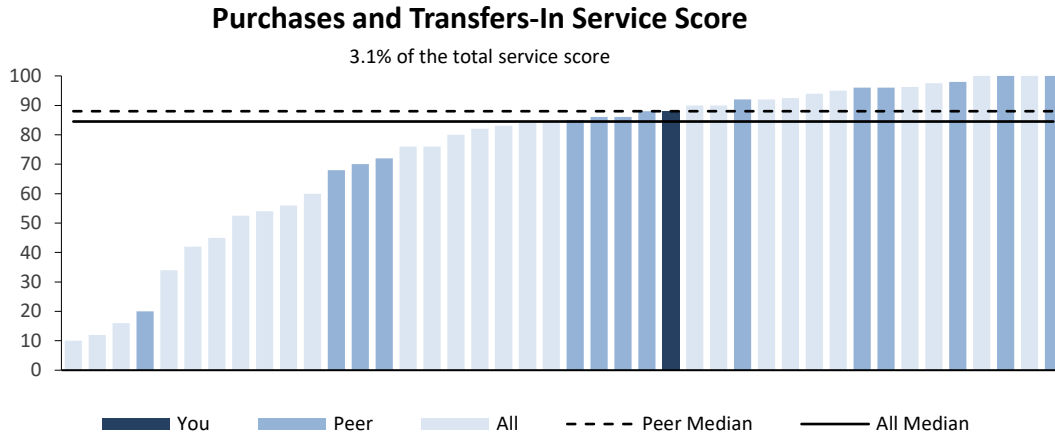
Speed from request to completion is what matters to members, regardless of whether the delays are caused by internal or external parties.

1C Refunds, Withdrawals, and Transfers-out

3. Survey questions used		You	Peer Avg
Q22	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)?	24	29 days
	a) Are you legislated to have a wait period before you can effect a refund?	No	53% Yes
	b) How long is the wait period? (in days)	n/a	33 days
	c) Can the wait period be waived?	n/a	38% Yes
Q23	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)?	27	23 days
Q24	Do you require notarization of refund or transfer-out applications?	No	1% Yes

1D Purchases and Transfers-in

Your service score for purchases and transfers-in was 88 out of 100. This was equal to the peer median.



1. Scoring method		Your Data	Your Score
	<u>Service credit purchase estimates</u>		
+ 80	if you can provide an estimate in 1 day or less, otherwise 80 - 2 per day over 1 day [Subject to a minimum score of 0]	6 days	70.0
	<u>Transfers-in</u>		
+ 20	if a member's transfer-in application is processed within 1 month, otherwise 20 - 2 per month over 1 month [Subject to a minimum score of 0]	2.0 months	18.0
Total score			88.0

2. Rationale for the scoring method

From a member perspective, faster is higher service.

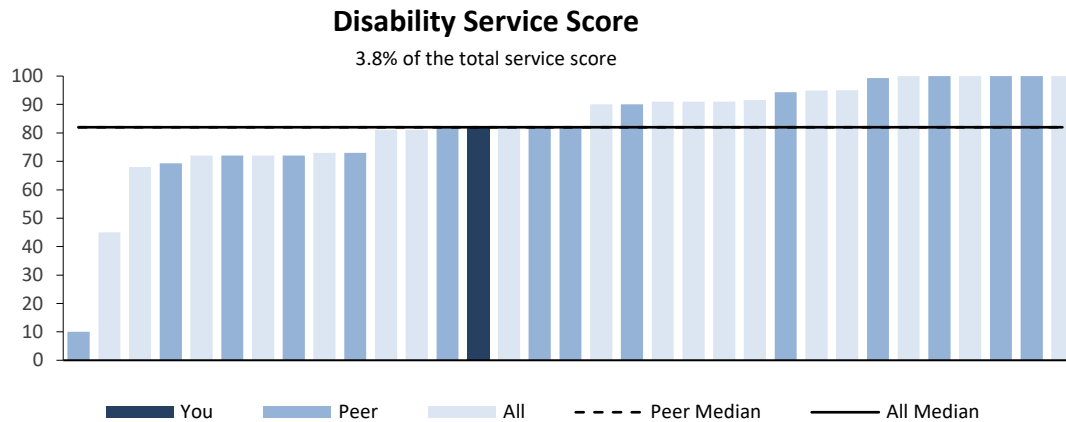
The score for transfers-in is mostly based on your own timeliness. A small part of the score is based on the total time it takes to complete transfers-in (i.e., including delays caused by third parties). Speed from request to completion is what matters to members, regardless of whether the delays are caused by internal or external parties.

1D Purchases and Transfers-in

3. Survey questions used		You	Peer Avg
Q27	On average, how many business days does it take from the date of first request to provide a written service credit purchase cost?	6	22 days
Q28	How long does it take on average for you to do individual transfers-in? [Months from request to completion including delays caused by external parties]	2	1 month

1E Disability

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



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]	3.0 months	72
+ 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			82

2. Rationale for the scoring method

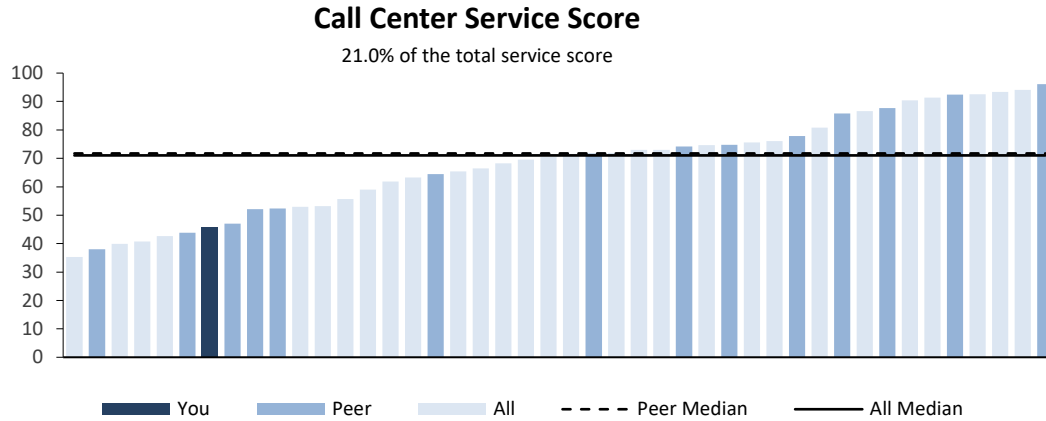
Taking more than 1 month to return a decision in a disability application can cause financial insecurity for members. Faster turnaround times are higher service from the member's perspective.

Requiring notarization causes delays and inconvenience from the member's perspective.

3. Survey questions used		You	Peer Avg
Q32	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?	3.0	3 months
Q34	Do you require notarization of disability applications?	No	27% Yes

2A Call Center

Your call center service score was 46 out of 100. This was below the peer median of 72.

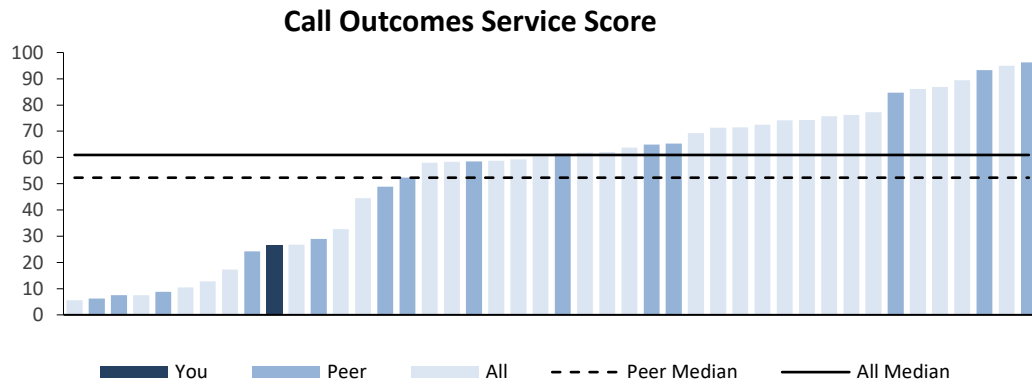


Your service score for 2a call center is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Call Center Service Score Components		
	Weight	Your Score
a. Call outcomes	20%	26.4
b. Call wait time	20%	12.0
c. Menu layers	10%	60.0
d. CRM and other capability	35%	56.5
e. Call quality	15%	81.4
Weighted Total	100%	45.7

a. Call outcomes

Your service score for call outcomes was 26 out of 100. This was below the peer median of 52.



1. Scoring method	Your Data	Your Score
+ 90 if members experience no undesired call outcomes - % of calls resulting in other undesired outcomes X 400 [Subject to a minimum score of 0]	18.4%	90.0 <u>-73.6</u> 16.4
+ 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]	50.0	10.0
Total score		26.4

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.

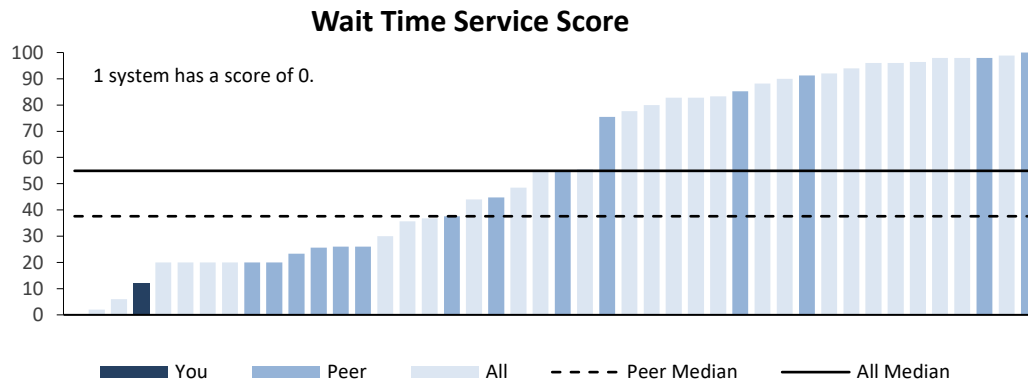
Shorter business hours are treated as an undesired outcome because after-hour callers do not reach a knowledgeable person.

a. Call outcomes

3. Survey questions used		You	Peer Avg
	<u>Desired call outcomes</u>		
Q35	a) Incoming calls that reach and are responded to by a knowledgeable service representative (i.e., exclude messages, etc.)?	171,652	
	c) Incoming calls satisfied by self-serve options, if any?	0	
	Total desired call outcomes (A)	171,652	
	<u>Undesired call outcomes during business hours</u>		
Q36	a) # Busy signal, never enters the system?	6,494	
	b) # Caller gets pre-recorded 'call another time' message during business hours?	2,216	
	c) # Voice mail takes a message during business hours?	n/a	
	d) # Abandoned calls (i.e., caller hangs-up while in a menu)?	15,788	
	e) # Abandoned calls (i.e., caller hangs-up while in a queue or on hold)?	14,205	
	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	
Q41	If you have a callback feature, # of callback requests that were not completed	n/a	
	Total undesired call outcomes during business hours (B)	38,703	
	Total incoming calls (C = A + B)	210,355	
	Undesired outcomes as a percentage of total incoming calls (B / C)	18.4%	14.4%
	<u>Undesired outcomes after business hours</u>		
Q51	How many hours per week is your 'call center' operational?	50.0h	46.4h

b. Call wait time

Your service score for call wait time was 12 out of 100. This was below the peer median of 38.



1. Scoring method	Your Data	Your Score
<p><u>Calls</u></p> <p>+ 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]</p>	228 seconds	6
<p>+ 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</p>	No	0
<p><u>Emails</u></p> <p>+ 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]</p>	1.0 day	6.0
Total score		12.0

2. Rationale for the scoring method

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

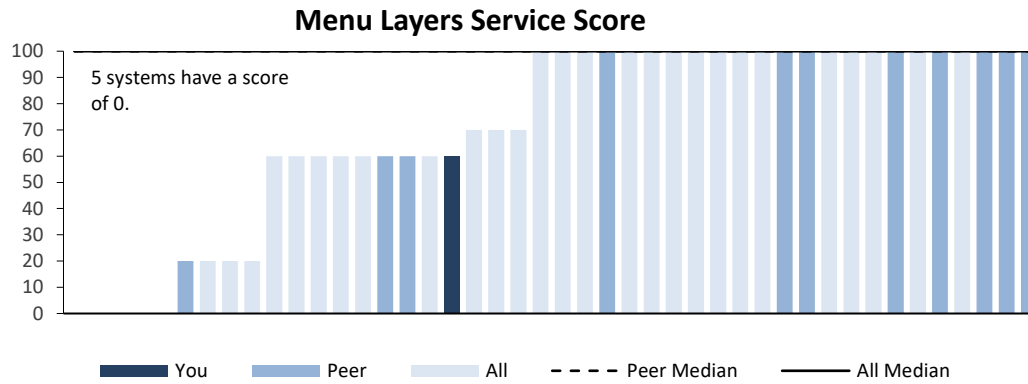
b. Call wait time

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:	228	254
	<u>(1) Navigate menus</u>		
Q37	If you have a menu:	Yes	93% 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)	40	71
	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)]	40	71
	<u>(2) Navigate receptionists</u>		
Q38	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>		
Q39	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?	188	187
	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	188	187
Q40	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?	No	73% Yes
Q52	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.	1.0	1.5 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 60 out of 100. This was below the peer median of 100.



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	2	60.0
- 30 if a receptionist is the first point of contact.	No	0.0
Total score		60.0

c. Menu layers

2. Rationale for the scoring method

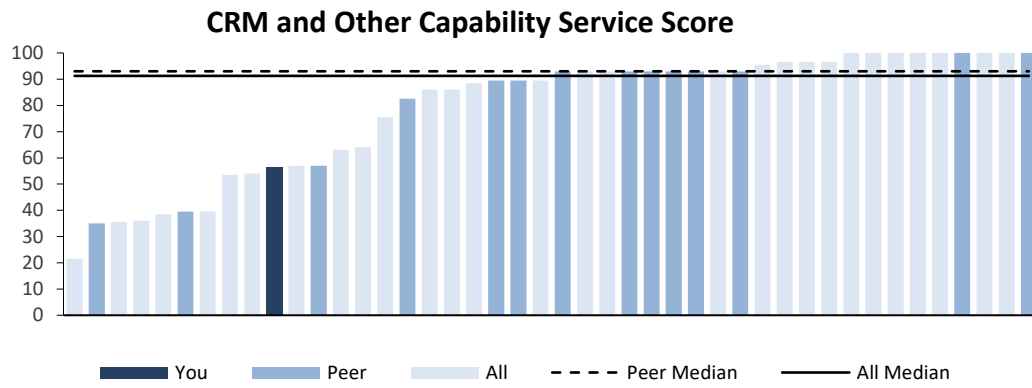
Members prefer to get through to a knowledgeable person who can answer their questions immediately. Irritation increases rapidly with the number of menu layers.

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
Q37	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 2	93% Yes 2
Q38	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 57 out of 100. This was below the peer median of 93.



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	No	0.0
+ 7	estimate cost to purchase service credit	No	0.0
+ 7	change address	Yes	7.0
+ 7	change banking information	Yes	7.0
+ 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	No	0.0
Total score			56.5

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.

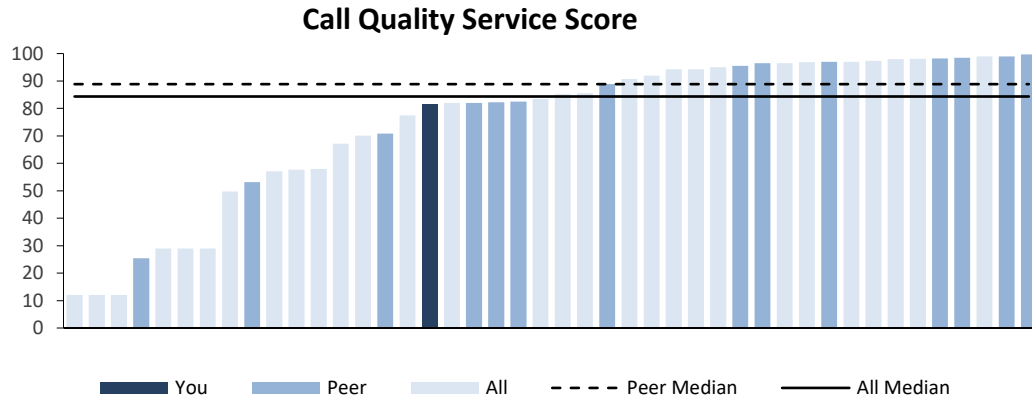
Your ability to serve members is greatly reduced if your capabilities or policies prevent you from answering questions over the phone.

d. CRM and other capability

3. Survey questions used		You	Peer Avg
Q44	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	80% 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	93% Yes
	d) Most recent member statement?	Yes	100% Yes
	e) Beneficiary information?	Yes	100% Yes
Q45	Do your service representatives have real-time access to a workflow system that lets them know the status of open items?	Yes	100% Yes
Q46	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	73% 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	73% Yes
	a2) Is the estimate based on an interactive benefit calculator linked to the member's actual account data?	n/a	73% Yes
	b) Refund or transfer value assuming the member exited employment at the time of the call?	Yes	93% Yes
	c) Pensionable salary?	Yes	93% Yes
	d) Service credit history including gaps?	No	87% Yes
	e) Cost to purchase service credit?	No	67% Yes
Q47	Can members calling in perform the following transactions over the phone:		
	a) Change address?	Yes	80% Yes
	b) Add or change email address?	Yes	93% Yes
	c) Change payment instructions? [i.e., bank account]	Yes	27% Yes
Q49	Do you have and use tools to help you project call volumes?	No	93% Yes
Q50	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 81 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	3	41.3
+ 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]	90%	25.1
Total score			81.4

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.

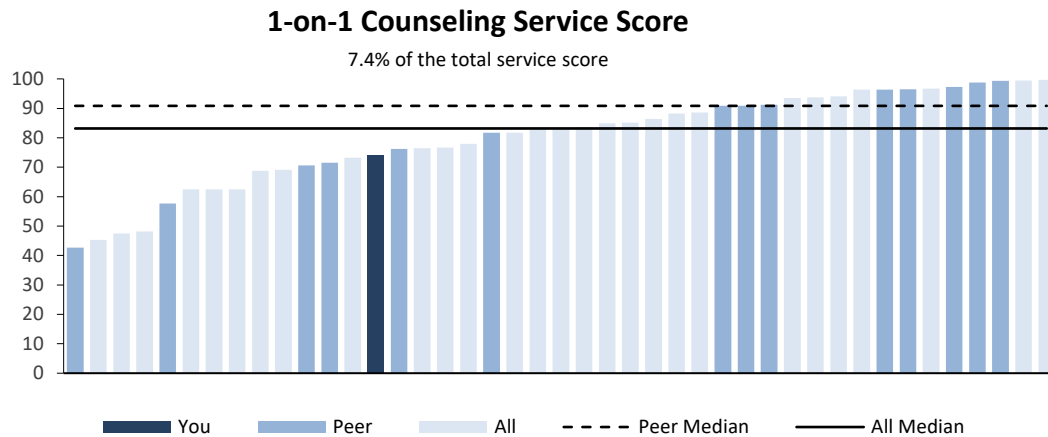
It is higher service if a caller's questions are immediately satisfied by the first contact without being transferred.

3. Survey questions used

		You	Peer Avg
Q42	c) % of calls satisfied by the first contact?	90%	91%
Q48	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	93% Yes
	a) How many calls per agent per month (on average) do you monitor?	3	6
	b) Are you listening in on a live call or a recording?	Recording	50% Recording

2C 1-on-1 Counseling

Your service score for 1-on-1 counseling was 74 out of 100. This was below the peer median of 91.

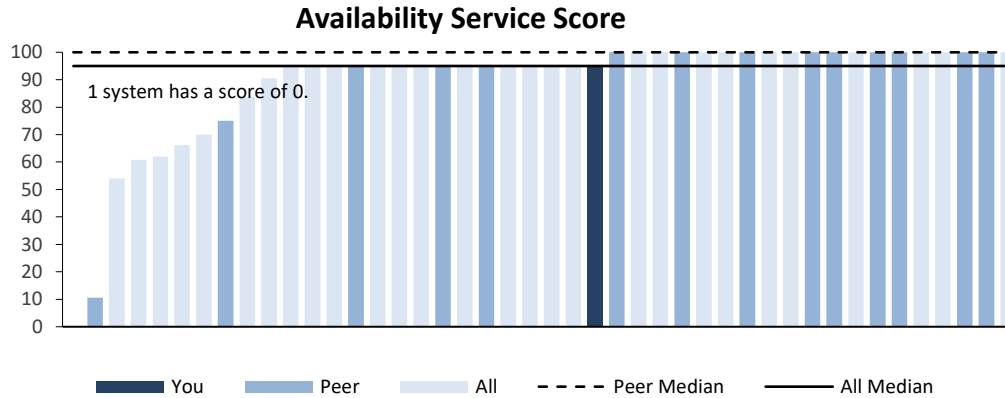


Your service score for 2c 1-on-1 counseling is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

1-on-1 Counseling Service Score Components		
	Weight	Your Score
a. Availability	50%	95.0
b. Field locations	20%	32.3
c. Wait times	20%	67.5
d. Capability	10%	66.7
Weighted Total	100%	74.1

a. Availability

Your service score for availability was 95 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 1.0% ¹ or more, otherwise 7,000 ¹ X number of members counseled 1-on-1 as a % of active members	3.1%	70.0
+ 25 if 1-on-1 counseling is freely available, without limitations	Yes	25.0
+ 5 if 1-on-1 counseling is available outside of normal working hours, otherwise 0	No	0.0
Total score		95.0

¹Better 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 none of your pension inceptions occur online, you need attendees equal to 1.00% of your active member population to achieve a perfect score of 70; we use a multiplication factor of 7,000 because $70 / 1.00\% = 7,000$).

2. Rationale for the scoring method

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

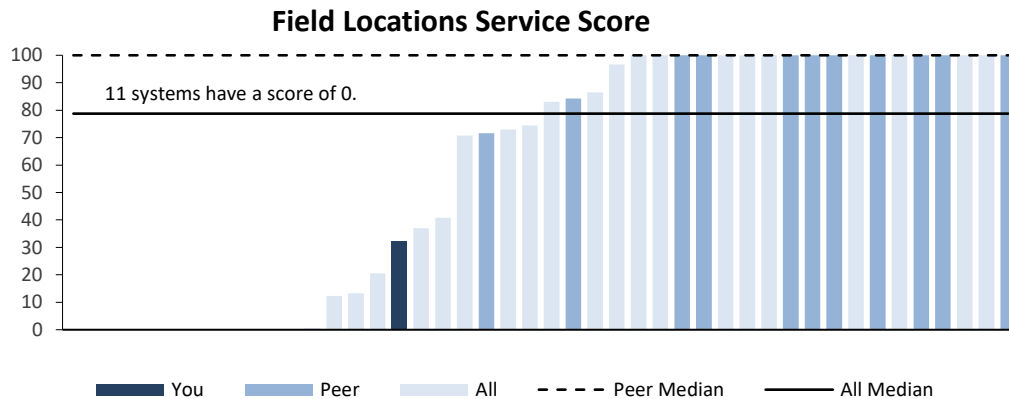
Members prefer freely available access to counseling with no time period limits, no limits on the number of sessions, etc.

a. Availability

3. Survey questions used		You	Peer Avg
Q56	Total number of members counseled 1-on-1 (A)	7,914	10,581
Q5	Active Members (B)	257,911	274,966
	Members counseled 1-on-1 as a percentage of active members (A / B)	3.1%	3.5%
Q57	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	93% Yes
Q58	Do you limit 1-on-1 counseling by:		
	a) Requiring that members be within a certain time period of earliest possible retirement?	No	7% Yes
	b) Placing a limit on the number of counseling sessions a member can request?	No	7% Yes
	c) Indicating that members should contact their employers or unions first for counseling?	No	0% Yes
	d) Other (describe)?	No	7% Yes
Q61	Do you offer 1-on-1 counseling sessions after normal working hours, such as evenings and/or weekends?	No	67% Yes

b. Field locations

Your service score for field locations was 32 out of 100. This was below the peer median of 100.



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	0.8%	2.3
+ 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	100%	30.0
Total score			32.3

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.

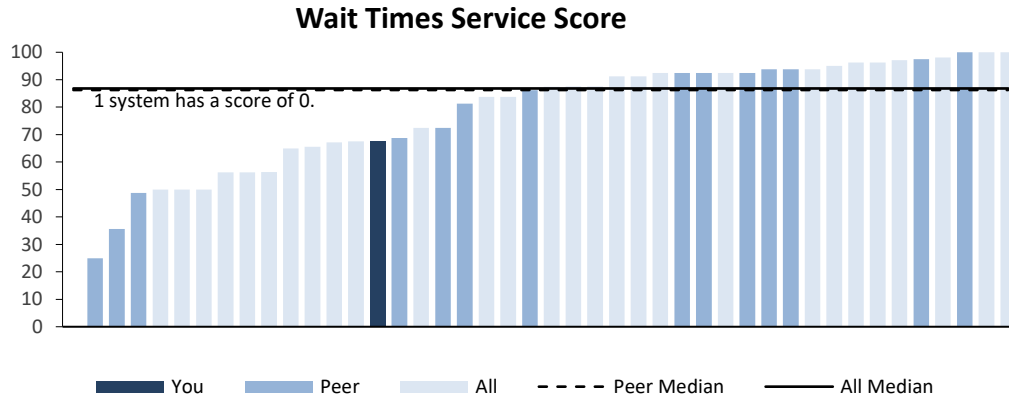
Field locations separate from the employer are preferred because they help preserve confidentiality and privacy.

b. Field locations

3. Survey questions used		You	Peer Avg
Q56	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)	65	4,066
	c) At the member's place of employment?	<u>0</u>	<u>418</u>
	Total number of members counseled 1-on-1 in the field (B)	65	4,484
	% of 1-on-1 field sessions separate from employer (A / B)	100%	71%
	Total number of members counseled 1-on-1 (C)	7,914	10,581
	% of members counseled at 1-on-1 sessions held in the field (B / C)	0.8%	41.6%

c. Wait times

Your service score for wait times was 68 out of 100. This was below the peer median of 86.



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]	25.0 days	0.0
+ 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]	5 min.	18.8
+ 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]	1.0%	23.8
Total score		67.5

2. Rationale for the scoring method

The shorter the wait times, the better.

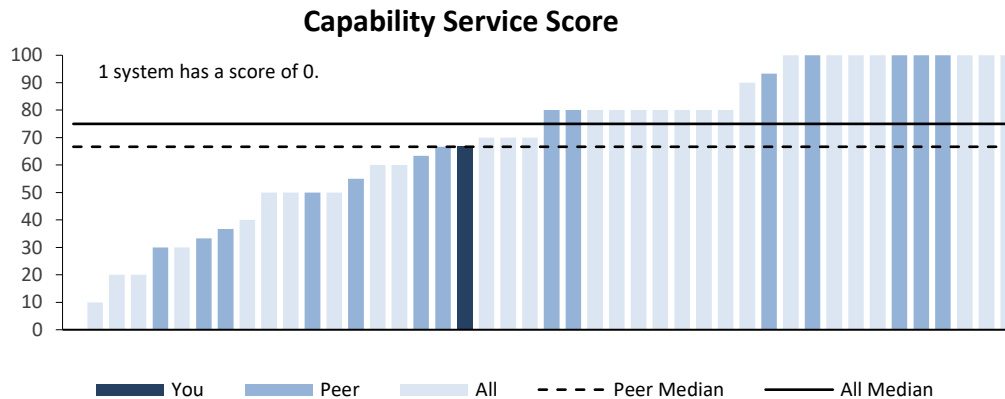
Some people like to be able to schedule an appointment. Also, a pre-scheduled session gives you the opportunity to prepare in advance.

c. Wait times

3. Survey questions used		You	Peer Avg
Q59	Do you provide counseling for walk-in traffic?	Yes	87% 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)	5	8 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?	1.0%	8.0%
Q60	Do you offer prescheduled 1-on-1 counseling?	Yes	93% 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?	25.0	4.8 days

d. Capability

Your service score for capability was 67 out of 100. This was equal to the peer median.



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	2 Yes	33.3
+ 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	2 Yes	6.7
+ 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			66.7

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.

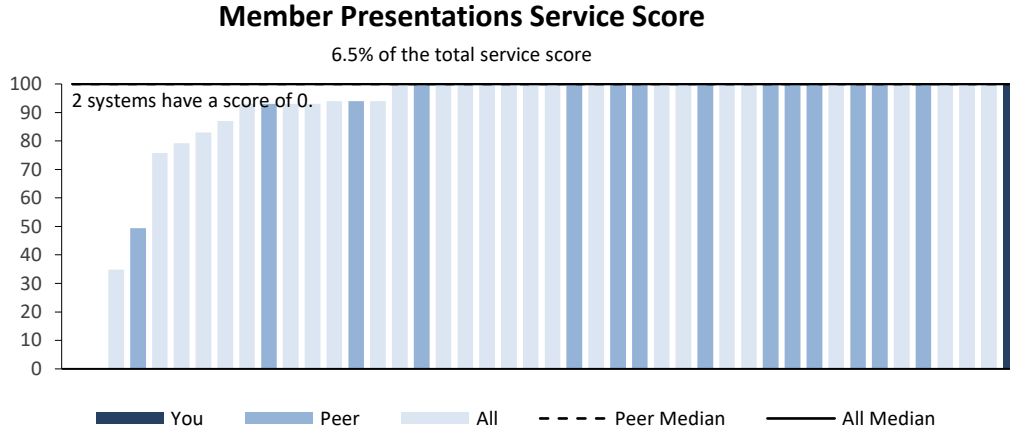
Members feel more comfortable if they can discuss their retirement income in an office with a door. If you review sessions for coaching purposes, this suggests that you monitor quality.

3. Survey questions used

		You	Peer Avg
Q63	a) Do almost all sessions take place in a private office with a door (versus a cubicle, etc.)?		
	a1) Walk-in traffic in-house?	No	85% Yes
	a2) Pre-scheduled in-house?	Yes	100% Yes
	a3) In-the-field?	No	75% Yes
	c) Do you provide new written estimates on a real-time basis for anybody that wants one?		
	c1) Walk-in traffic in-house?	Yes	77% Yes
	c2) Pre-scheduled in-house?	Yes	86% Yes
	c3) In-the-field?	No	67% 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?	Yes	85% Yes
	d2) pre-scheduled In-house?	Yes	71% Yes
	d3) In-the-field?	No	58% Yes
Q64	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	60% Yes

2D Member Presentations

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



1. Scoring method		Your Data	Your Score
<u>Availability</u>			
+ 70	if attendees as a percent of active members is 2.5% ¹ or more, otherwise 2,800 ¹ X attendees as percent of active members	6.5%	70.0
+ 5	if you offer presentations outside of normal working hours	Yes	5.0
<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	4	18.0
<u>Coaching</u>			
+ 7	if you regularly review presenters for coaching purposes	Yes	7.0
Total score			100.0

¹Better 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 none of your pension inceptions occur online, you need attendees equal to 2.50% of your active member population to achieve a perfect score of 70; we use a multiplication factor of 2,800 because $70 / 2.50\% = 2,800$).

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.

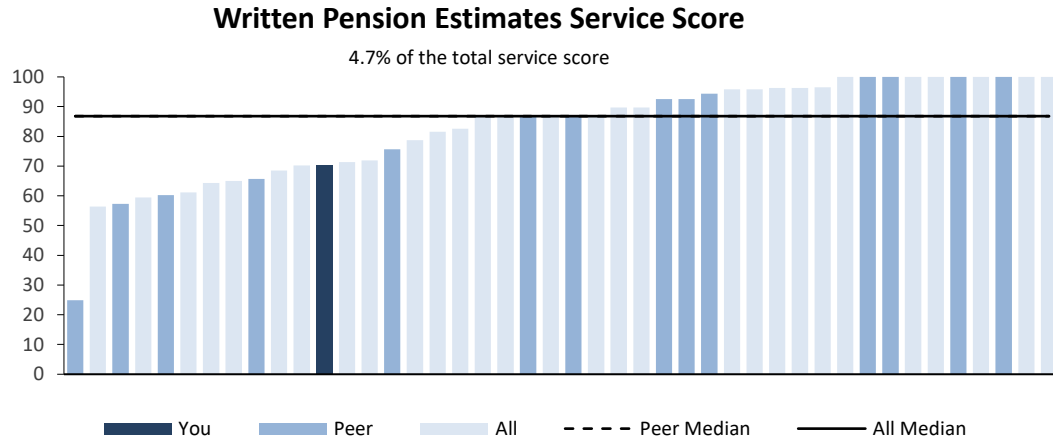
Presentations for different target audiences are higher service.

3. Survey questions used

		You	Peer Avg
	<u>Availability</u>		
Q68	What was the total number of attendees at all of the presentations? [Exclude benefit fair attendees] (A)	16,799	16,950
Q5	Active Members (B)	257,911	274,966
	Attendees as a percent of active members (A / B)	6.5%	6.2%
Q70	Do you offer presentations after normal working hours such as evenings and/or weekends?	Yes	100% Yes
	<u>Types</u>		
Q69	Did you do specific presentations for members, in the past fiscal year, targeted solely for:		
	a) New members?	Yes	93% Yes
	b) Members in mid career?	Yes	73% Yes
	c) Members approaching retirement or ready to retire?	Yes	100% Yes
	f) Other? (Please describe)	<u>Yes</u>	<u>67% Yes</u>
	Total presentation types	4	3
	<u>Coaching</u>		
Q71	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	87% Yes

2E Written Pension Estimates

Your service score for written pension estimates was 70 out of 100. This was below the peer median of 87.

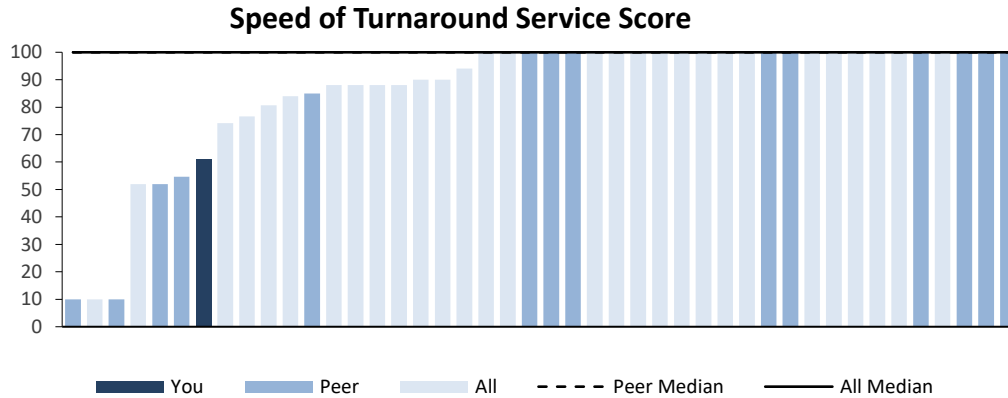


Your service score for 2e written pension estimates is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Written Pension Estimates Service Score Components		
	Weight	Your Score
a. Speed of turnaround	35%	61.0
b. Content	25%	100.0
c. Alternative channels	40%	60.0
Weighted Total	100%	70.4

a. Speed of turnaround

Your service score for speed of turnaround was 61 out of 100. This was below the peer median of 100.



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	14 days	51.0
+ 10 if you regularly measure the time to provide an estimate	Regular	10.0
Total score [Subject to a minimum score of 0]		61.0

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

2. Rationale for the scoring method
<p>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.</p> <p>We assume that it is higher service if you regularly measure turnaround times because we believe that what gets measured, gets managed.</p>

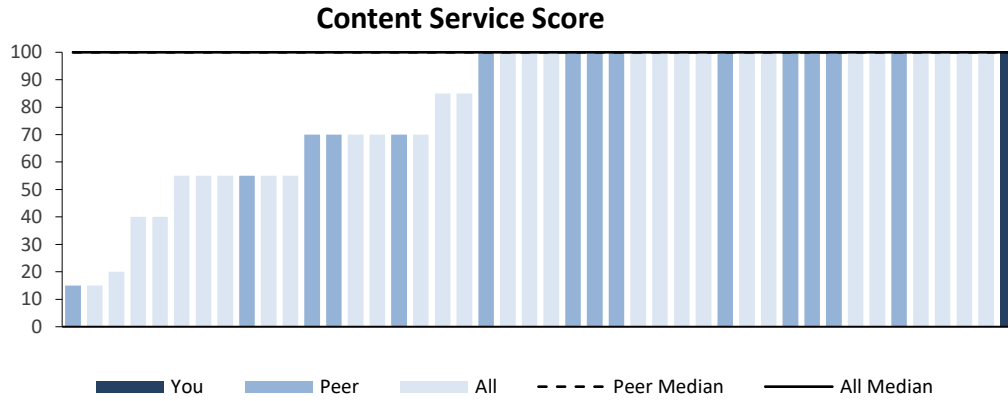
a. Speed of turnaround

3. Survey questions used		You	Peer Avg
Q73	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.]	24,003	33,989
Q75	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) a) Is this a number you regularly measure and track (versus an estimate)?	14 days Regular	14 days 100% Yes
Q81	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? If yes, volume? (C) p) Submit a retirement application online? Weighted average estimate turnaround time ¹ (A x B) / (A + C)	No n/a No 14 days	80% Yes 199,104 60% Yes 12.0 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

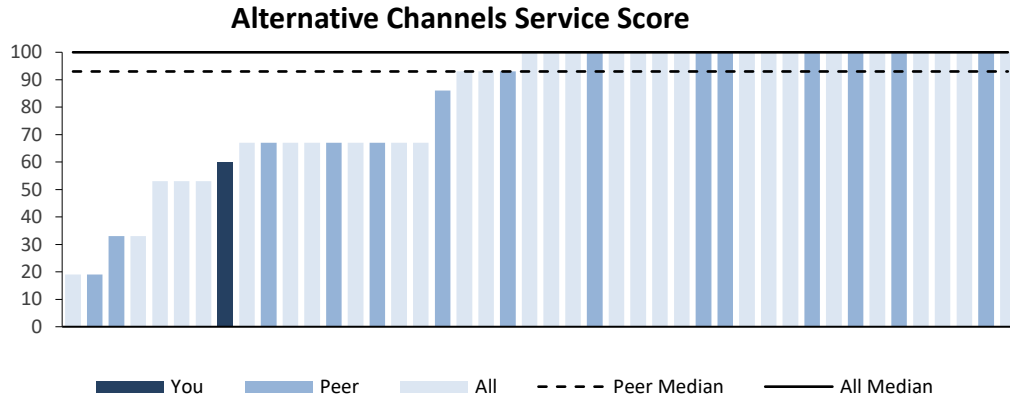
The more members understand about how their pension is affected by inflation, social security, etc. the better they can plan for retirement. A perfect score requires that you provide all this information in a written pension estimate.

3. Survey questions used

		You	Peer Avg
Q78	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	67% 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	100% Yes
	d) Model alternative retirement payment options?	Yes	93% Yes

c. Alternative channels

Your service score for alternative channels was 60 out of 100. This was below the peer median of 93.



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	No	0.0
Total score			60.0

2. Rationale for the scoring method

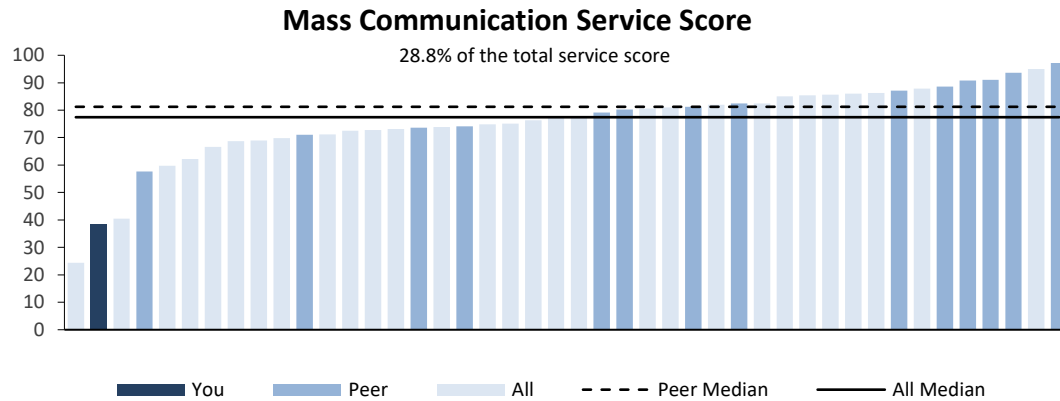
More choices in obtaining a pension estimate provides greater access and convenience for your members.

c. Alternative channels

3. Survey questions used		You	Peer Avg
Q46	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	73% Yes
Q76	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	73% Yes
Q77	Do you place a limit on the number of written pension estimates that a member can request?	No	13% Yes
Q81	Indicate whether the following capabilities are available on your website and provide volumes: a) Benefit calculator in non-secure area? b) Benefit calculator in secure area not linked to member data? c) Benefit calculator in secure area linked to member's salary and service data?	Yes No No	60% Yes 27% Yes 80% Yes
Q94	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	73% Yes

2F Mass Communication

Your service score for mass communication was 38 out of 100. This was below the peer median of 81.

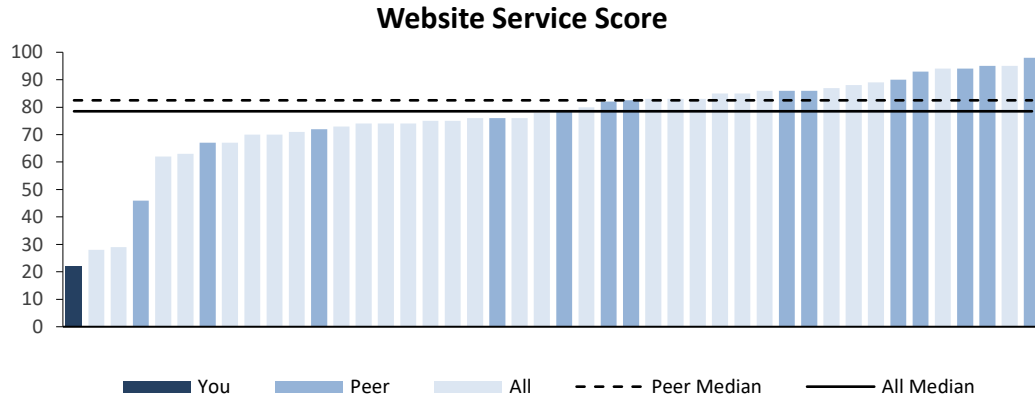


Your service score for 2f mass communication is the weighted total of the components shown in the table below. The methodology and data used to determine your scores for each of these components is described in detail on the following pages.

Mass Communication Service Score Components		
	Weight	Your Score
a. Website	74%	22.0
b. News and Targeted Communication	10%	75.0
c. Member statements	16%	91.0
Weighted Total	100%	38.4

a. Website

Your service score for the website was 22 out of 100. This was below the peer median of 83.



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	No	0.0
+ 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	n/a	0.0
+ 3 if salary and service credit data is up-to-date to the most recent pay period	n/a	0.0
+ 2 if a complete annual history since employment began of salary and service credit data is available	n/a	0.0
<u>Secure access design</u>		
+ 4 if members can get online immediately upon registering	n/a	0.0
+ 2 if you greet members by name upon log-in	n/a	0.0
- 4 if you force members to acknowledge a disclaimer every time they log-in or use the calculator	n/a	0.0
+ 1 if inactive members have access to the secure member area	n/a	0.0
+ 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	Most	6.0
<u>Other tools and transactions</u>		
+ 1 register for counseling sessions in real-time	n/a	0.0
+ 1 register for presentations	Yes	1.0
+ 2 if you offer live chat	No	0.0
+ 3 change address	No	0.0
+ 2 change beneficiary	No	0.0
+ 3 add or change email address	No	0.0
+ 1 reset password	No	0.0
+ 2 change annuity deposit banking information	No	0.0
+ 2 change tax withholding amount	No	0.0
+ 3 download or print tax receipts	No	0.0
+ 3 view pension payment gross amounts and deductions (payment stubs)	No	0.0
+ 3 submit a retirement application online	No	0.0
+ 2 if less than 50% of pensions initiated online require follow-up documents or signatures to be mailed in	n/a	0.0
+ 1 check status of retirement application	No	0.0
+ 3 apply for a transfer-out or refund	No	0.0
+ 2 download member statement	No	0.0
+ 3 upload documents in lieu of mailing hardcopies	No	0.0
+ 3 view pensionable earnings and/or service without downloading	No	0.0
+ 3 access videos online	Yes	3.0
Total score		22.0

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

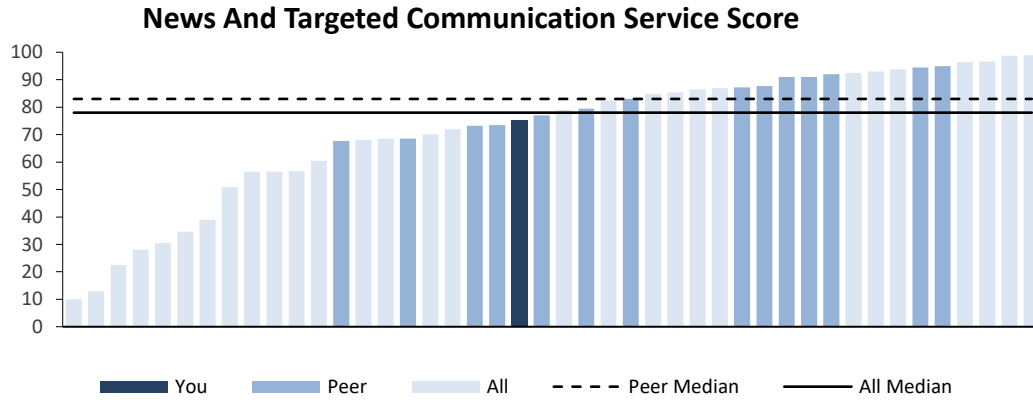
		You	Peer Avg
	<u>Calculators</u>		
Q81	Indicate whether the following capabilities are available on your website and provide volumes:		
	a) Benefit calculator in non-secure area?	Yes	60% Yes
	b) Benefit calculator in secure area not linked to member data?	No	27% Yes
	c) Benefit calculator in secure area linked to member's salary and service data?	No	80% Yes
	d) Service credit purchase calculator?	Yes	87% Yes
	<u>Salary and service credit</u>		
	v) View pensionable earnings and/or service without downloading?	No	87% Yes
	v1) Are both salary and service data available?	n/a	92% Yes
	v2) Is online data up-to-date to the most recent pay period?	n/a	85% Yes
	v3) Is a complete annual history from the beginning of employment provided?	n/a	62% Yes
	<u>Secure access design</u>		
Q80	Does your website have a secure member area where members can access their own data?	No	93% Yes
	c) If a member wants to register for the first time, does he/she have to wait for a password in the mail?	n/a	7% Yes
	d) Do you welcome the member by name on the home page of the secure member area?	n/a	100% Yes
	e) Are users required to acknowledge a disclaimer every time they log in?	n/a	14% Yes
	f) Are users required to acknowledge a disclaimer every time they generate a pension estimate?	n/a	31% Yes
	g) Do inactive members have access to the secure member area?	n/a	100% Yes
Q81	s) Secure mailbox or digital file including history of recent correspondence and member documents?	No	73% Yes
	<u>Forms</u>		
Q79	Are all, most or some of your forms available online for either completion or downloading?	Most	41% All

a. Website

3. Survey questions used		You	Peer Avg
	<u>Other tools and transactions</u>		
Q81	Indicate whether the following capabilities are available on your website and provide volumes:		
	e) Register for 1-on-1 counseling sessions?	No	50% Yes
	e1) If yes, does the member have real-time access to available dates and times?	n/a	100% Yes
	f) Register for presentations?	Yes	80% Yes
	g) Live chat?	No	7% Yes
	h) Change address?	No	93% Yes
	i) Change beneficiary?	No	80% Yes
	j) Change email address?	No	93% Yes
	k) Reset password?	No	93% Yes
	l) Change banking information for direct deposit?	No	67% Yes
	m) Change tax withholding amount?	No	80% Yes
	n) Download or print duplicate tax receipts? [i.e., 1099s in the U.S.]	No	87% Yes
	o) View pension payment details? [i.e., gross amounts, deductions]	No	87% Yes
	p) Submit a retirement application online?	No	60% Yes
	If yes:		
	p1) Does the online application provide an estimate, final value or neither of the annuity payment the member will receive?	n/a	0% Final
	p2) Approximately what % of retirements submitted online require follow-up documents or signatures to be mailed in?	n/a	46.6%
	q) View status of online retirement application?	No	53% Yes
	r) Apply for a refund or transfer-out?	No	67% Yes
	t) Download member statement? [i.e., Adobe format]	No	80% Yes
	u) Upload documents (such as birth certificates)?	No	60% Yes
Q82	Do you have videos that members can access online?	Yes	100% Yes

b. News and Targeted Communication

Your service score for newsletters was 75 out of 100. This was below the peer median of 83.



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	4 times	20.0
+ 20	if annuitants receive a newsletter 2 or more times per year. 14 if 1 time, otherwise 0	3 times	20.0
+ 2	if inactive members receive a newsletter at least annually	0 times	0.0
+ 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>			
+ 10	if you issue a 'welcome' kit to new members	Yes	10.0
if you send out personalized letters to members:			
+ 2	that are new (this letter could be part of a welcome kit)	No	0.0
+ 7.5	approaching eligibility, or becoming eligible, for retirement	Yes	7.5
+ 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	n/a	0.0
+ 1	if you publish member statements, annual reports, newsletters, the website and brochures in a language other than English, otherwise 0.2 for each publication translated	0 publications	0.0
+ 2.5	if you solicit member feedback on your publications through focus groups, or surveys	Yes	2.5
Total score			75.0

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

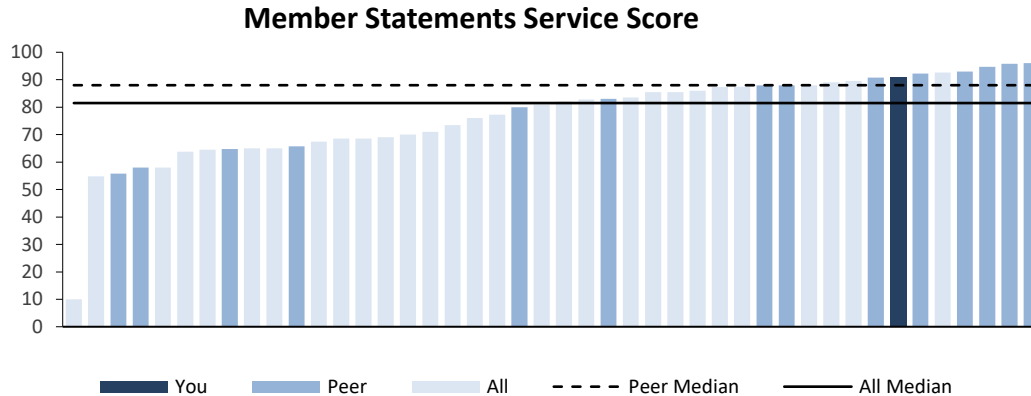
		You	Peer Avg
Q84	Indicate whether you sent newsletters or news magazines (in either electronic or paper format) last year to any of the following member segments, and if yes, the number of times it was sent:		
		#	#
	a) All members (active, inactive and annuitants)?	No n/a	27% Yes 5
	b) Active and inactive members?	No n/a	40% Yes 14
	c) Active members and annuitants?	No n/a	0% Yes n/a
	d) Active members only?	Yes 4	53% Yes 4
	e) Inactive members only?	No n/a	13% Yes 2
	f) Annuitants only?	Yes 3	100% Yes 4
	g) Age segments (i.e., under 35, 35-50, 50 plus)?	No n/a	20% Yes 20
	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	33% Yes 10
	j) Other? (describe your other newsletter segments below)	<u>No</u> n/a	<u>40% Yes</u> 7
	n/a		
	Total Segments	2	3.3
Q85	Are new members issued a 'welcome' kit describing their benefits?	Yes	93% Yes
	If yes:		
	a) If yes, does it include a personalized letter addressing the new member by name?	No	64% Yes

b. News and Targeted Communication

3. Survey questions used		You	Peer Avg
Q87	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	36% Yes
	b) Vested for disability benefits (if member is not vested immediately)?	No	14% Yes
	c) Expiration of disability benefits for inactive members or members that have	Yes	47% Yes
	d) Approaching eligibility, or becoming eligible, for retirement?	Yes	53% Yes
	e) Eligibility or likely eligibility, to purchase service credit?	No	27% Yes
	f) Missing beneficiary?	No	20% Yes
	g) Missing email address?	No	13% Yes
	h) Never visited the secure member area?	n/a	14% Yes
	i) Other milestone communication? (describe below)	Yes	60% Yes
Q88	Do you actively solicit member feedback on your publications through:		
	a) Focus groups?	Yes	33% 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	47% Yes
Q89	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?	No	0% Yes
	b) Annual report?	No	0% Yes
	c) Newsletters?	No	7% Yes
	d) Website?	No	20% Yes
	e) Brochures and pamphlets?	No	13% Yes

c. Member statements

Your service score for member statements was 91 out of 100. This was above the peer median of 88.



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]	3.0 months	11.0
+ 5 if paper member statements mailed directly to the member's home	Yes	5.0
+ 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	1 time	5.0
<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		91.0

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

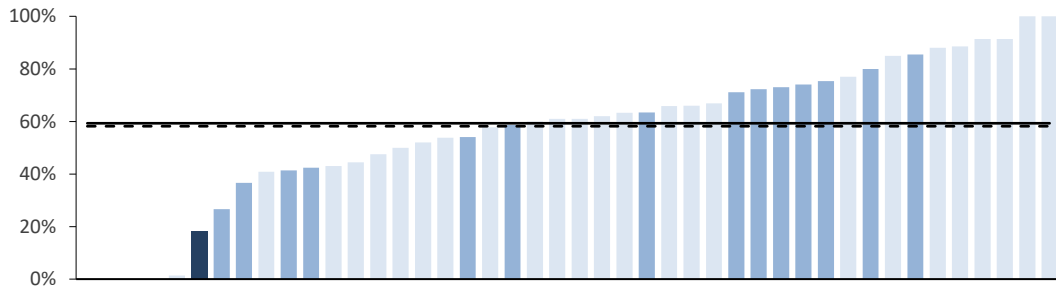
		You	Peer Avg
Q90	How many times per year (annually = 1, every 2nd year = 0.5, every 3 years = 0.33, every 5 years = 0.2) do you send member statements to: a) Active members? b) Inactive members?	1 time 1 time	1.3 times 1.3 times
Q91	Approximately what % of members complain about the accuracy of data in their member statements?	0.0%	0.4%
Q92	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?	66.5% 21.9% 11.6%	7.7% 50.7% 38.0%
Q93	On average, how current is an active member's data in the statements that the member receives (in months)?	3.0	2 months
Q94	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 87% Yes 53% Yes 93% Yes 73% Yes

Digital delivery

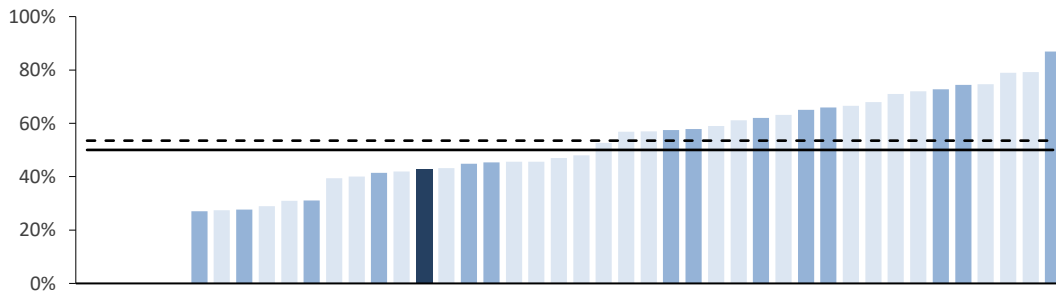
Systems are increasingly looking at cost effective and timely solutions for communicating with members. In particular, more systems are using email and other digital delivery options to deliver newsletters, member statements and other forms of traditional, paper mass communications. CEM's service model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

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

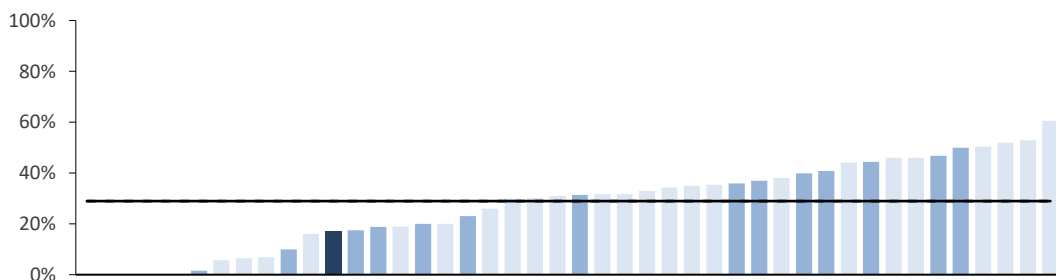
% Email addresses for active members



% Email addresses for annuitants



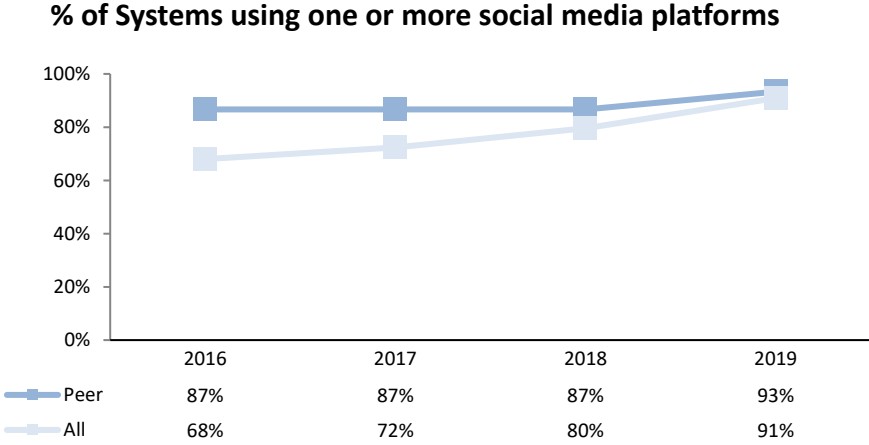
% Email addresses for inactive members



You
 Peer
 All Avg
 All
 Peer Avg

Digital delivery

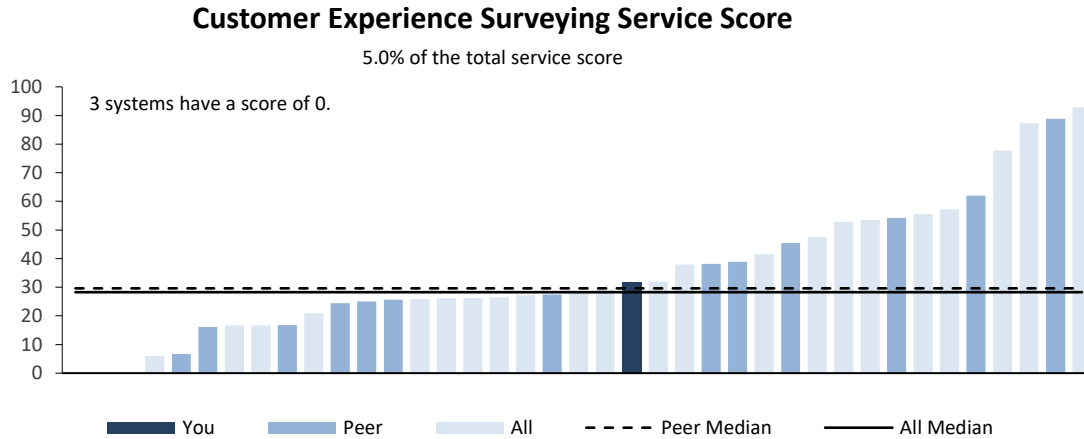
Social media is another method systems use to communicate with members, for both educational and marketing purposes. Social media is not currently included in the service score, but we are tracking these measures and may use them in the future.



Digital delivery questions		You	Peer Avg	All Avg
Q82	Do you have videos that members can access online?	Yes	100% Yes	91% Yes
	If yes:			
	a) How many different videos do you have for members online?	20	47	58
	b) What was the total number of new views for all streamed videos?	31,469	29,927	28,776
Q95	Do you have:			
	a) Facebook?	No	80% Yes	59% Yes
	b) Twitter?	Yes	67% Yes	48% Yes
	c) YouTube?	Yes	60% Yes	66% Yes
	d) Google+?	No	7% Yes	11% Yes
	e) LinkedIn?	No	73% Yes	59% Yes
	f) Pinterest?	No	7% Yes	5% Yes
	g) Instagram?	No	13% Yes	20% Yes
	h) WhatsApp?	No	0% Yes	5% Yes
	i) Blog?	No	33% Yes	23% Yes
	j) Other?	No	13% Yes	16% Yes
Q96	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)?	n/a	5.4%	5.4%
	b) For Twitter, what is your average tweet engagement rate (combined clicks, retweets, replies, follows, and likes divided by total impressions)?	Unknown	0.8%	1.3%
Q97	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	0.8
Q98	Do you support private two-way communication with members through any social media platforms?	Yes	73% Yes	41% Yes
Q99	Do you have a mobile app(s)?	No	0% Yes	5% Yes

Customer Experience Surveying

Your service score for member experience surveying was 32 out of 100. This was above the peer median of 30.



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 ¹	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	10.0%	Yes	95.0
b2. Member presentations	7.0%	Yes	95.0
b3. Member telephone calls	8.0%	Yes	70.0
b4. Website - secure member area	14.0%	No	0.0
c. Member Journeys			
c6. Disability	10.0%	No	0.0
c7. Retirement	25.0%	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
Weighted Total	100.0%		31.8

¹ 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
b1. 1-on-1 counseling		
+ 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.	0 days	20.0
+ 10 if you can summarize results by service representative.	Yes	10.0
+ 10 if you can summarize results by topic covered.	Yes	10.0
+ 5 if you survey 1-on-1 counseling continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	continuous	5.0
+ 5 if you survey how easy it was for the member to accomplish what they wanted.	No	<u>0.0</u>
Total		95.0
b2. Member presentations		
+ 55 if you survey satisfaction or NPS exclusively for member presentations.	Yes	55.0
+ 25 if the greatest length of time between the survey and the member presentations session is 1 day.	0 days	25.0
+ 10 if you can summarize results by service representative.	Yes	10.0
+ 5 if you survey member presentations continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	continuous	5.0
+ 5 if you survey how easy it was for the member to accomplish what they wanted.	No	<u>0.0</u>
Total		95.0
b3. Member telephone calls		
+ 35 if you survey satisfaction or NPS exclusively for member telephone calls.	Yes	35.0
+ 20 if the greatest length of time between the survey and the member telephone calls session is 1 day.	0 days	20.0
+ 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.	No	0.0
+ 5 if you survey member telephone calls continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	continuous	<u>5.0</u>
Total		70.0
b4. Website - secure member area		
+ 20 if you survey satisfaction or NPS exclusively for website - secure member area.	No	0.0
+ 30 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	0.0
+ 5 if you survey website - secure member area continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	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
c6. Disability			
+ 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
+ 20	if the greatest length of time between the survey and the end of the disability process is 30 days or less.	n/a	0.0
+ 5	if you survey disability continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	n/a	<u>0.0</u>
	Total		0.0
c7. Retirement			
+ 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
+ 20	if the greatest length of time between the survey and the end of the retirement process is 30 days or less.	n/a	0.0
+ 5	if you survey retirement continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	n/a	<u>0.0</u>
	Total		0.0
c#. Other member journeys			
+ 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 estimates.	No	0.0
+ 35 if you survey how easy it was for the member to accomplish what they wanted.	n/a	0.0
+ 20 if the greatest length of time between the survey and the receipt of the written pension estimates process is 1 day or less.	n/a	0.0
+ 5 if you survey written pension estimates continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	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
+ 20 if the greatest length of time between the survey and the refunds, withdrawals, and transfers-out process is 7 days or less.	n/a	0.0
+ 5 if you survey refunds or transfers-out continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	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
+ 20 if the greatest length of time between the survey and the purchases and transfers-in process is 7 days or less.	n/a	0.0
+ 5 if you survey purchases and transfers-in continuously or more than 11 times per year, otherwise +3 if quarterly, +1 if once per year.	n/a	<u>0.0</u>
Total		0.0

Customer Experience Surveying

2. Rationale for the scoring method

Best practice surveying:

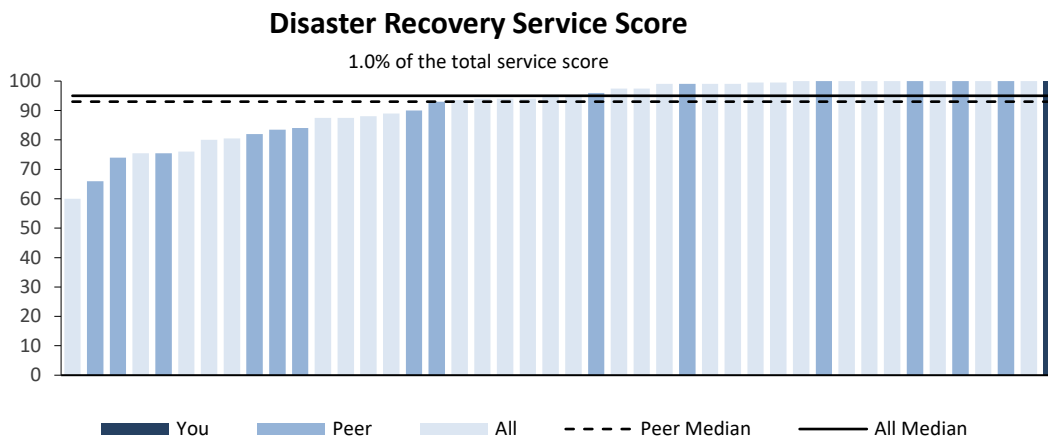
- Focuses on a single customer journey, such as the retirement process, or a single transaction, such as calls.
- Occurs shortly after the transaction or journey is completed. Immediately after a transaction is optimal for getting the member's impression of the service agent. Any longer and research 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						
Q123	Did you survey satisfaction, NPS or engagement for this activity in your most recently ended fiscal year?		If yes, for each activity surveyed:			
	Did you survey member effort?	What was the longest possible time in days between the activity or journey and the survey?	How often did you survey about the activity or journey? (times per year)	Can you break down the survey results by service agent?	Can you break down the survey results by topic covered?	
Your Responses						
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	No	0	continuous	Yes	Yes
b2. Member presentations	Yes	No	0	continuous	Yes	
b3. Member telephone calls	Yes	n/a	0	continuous	Yes	No
b4. Website - secure member area	No	n/a	n/a	n/a		n/a
c. Member Journeys						
c6. Disability	No	n/a	n/a	n/a		
c7. Retirement	No	n/a	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	n/a		
d2. Refunds, Withdrawals, and Transfer	No	n/a	n/a	n/a		
d3. Purchases and transfers-in	No	n/a	n/a	n/a		
Peer Responses						
a. Member satisfaction, Net Promoter Score (NPS) or Engagement (If applicable)						
a1. Active members	53% Yes					
a2. Annuitants	53% Yes					
b. Single-channel touchpoints						
b1. 1-on-1 counseling	73% Yes	8% Yes	3	100% ≥ 12	100% Yes	73% Yes
b2. Member presentations	100% Yes	17% Yes	5	100% ≥ 12	93% Yes	
b3. Member telephone calls	67% Yes	18% Yes	8	90% ≥ 12	100% Yes	40% Yes
b4. Website - secure member area	40% Yes	20% Yes	22	83% ≥ 12		50% Yes
c. Member Journeys						
c6. Disability	47% Yes	20% Yes	75	71% ≥ 12		
c7. Retirement	33% Yes	60% Yes	93	0% ≥ 12		
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	0% Yes					
d. Transactions that may be part of a member journey						
d1. Written pension estimates	47% Yes	33% Yes	28	86% ≥ 12		
d2. Refunds, Withdrawals, and Transfer	20% Yes	0% Yes	43	67% ≥ 12		
d3. Purchases and transfers-in	33% Yes	33% Yes	35	80% ≥ 12		

Disaster Recovery

Your service score for disaster recovery was 100 out of 100. This was above the peer median of 93.



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]	1	15.0
+ 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]	1	10.0
+ 10 if call center at current service levels in 2 days or less, otherwise 11 - days / 2 [Subject to a minimum score of 0]	1	10.0
+ 10 if you have an independent auditor that reviews and tests the disaster recovery	Yes	10.0
Total score		100.0

Disaster Recovery

2. Rationale for the scoring method

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

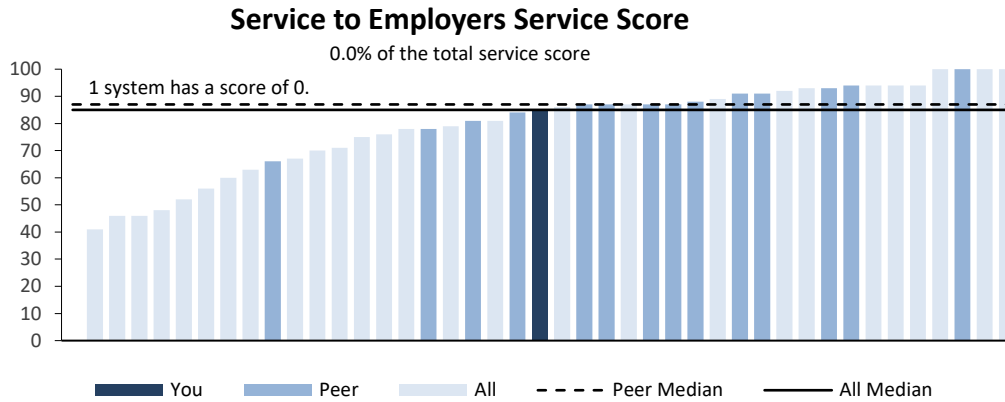
3. Survey questions used

		You	Peer Avg
Q119	Do you have back-up equipment and premises arranged for your operations if substantial damage occurs at your principal location?	Yes	100% Yes
Q120	Do you have an independent auditor that reviews and tests the disaster recovery plan?	Yes	60% Yes
Q121	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?	1	8 days
	c) Collect data and money from employers?	1	2 days
	d) Respond to member calls at close to current service levels?	1	6 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 85 out of 100. This was below the peer median of 87.



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	31	12.0
+ 12	if you send newsletters for employers 4 or more times per year, otherwise 3 X newsletter frequency	57	12.0
<u>Satisfaction and service agreements</u>			
+ 7	if you survey employer satisfaction, NPS or engagement	Yes	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	No	0.0
Total score			85.0

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
Q111	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
Q113	How many different types of presentations did you give to employers?	31	10
Q114	Do you have a newsletter dedicated to employers that is different from the newsletter for members?	Yes	93% Yes
	a) If yes, how many times did you prepare and send an employer dedicated newsletter last year?	57	14
Q115	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	27% Yes
Q116	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	93% 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?]	No	73% Yes
Q117	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
Q123	Did you survey satisfaction regarding this activity in your most recently ended fiscal year?	Yes	40% 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 37.7 points (from 62.3 to 100) to your Total Service Score if you enhanced service in each activity as follows:

Service Activity	Potential Improvement
<u>1A Pension Payments (0.15 potential improvement to your total service score)</u>	
• You provide payment advices with your ETF payments every time amount changes. To achieve a	+ 0.05
• You cannot comply with a request not to send a payment advice, and you do not ask new annuitants if they want to receive a pay slip. To achieve a perfect service score, you must either comply with a request not to send a payment advice or ask new annuitants if they want to receive a pay slip.	+ 0.10
<u>1B Pension Inceptions (0.58 potential improvement to your total service score)</u>	
• 100.0% of your service pension inceptions are based on estimates which took an average of 4.0 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.	+ 0.58
• 0.3% 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.	+ 0.00
<u>1D Purchases and Transfers-in (0.37 potential improvement to your total service score)</u>	
• On average, you provide a service credit purchase in 6 days. To achieve a perfect service score, you must be able to provide a service credit purchase estimate in 1 day or less.	+ 0.31
• On average, you process member's transfer-in applications in 2 months. To achieve a perfect service score, a member's transfer-in application is processed in 1 month or less.	+ 0.06
<u>1E Disability (0.68 potential improvement to your total service score)</u>	
• On average, you return a decision on a disability application in 3.0 months. To achieve a perfect service score, you must return a decision on a disability application in 1 month or less.	+ 0.68
<u>2A Call Center (11.41 potential improvement to your total service score)</u>	
• 18.4% of your incoming calls resulted in undesired outcomes. To achieve a perfect service score, members must experience no undesired call outcomes.	+ 3.09
• On average, members calling your call center reach a knowledgeable person in 228 seconds. To achieve a perfect service score, members must reach a knowledgeable person on the phone in 60 seconds or less.	+ 3.53
• You do not notify members of expected wait time, or their place in the queue, when the expected wait exceeds a certain threshold.	+ 0.08
• On average, your response time to member emails is 1.0 day. To achieve a perfect service score, members' emails must be responded to in 0.5 days or less.	+ 0.08
• You have 2 menu layers on your telephone tree. To achieve a perfect service score you must have	+ 0.84
• 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 provide service credit history including gaps on an immediate real-time basis over the phone. To achieve a perfect service score, you must be able to provide service credit history including gaps over the phone. + 0.29
- 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 cannot track call volume projections. To achieve a perfect service score, you must be able to track call volume projections. + 0.26
- On average, you review your staff's responses to member calls 3 times per month. To achieve a perfect service score you must review your staff's responses to member calls 4 or more times per month. + 0.43
- 90.2% 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. + 0.15

2C 1-on-1 Counseling (1.91 potential improvement to your total service score)

- 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
- 0.8% 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. + 1.00
- Your wait time for pre-scheduled in-house counseling sessions was 25 days. To achieve a perfect service score there must be no wait time for pre-scheduled in-house counseling sessions. + 0.37
- Your average wait time for walk-in counseling was 5 minutes. To achieve a perfect service score there must be no wait time for walk-in counseling. + 0.09
- 1.0% 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. + 0.02
- 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. + 0.12
- 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. + 0.02
- 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

2E Written Pension Estimates (1.39 potential improvement to your total service score)

- You provide estimates on average in 14.0 days. To achieve a perfect service score, the weighted average time required to provide written and online estimates must be same day or less. + 0.64
- 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

2F Mass Communication - Website (16.61 potential improvement to your total service score)

- Your interactive calculator is not linked to member data. To achieve a perfect service score you must link member data to your interactive calculator. + 4.26
- You do not offer secure access to both salary and service credit data. To achieve a perfect service score you must offer secure access to both salary and service credit data. + 0.64
- Online salary and service credit data is not up-to-date to the most recent pay period. To achieve a perfect service score this data must be up-to-date to the most recent pay period. + 0.64
- You do not provide a complete annual history of salary and service credit data on your website. To achieve a perfect service a complete annual history of salary and service credit data must be available to members. + 0.43
- Your members wait for a password in the mail when they register for the first time. To achieve a perfect service score members must be able to get online immediately upon registering. + 0.85
- You do not greet members by name when they log-in to your website. To achieve a perfect service score you must greet members by name when they log-in. + 0.43
- You do not offer access to the secure member area to inactive members. To achieve a perfect score inactive members must have access to the secure member area. + 0.21
- 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
- You do not make all forms available online. To achieve a perfect service score all forms must be available to the member online. + 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
- Members cannot change their address online. To achieve a perfect score members must be able to change their address online. + 0.64
- Members cannot change beneficiaries online. To achieve a perfect score members must be able to change beneficiaries online. + 0.43
- Members cannot add or change their email address online. To achieve a perfect score members must be able to add or change their email address online. + 0.64
- Members cannot reset their password online. To achieve a perfect score members must be able to reset their password online. + 0.21
- Members cannot change their annuity deposit banking information online. To achieve a perfect score members must be able to change their annuity deposit banking information online. + 0.43

- Members cannot change their tax withholding amount online. To achieve a perfect score members must be able to change their tax withholding amount online. + 0.43
- Members cannot download or print tax receipts online. To achieve a perfect score members must be able to download or print tax receipts online. + 0.64
- Members cannot view their pension payment gross amounts and deductions (payment stubs) online. To achieve a perfect score members must be able to view their pension payment gross amounts and deductions (payment stubs) online. + 0.64
- Members cannot apply for retirement online. To achieve a perfect score members must be able to apply for retirement online. + 0.64
- To achieve a perfect score pensions initiated online requiring follow-up documents must be less than 50%. + 0.43
- Members cannot check the status of their retirement application online. To achieve a perfect score members must be able to check the status of their retirement application online. + 0.21
- 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 download a member statement online. To achieve a perfect score members must be able to download a member statement online. + 0.43
- 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
- Members cannot view pensionable earnings and/or service online without downloading. To achieve a perfect score members must be able to view pensionable earnings and/or service online without downloading. + 0.64

2F Mass Communication - Newsletters (0.70 potential improvement to your total service score)

- You do not send newsletters to inactive members. To achieve a perfect service score you must send a newsletter to inactive members at least annually. + 0.06
- 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 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 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 (0.42 potential improvement to your total service score)

- Your member statement data is current to 3 months. To achieve a perfect service score your member statement data must be current to one month or less. + 0.19
- 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 (3.41 potential improvement to your total service score)

b1. 1-on-1 counseling (0.03 potential improvement to your total service score)

- You survey customer experience for 1-on-1 counseling continuous times per year. To achieve a perfect service score, you must survey customer experience for 1-on-1 counseling on a continuous basis or more than 11 times per year. + 0.03

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

- You did not do any customer experience surveying in the member presentations process during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow + 0.02

best practice customer experience surveying which is: (i) effort.

b3. Member telephone calls (0.12 potential improvement to your total service score)

- You did not do any 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) effort. + 0.08
- You are unable to summarize member telephone calls customer experience survey results by topic covered. To achieve a perfect service score you must be able to summarize member telephone calls customer experience survey results by topic covered. + 0.04

b4. Website - secure member area (0.70 potential improvement to your total service score)

- You did not do any 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 are: (i) satisfaction and (ii) Net Promoter Score (NPS). + 0.14
- You did not do any 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) effort. + 0.21
- 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 survey customer experience for member visiting website - secure member area n/a times per year. To achieve a perfect service score, you must survey customer experience for member visiting website - secure member area on a continuous basis or more than 11 times per year. + 0.04
- 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. + 0.21
- You did not do any customer experience surveying in the disability process during the fiscal year covered in this benchmarking report. To achieve a perfect service score you must follow best practice customer experience surveying which are: (i) satisfaction, (ii) net promoter score (NPS), (iii) + 0.20
- You did not do any 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) effort. + 0.18
- 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. + 0.10
- You survey customer experience for disability n/a times per year. To achieve a perfect service score, you must survey customer experience for disability on a continuous basis or more than 11 times per year. + 0.03

c7. Retirement (1.25 potential improvement to your total service score)

- You did not do any 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). + 0.50
- You did not do any 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) effort. + 0.44
- 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. + 0.25
- You survey customer experience for retirements n/a times per year. To achieve a perfect service + 0.06

score, you must survey customer experience for retirements on a continuous basis or more than 11 times per year.

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 are: (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 are: (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 are: (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 are: (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 are: (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 are: (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 did not do any 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 are: (i) satisfaction and (ii) Net Promoter Score (NPS). + 0.10
- You did not do any 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) effort. + 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 + 0.05
- You survey customer experience for written pension estimates n/a times per year. To achieve a perfect service score, you must survey customer experience for written pension estimates on a continuous basis or more than 11 times per year. + 0.01

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

- You did not do any 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 are: (i) satisfaction and (ii) Net Promoter Score (NPS). + 0.02
- You did not do any 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 are: (i) effort. + 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
- You survey customer experience for refunds, withdrawals and transfers-out n/a times per year. To achieve a perfect service score, you must survey customer experience for refunds, withdrawals and transfers-out on a continuous basis or more than 11 times per year. + 0.003

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

- You did not do any 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 are: (i) satisfaction and (ii) Net Promoter Score (NPS). + 0.10
- You did not do any 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 are: (i) effort. + 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 + 0.05
- You survey customer experience for purchases and transfers-in n/a times per year. To achieve a perfect service score, you must survey customer experience for purchases and transfers-in on a continuous basis or more than 11 times per year. + 0.01

8

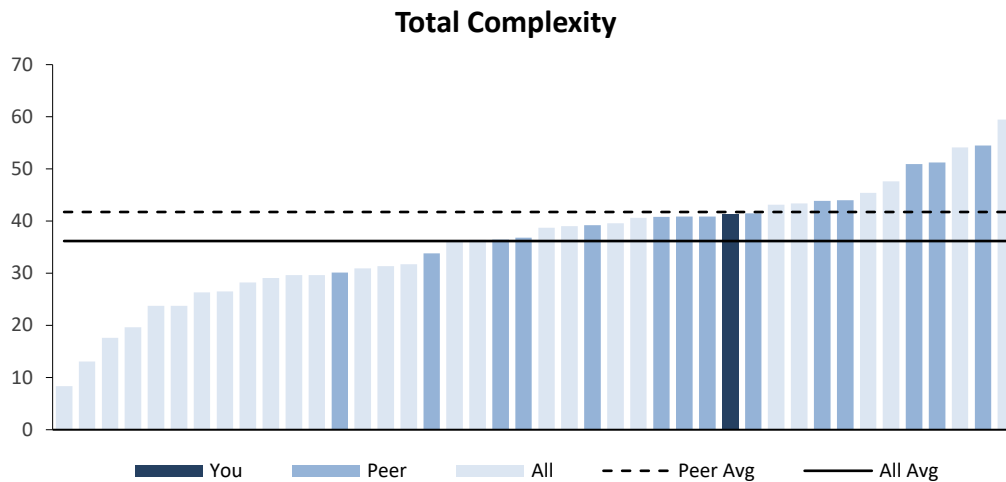
Plan Complexity

This section:

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

Your complexity score was below the peer average.

Your total complexity score was 41. This was equal to the peer median of 41.

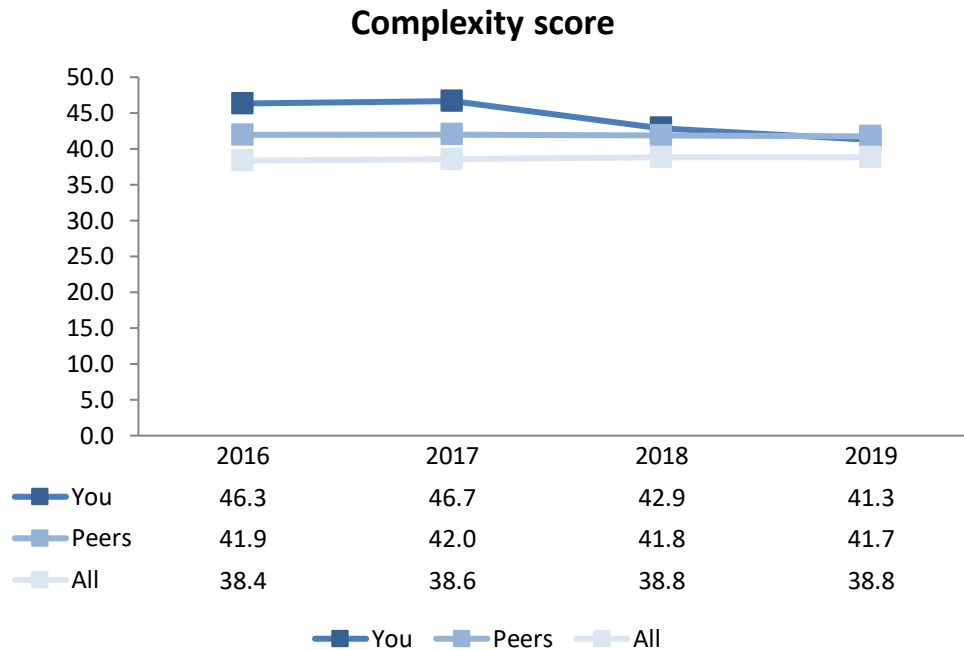


Your total complexity score is the weighted average of your complexity scores by the cause. The causes of complexity are summarized in the table below:

Complexity Scores by Cause			Complexity Score		
Cause	Weight	You	Peer Avg	All Avg	
A Pension Payment Options	15.0%	49	41	36	
B Customization Choices	20.0%	8	14	14	
C Multiple Plan Types and Overlays	13.0%	50	32	25	
D Multiple Benefit Formula	16.0%	46	55	47	
E External Reciprocity	3.0%	35	31	22	
F COLA Rules	4.0%	28	26	29	
G Contribution Rates	3.0%	24	41	35	
H Variable Compensation	4.0%	85	80	75	
I Service Credit Rules	3.0%	53	50	42	
J Divorce Rules	3.0%	100	69	64	
K Purchase Rules	6.0%	49	63	58	
L Refund Rules	4.0%	8	45	42	
M Disability Rules	6.0%	72	68	52	
Weighted Average	100.0%	41	42	36	

Trends in Complexity

Your total complexity score decreased slightly from 46.3 in 2016 to 41.3 in 2019.



1. Trend analysis is based on systems that have participated for 4-consecutive years (15 peers and 31 World systems). This ensures that trends are not caused by changes in the composition of the participants.

Complexity scoring methodology

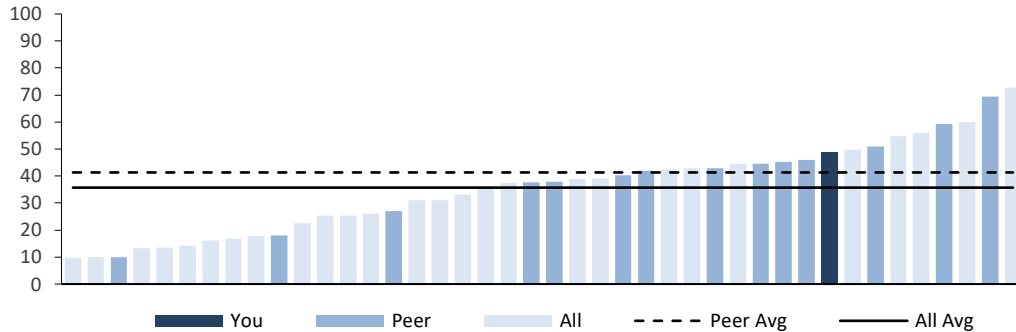
CEM's complexity scoring methodology changed in 2018, from a relative measure to absolute. The benefit of using an absolute measure is that your score is only impacted by changes in your plan rules.

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

Complexity from Pension Payment Options

15.0% of total complexity score



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
10%	<p>Q141 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	13% Yes 13	10% Yes 10
30%	<p>Q136 Do you offer "joint and survivor" options that are: 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 b) Reduced to Last Survivor? [For example, if either the retiree or beneficiary dies the survivor receives a reduced pension (such as 70%, etc.).] 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).] <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 Yes Yes 100	80% Yes 27% Yes 87% Yes 60	71% Yes 29% Yes 60% Yes 43
10%	<p>Q137 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. a) How many percentages do you permit? <i>Complexity: 100 if unlimited, 0 if none, otherwise $12.7 + 18.3 \times \ln(\text{number of percentages you permit})$ subject to a maximum of 100. i.e., 1 = 12.7, 2 = 25.3, 4 = 38.0, 8 = 50.6, etc. ¹</i></p>	Yes 2 25	1 13 65	1 8 59

¹The 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

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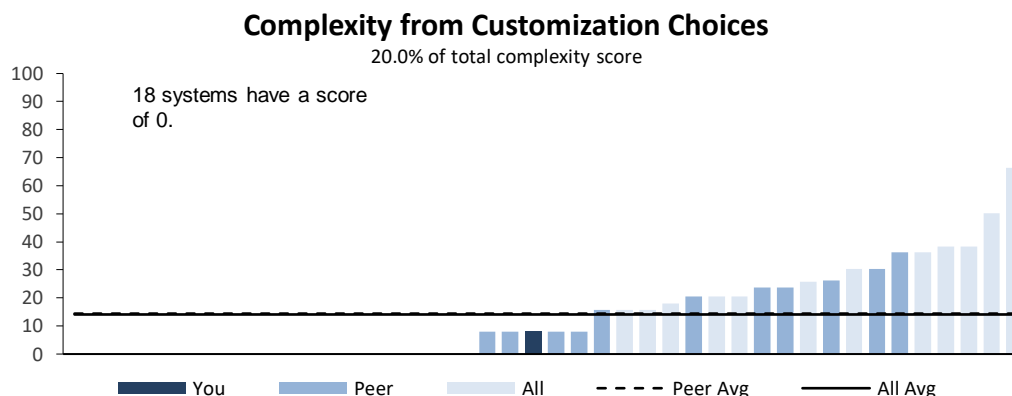
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
10%	Q146 How many mortality tables do you keep track of for determining joint and survivor or beneficiary options? <i>Complexity: 0 if none, otherwise 10.5 + 15.1 x ln(number of mortality tables). i.e., 1 = 10.5, 2 = 20.9, 4 = 31.4, 8 = 41.8, etc.</i>	1	21	10
		10	27	24
10%	Q138 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>	No	27% Yes	50% Yes
		n/a	0% All	38% All
		n/a	75% Yes	90% Yes
			0	25
5%	Q139 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	7% Yes	7% Yes
		0	7	7
5%	Q140 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>	Yes	60% Yes	52% Yes
		100	60	52
5%	Q142 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>	No	0% Yes	5% Yes
		0	0	5

A. Pension Payment Options Complexity

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Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
5%	<p>Q143 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.] <i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	20% Yes 20	19% Yes 19
5%	<p>Q144 At retirement, can a member convert: a) Part of his benefit into a partial lump sum payment? 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.] <i>Complexity: 100 if yes to a or b, 0 if no.</i></p>	No Yes 100	67% Yes 33% Yes 87	43% Yes 24% Yes 57
5%	<p>Q145 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? <i>Complexity: 100 if any day, otherwise 0.</i></p>	Any Day 100	33% Any 33	40% Any 40
100%	Weighted Average	49	41	36

B. Customization Choices Complexity



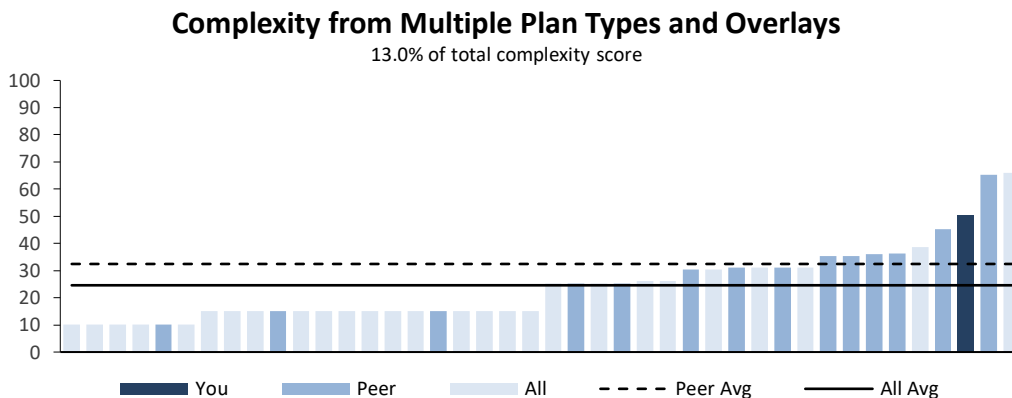
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
Q177	Can either existing employers, or a new employer joining your system, choose:			
	a) Whether they offer early retirement, or a window of early retirement?	No	27% Yes	21% Yes
	b) Whether or not part-time employees are eligible?	No	7% Yes	10% Yes
	c) Whether employee contributions are paid pre or post tax?	No	47% Yes	19% Yes
	d) Whether they pay for employee contributions themselves, or not?	No	47% Yes	26% 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	20% Yes	10% 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	13% 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.]	Yes	13% Yes	14% Yes

B. Customization Choices Complexity

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Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	<p>Q178 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 Q177 + sum of # of choices in Q178]</p> <p><i>Complexity: 0 if none, otherwise $8.8 + 12.7 \times \ln(\text{number of customization choices})$. i.e., 1 = 8.8, 2 = 17.6, 4 = 26.4, 8 = 35.1, etc.</i></p>	n/a	n/a	5
		n/a	2	2
		n/a	n/a	n/a
		n/a	n/a	4
		n/a	n/a	n/a
		n/a	2	4
		n/a	n/a	4
		n/a	n/a	3
		n/a	n/a	2
		n/a	1	6
		1	2	4
90%		9	15	13
	<p>Q179 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>	No	13% Yes	24% Yes
10%		0	13	24
100%	Weighted Average	8	14	14

C. Multiple Plan Types and Overlays Complexity



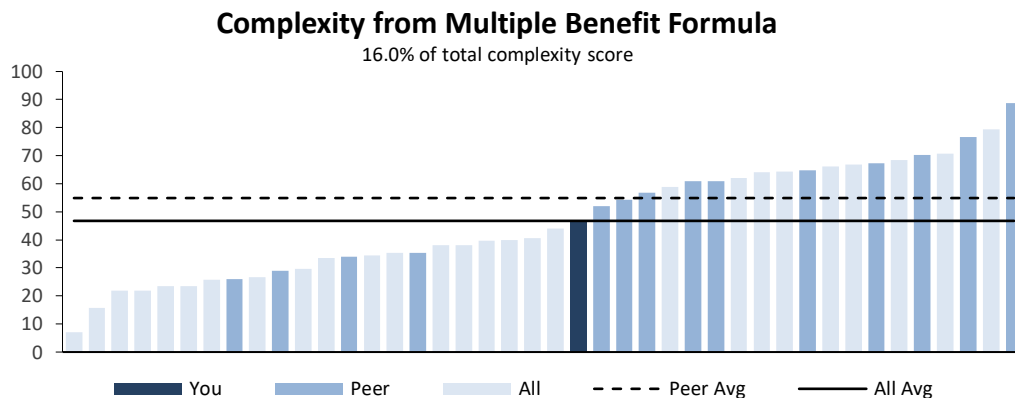
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
45%	Q126 Which of the following descriptions best describes the non-optional benefit plans that you administer for each of your member groups:			
	a) Traditional Defined Benefit ("DB")?	Yes	93% Yes	93% Yes
	b) DB Cash Balance (aka Money Purchase)?	No	13% Yes	7% Yes
	c) Hybrid DB/ DC Cash Balance?	No	7% Yes	5% Yes
	d) Hybrid DB/ Money Match?	No	7% Yes	5% Yes
	e) DROP savings?	No	7% Yes	10% Yes
	f) Defined Contribution ("DC")?	No	27% Yes	16% Yes
	g) Hybrid DB/ DC?	No	53% Yes	25% Yes
	h) Other (describe)?	No	7% Yes	9% Yes
	Total number of different plan types. Hybrid plans count as 2 types.	1.0	2.8	2.1
<i>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.</i>	22	50	39	

C. Multiple Plan Types and Overlays Complexity

page 2 of 2

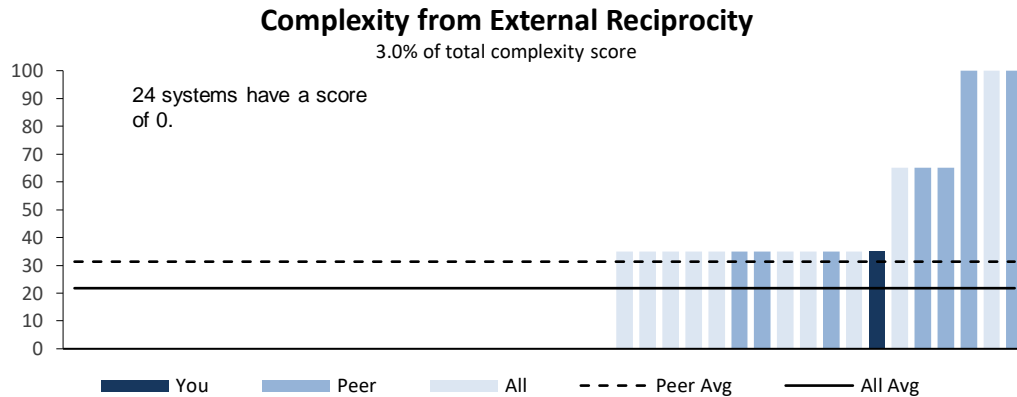
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
30%	<p>Q127 Do members in any of your defined benefit plan(s) have the option of electing: [These questions are not applicable for DC plans or the DC portion of hybrid DB/DC plans]</p> <p>a) A 'variable investment option' that can 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>	Yes 100	13% Yes 13	7% Yes 7
10%	<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>	Yes 100	27% Yes 27	12% Yes 12
10%	<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>	No 0	0% Yes 0	2% Yes 2
5%	<p>Q128 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>	No 0	67% Yes 67	67% Yes 67
100%	Weighted Average	50	32	25

D. Multiple Benefit Formula Complexity



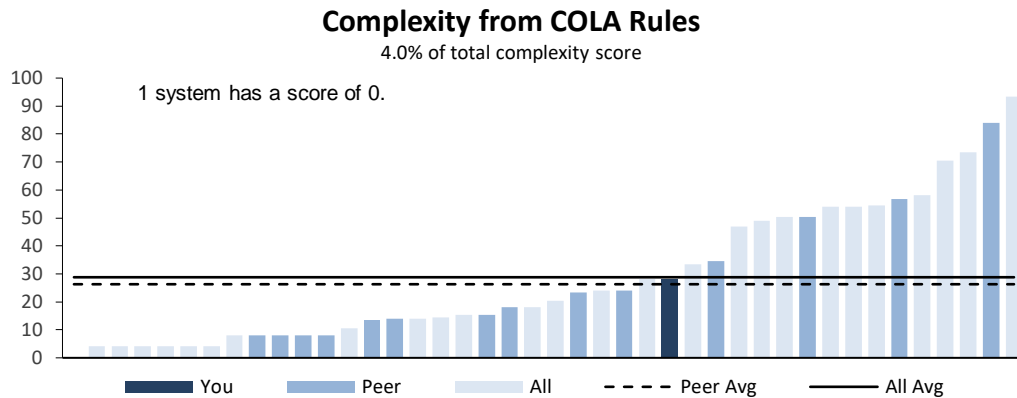
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
30%	<p>Q150 How many different rule sets do you have that apply to member groups or subsets of a member group for qualifying for an unreduced retirement formula? Complexity: 0 if none, otherwise $12.7 + 18.3 \times \ln(\text{number of rule sets})$. i.e., 1 = 12.7, 2 = 25.3, 4 = 38.0, 8 = 50.6, etc.</p>	14	14	10
5%	<p>Q151 Can members retire earlier than the age required for an unreduced retirement formula? Complexity: 100 if yes, 0 if no</p>	100	100% Yes 100	95% Yes 95
20%	<p>Q152 How many different salary definitions could apply in retirement formula calculations? Complexity: 0 if none, otherwise $19.4 + 27.9 \times \ln(\text{number of salary definitions})$. i.e., 1 = 19.4, 2 = 38.7, 4 = 58.1, 8 = 77.4, etc.</p>	3	6	4
25%	<p>Q153 How many different 'formula percentage' rule sets could apply in unreduced retirement formulas? Complexity: 0 if none, otherwise $12.7 + 18.3 \times \ln(\text{number of 'formula percentage' rule sets})$. i.e., 1 = 12.7, 2 = 25.3, 4 = 38.0, 8 = 50.6, etc.</p>	9	12	9
20%	<p>Q154 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>	No n/a n/a n/a n/a 0	67% Yes 50% Yes 30% Yes 20% Yes 30% Yes 10% Yes	50% Yes 52% Yes 38% Yes 10% Yes 33% Yes 24% Yes
100%	Weighted Average	46	55	47

E. External Reciprocity Complexity



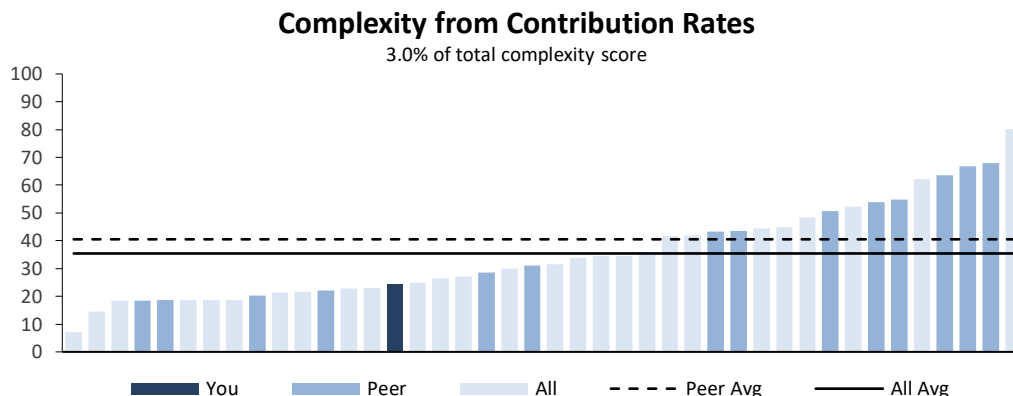
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
35%	<p>Q155 Do you have agreements with external systems where you both agree to use the member's final salary from the system where the member worked immediately prior to retirement in the benefit calculation? [Otherwise, each system 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>	Yes 100	40% Yes 40	36% Yes 36
65%	<p>Q156 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	27% Yes 27	14% Yes 14
100%	Weighted Average	35	31	22

F. COLA Rules Complexity



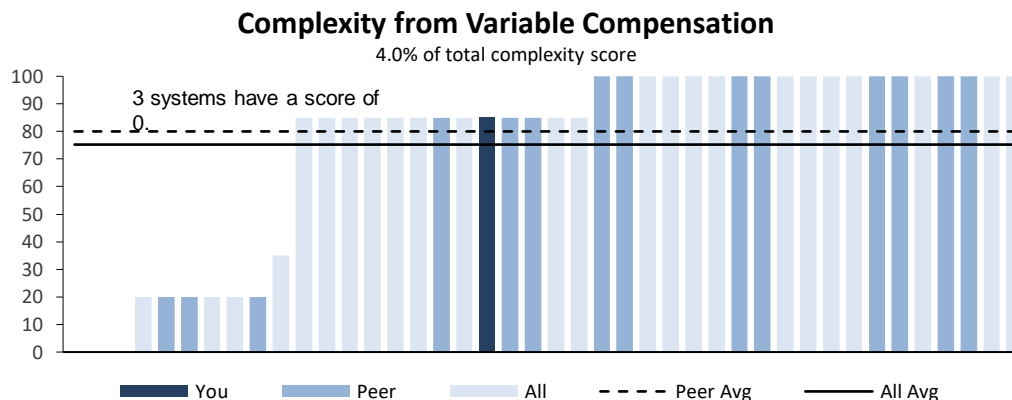
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
20%	<p>Q147 How many different cost of living adjustment ("COLA") rule sets do you have for retired, and if applicable, inactive members? (These rule sets may be either contractual or legislated.) <i>Complexity: 0 if none, otherwise $20.2 + 29.2 \times \ln(\text{number of COLA rule sets})$. i.e., 1 = 20.2, 2 = 40.4, 4 = 60.6, 8 = 80.8, etc.</i></p>	2 40	4 52	3 45
40%	<p>Q148 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.)? <i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	20% Yes 20	29% Yes 29
10%	<p>b) Conditional COLA based on the level of funding? <i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	27% Yes 27	26% Yes 26
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.] <i>Complexity: 100 if yes, otherwise 0.</i></p>	Yes 100	20% Yes 20	19% Yes 19
5%	<p>Q149 Do you have COLA clauses that increase the base pensionable earnings of inactive members? <i>Complexity: 100 if yes, otherwise 0.</i></p>	No 0	20% Yes 20	24% Yes 24
5%	<p>a) If yes, are these COLA increases the same as they are for annuitants? <i>Complexity: 100 if yes, otherwise 0.</i></p>	n/a 0	33% Yes 7	70% Yes 17
100%	Weighted Average	28	26	29

G. Contribution Rates Complexity



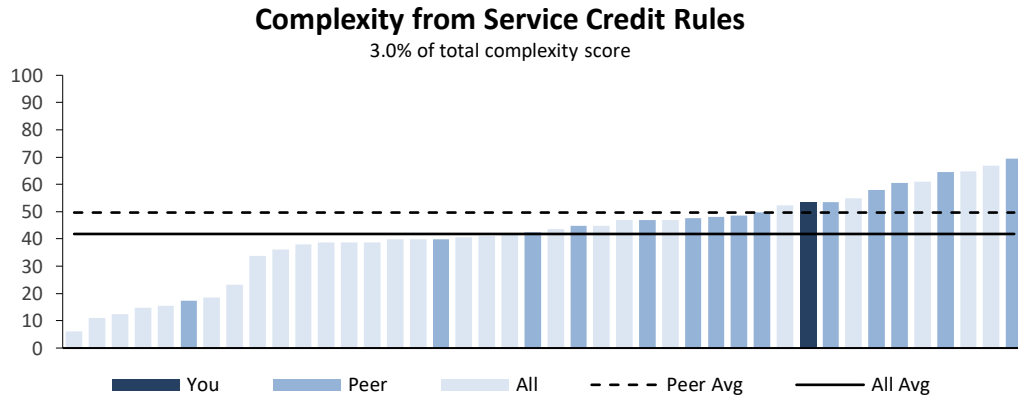
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
40%	<p>Q180 How many different contribution percentages do you collect from:</p> <p>a) Employers? [For example, single member group systems may have only one contribution percentage whereas some multi-plan systems may collect numerous different contribution rates from various participating employers.] <i>Complexity: 0 if none, otherwise $7.3 + 10.5 \times \ln(\text{number of contribution percentages collected from employers})$. i.e., 1 = 7.3, 2 = 14.6, 4 = 21.9, 8 = 29.2, etc.</i></p>	3	414	297
40%	<p>b) Members? <i>Complexity: 0 if none, otherwise $10.8 + 15.5 \times \ln(\text{number of contribution percentages collected from members})$. i.e., 1 = 10.8, 2 = 21.5, 4 = 32.3, 8 = 43.0, etc.</i></p>	19	39	33
17%	<p>Q181 Which of the following payment methods for employee contributions occur in the plans that you administer:</p> <p>a) No employee contributions? No</p> <p>b) Employer pays his part and also the employee contributions? Yes</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? No</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>	33	55	39
3%	<p>Q182 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>	0	47	45
100%	Weighted Average	24	41	35

H. Variable Compensation Complexity



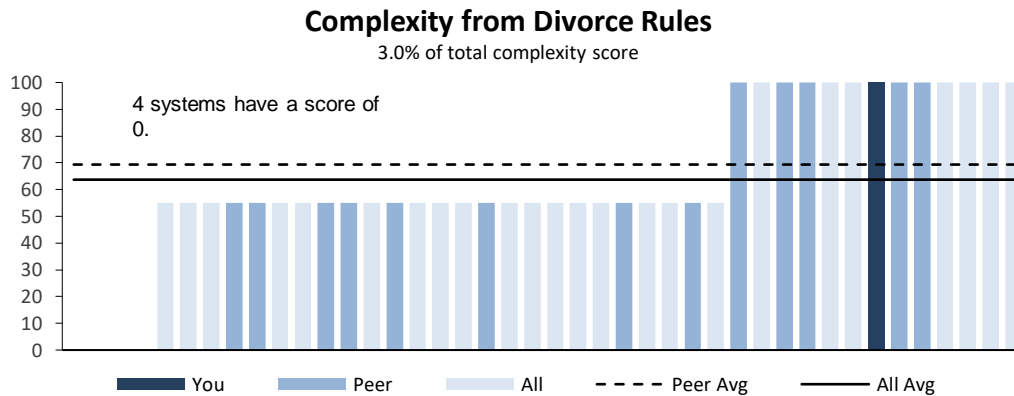
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
20%	<p>Q175 Indicate which of the following forms of variable compensation are paid in your system. And, if paid, indicate whether all, some or none of that type of variable compensation is included in pensionable earnings.</p> <p>a) Bonuses? Yes 80% Yes 79% Yes</p> <p>b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance? Yes 87% Yes 83% Yes</p> <p>c) Overtime pay? Yes 93% Yes 83% Yes</p> <p>d) Commissions or similar payments such as fees paid to sheriffs for process serving? No 33% Yes 38% Yes</p> <p><i>Complexity: 100 if variable compensation is paid in your system, otherwise 0.</i></p>	100	100	93
65%	<p>If yes, is all, some or none of it included in pensionable earnings?</p> <p>a) Bonuses? All 26% All 19% All</p> <p>b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance? Some 16% All 18% All</p> <p>c) Overtime pay? All 79% All 52% All</p> <p>d) Commissions or similar payments such as fees paid to sheriffs for process serving? n/a 41% All 38% All</p> <p><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></p>	100	80	76
15%	<p>Q176 When determining a member's pensionable earnings does a cap on salary increases apply? No 53% Yes 48% Yes</p> <p><i>Complexity: 100 if yes, 0 if no</i></p>	0	53	48
100%	Weighted Average	85	80	75

I. Service Credit Rules Complexity



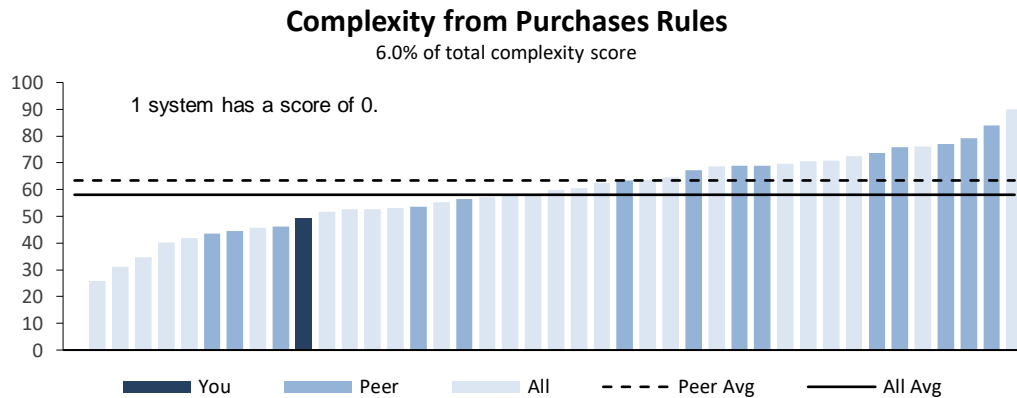
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
30%	Q157 How many different definitions do you have for a "full year" of service credit? <i>Complexity: 0 if none, otherwise $12.4 + 17.9 \times \ln(\text{number of 'full year' service credit definitions})$. i.e., 1 = 12.4, 2 = 24.9, 4 = 37.3, 8 = 49.7, etc.</i>	2	4	7
		25	34	31
30%	Q158 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 $16.1 + 23.2 \times \ln(\text{number of payroll years})$. i.e., 1 = 16.1, 2 = 32.2, 4 = 48.2, 8 = 64.3, etc.</i>	Yes 2	33% Yes 4	29% Yes 6
		32	14	13
5%	Q159 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 $23.8 + 34.3 \times \ln(\text{number of vesting periods})$. i.e., 1 = 23.8, 2 = 47.5, 4 = 71.3, 8 = 95.0, etc.</i>	1	3	2
		24	50	42
30%	Q160 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>	Yes 100	93% Yes 93	74% Yes 74
5%	Q161 Are you sometimes asked by employers to determine the eligibility of members? <i>Complexity: 100 if yes, otherwise 0.</i>	Yes 100	93% Yes 93	88% Yes 88
100%	Weighted Average	53	50	42

J. Divorce Rules Complexity



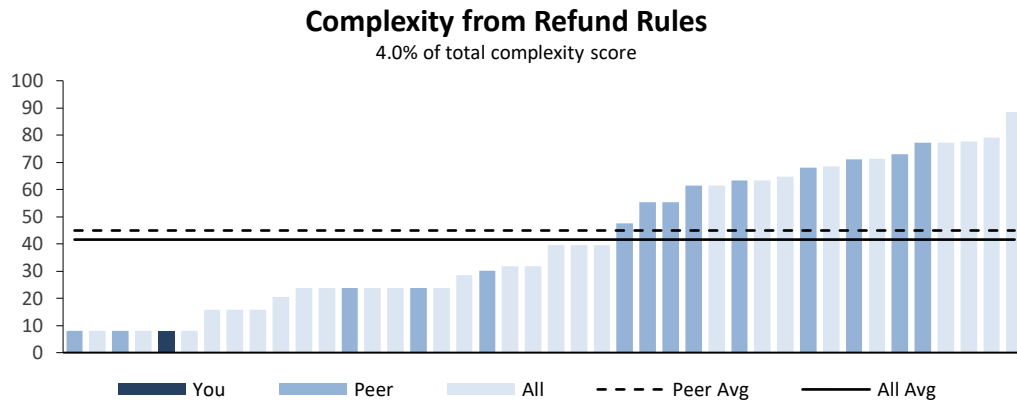
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
100%	<p>Q188 Choose the statement that best describes how divorce settlements for active members (or divorce decrees or QDROS, or QILDROS, or Division of Benefit Orders, etc.) impact your system. If you have different rules for different 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>	No	13% Yes	12% Yes
		No	0% Yes	0% Yes
		No	60% Yes	50% Yes
		Yes	40% Yes	31% Yes
		No	13% Yes	17% Yes
100%	<i>Complexity: 100 if yes to d, 55 if yes to c or e, 5 if yes to b, otherwise 0.</i>	100	69	64
100%	Weighted Average	100	69	64

K. Purchase Rules Complexity



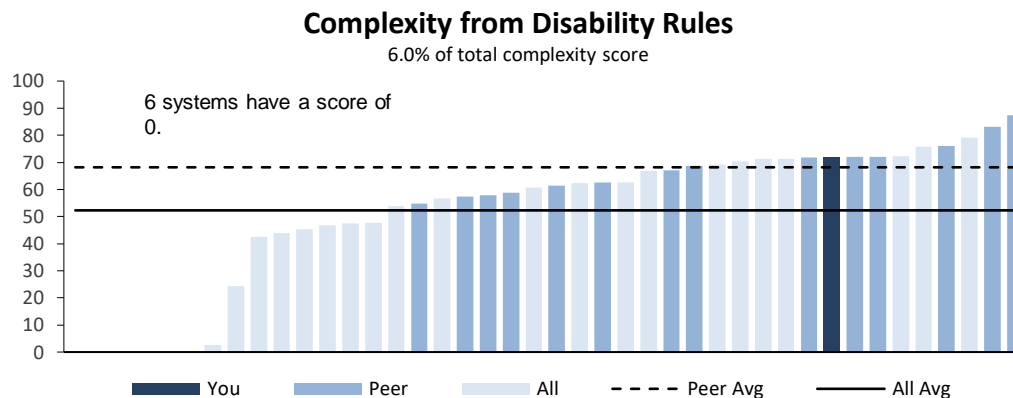
Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
25%	<p>Q162 Indicate each of the payment methods you permit for service credit purchases and upgrades:</p> <p>a) Rollover from tax qualified plans such as 401(a) or 401(k) or Conduit IRA or KEOGH in the US; or RRSP plans in Canada?</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>60% Yes</p> <p>60% Yes</p> <p>68</p>	<p>100% Yes</p> <p>98% Yes</p> <p>66% Yes</p> <p>60% Yes</p> <p>69</p>
25%	<p>Q163 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 $14.1 + 20.3 \times \ln(\text{number of service credit purchase categories})$. i.e., 1 = 14.1, 2 = 28.1, 4 = 42.2, 8 = 56.3, etc.</i></p>	6	14	13
25%	<p>Q164 How many different service credit purchase calculation formula or methodologies do you have?</p> <p><i>Complexity: 0 if none, otherwise $18.1 + 26.1 \times \ln(\text{number of service credit purchase formulas})$. i.e., 1 = 18.1, 2 = 36.2, 4 = 54.3, 8 = 72.4, etc.</i></p>	9	8	6
25%	<p>Q165 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>13% Yes</p> <p>67% Yes</p> <p>20% Yes</p> <p>53</p>	<p>38% Yes</p> <p>51% Yes</p> <p>18% Yes</p> <p>42</p>
100%	Weighted Average	49	63	58

L. Refund Rules Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	Q166 Do you pay a one-time death payment when a member, retiree or the retiree's beneficiary dies (separate from the survivor pension)?	No	60% Yes	60% Yes
	a) If yes, how many different one-time death payment rule sets do you have? [i.e., \$5,000, \$2,000 etc.]	n/a	4	4
67%	<i>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.</i>	0	40	38
	Q167 How many different refund formulas do you have?	1	3	3
33%	<i>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.</i>	24	55	49
100%	Weighted Average	8	45	42

M. Disability Rules Complexity



Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
20%	<p>Q29 Do you administer: a) Long-term disability/ disability pensions? <i>Complexity: 100 if you administer, otherwise 0.</i></p>	Yes 100	100% Yes 100	83% Yes 83
10%	<p>Q173 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 $13.3 + 19.2 \times \ln(\text{number of long-term disability/disability pension rule sets})$. i.e., 1 = 13.3, 2 = 26.6, 4 = 39.9, 8 = 53.1, etc.</i></p>	7 51	11 43	7 31
5%	<p>Q29 Do you administer: b) Short-term disability?</p> <p>Q173 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 $19.8 + 28.5 \times \ln(\text{number of short-term disability rule sets})$. i.e., 1 = 19.8, 2 = 39.5, 4 = 59.3, 8 = 79.0, etc.</i></p>	Yes 2 40	20% Yes 2 8	10% Yes 1 4
10%	<p>Q31 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 60% Yes 60	100% Yes 51% Yes 43

M. Disability Rules Complexity

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Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
10%	<p>Q135 b) Check income of disabled members after they have started receiving disability payments? <i>Complexity: 100 if yes, otherwise 0.</i></p>	Yes 100	87% Yes 87	66% Yes 60
10%	<p>Q169 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>	No 0	20% Yes 7% Yes 17	17% Yes 6% Yes 14
15%	<p>Q170 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	94% Yes 81
10%	<p>Q171 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>	No Yes No 100	47% Yes 27% Yes 27% Yes 13% Yes 82	58% Yes 19% Yes 29% Yes 12% Yes 65

M. Disability Rules Complexity

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Weight	Relevant Complexity Questions and Scoring	You	Peer Avg	All Avg
	<p>Q172 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>	No	60% Yes	57% Yes
		No	20% Yes	29% Yes
		Yes	60% 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>	100	20	7
	<p>Q174 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	53% Yes	33% Yes
		Yes	67% Yes	49% Yes
		No	20% Yes	9% Yes
		Yes	27% Yes	11% Yes
		Yes	40% Yes	20% Yes
		Yes	33% Yes	17% Yes
		Yes	67% Yes	51% Yes
		Yes	33% Yes	20% Yes
5%	<p><i>Complexity: 0 if none, otherwise $25.0 + 36.1 \times \ln(\text{number of disability coordination categories})$. i.e., 1 = 25.0, 2 = 50.0, 4 = 75.0, 8 = 100.0, etc.</i></p>	7	3	2
		95	58	33
100%	Weighted Average	72	68	52

9

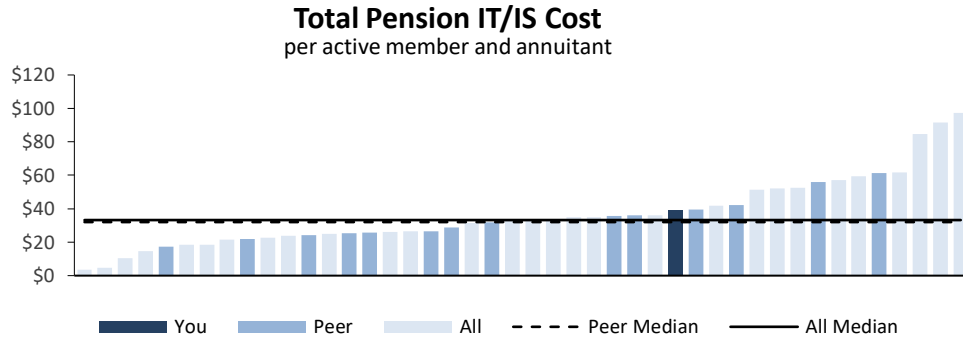
IT and Major Projects

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

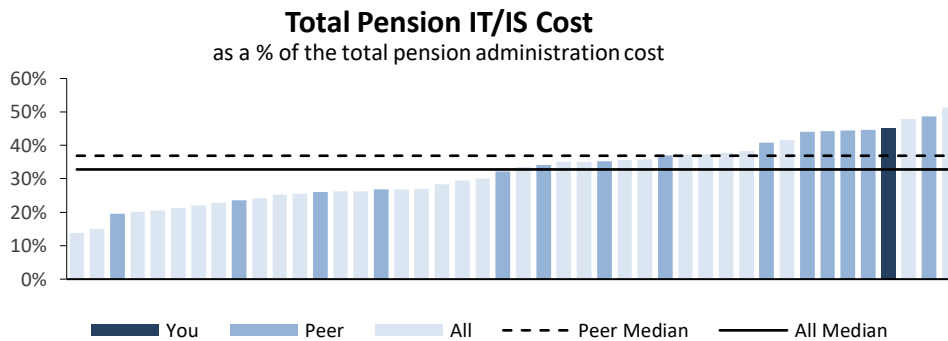
- Total IT/IS costs and trends
- Total major project costs and trends
- Indicators of CRM (Customer Relationship Management) capability
- Attributions of IT/IS and Major Projects to the other administration activities

IT/IS costs

Your IT/IS cost was \$39.11 per active member and annuitant. This was above the peer median of \$32.03.



Your IT/IS cost as a percent of total pension administration cost was 45%. This was above the peer median of 37%.

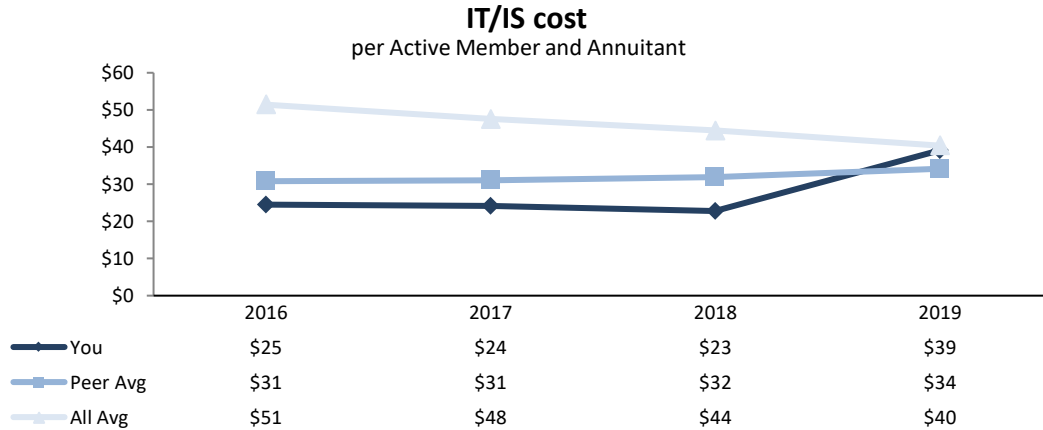


Activity	IT/IS Cost by Category								
	Cost in \$000s	Cost per Active Member and Annuitant					Cost as a % of Total IT/IS Cost		
		You	Peer Median	Peer Avg	All Median	All Avg	You	Peer Avg	All Avg
5c. Amortization of IT Major Projects	2,864	6.13	0.42	2.28	0.00	2.89	14%	6%	8%
5d. IT Major Projects (if you don't capitalize)	0	0.00	2.05	3.84	1.54	4.90	0%	10%	13%
6a. IT Strategy, Database Management and Applications (excl. major projects)	12,457	26.68	20.89	19.50	18.52	20.24	60%	53%	53%
6b. IT Desktop, Networks, Telecom	<u>2,941</u>	<u>6.30</u>	<u>9.82</u>	<u>8.53</u>	<u>7.89</u>	<u>8.69</u>	<u>14%</u>	<u>23%</u>	<u>23%</u>
Total Pension IT/IS cost (excludes below)	18,261	39.11	32.03	34.16	33.24	36.72	88%	92%	97%
IT/IS Attributions to: ¹									
1f. Healthcare Administration	1,964	4.20	0.85	1.70	0.00	0.76	9%	5%	2%
1g. Optional and Third Party Administered Benefits	605	1.30	0.64	1.22	0.00	0.50	3%	3%	1%
Total Administration IT/IS cost	20,830	44.61	32.11	37.07	33.24	37.98	100%	100%	100%

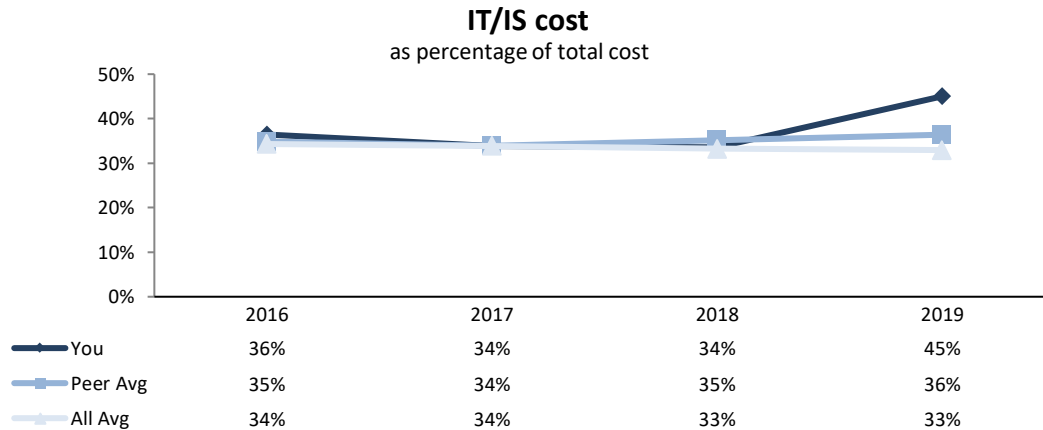
1. Attributions of total administration IT/IS to non-pension activities 1f and 1g includes: (i) pro-rata share of Major Project attribution (5a - 5d) weighted by activity 5c and 5d's contribution to total Major Project cost; (ii) total attribution of activity 6a to 1f and 1g; (iii) pro-rata share of 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 -7.7%. Your growth rate over the same period is 16.8% per annum.



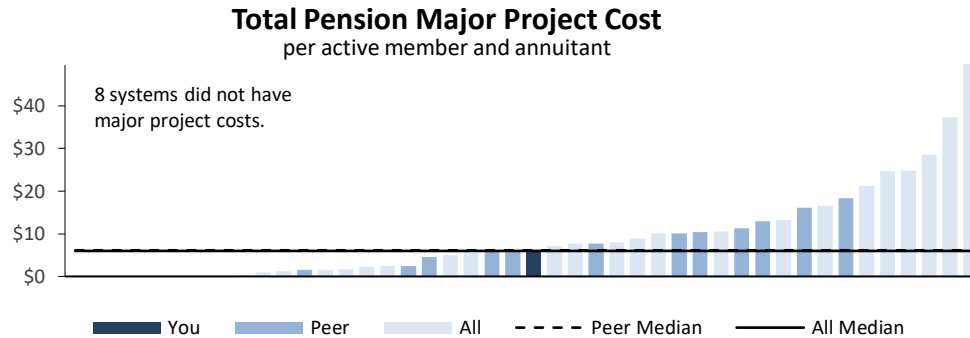
IT/IS cost as a percentage of total cost of your peers that have participated for 4 consecutive years has grown at a compound annual rate of 1.5% between 2016 and 2019. The all participant average is -1.3%. Your growth rate over the same period is 7.3% per annum.



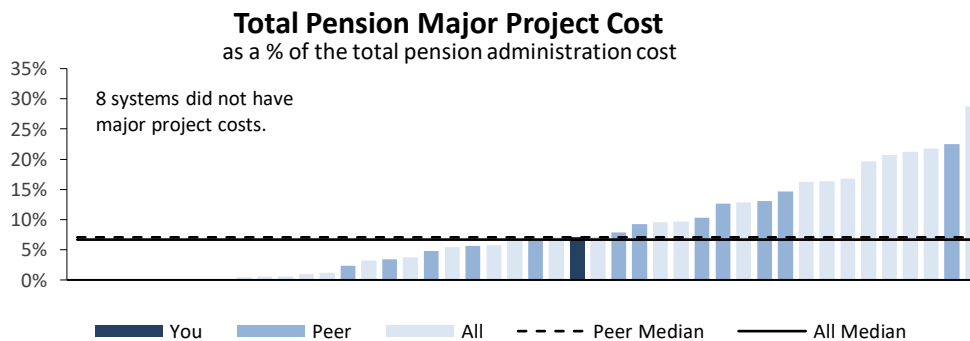
Trend analysis is based on systems that have provided 8 consecutive years of data.

Major project costs

Your major project cost was \$6.13 per active member and annuitant. This was equal to the peer median.



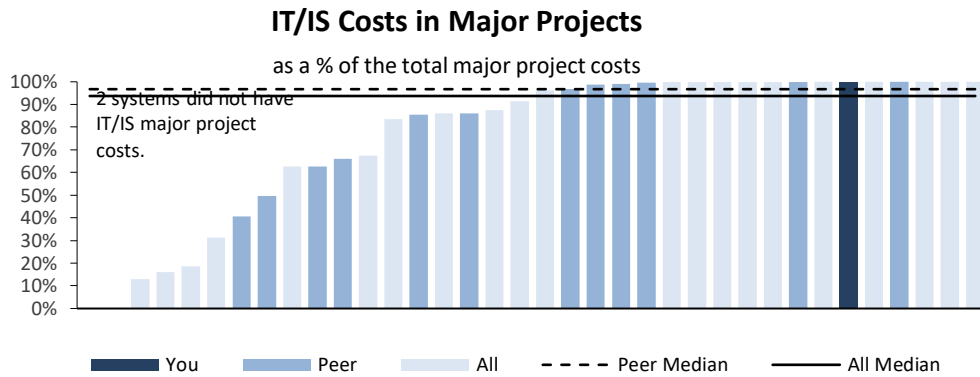
Your major project cost as a percent of total cost was 7%. This was equal to the peer median.



Major Project Cost by Category									
Activity	Cost	Cost per Active Member and Annuitant					Cost as a % of Total Major Project Cost		
	in\$000	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	0.21	0%	0%	2%
5b. Non-IT Major Projects (if you don't capitalize)	0	0.00	0.04	1.42	0.00	1.61	0%	17%	16%
5c. Amortization of IT Major Projects	2,864	6.13	0.42	2.28	0.00	2.95	88%	28%	30%
5d. IT Major Projects (if you don't capitalize)	0	0.00	2.05	3.84	1.54	4.90	0%	47%	50%
Total Pension Major Project cost (excludes below)	2,864	6.13	6.13	7.55	5.98	9.61	88%	93%	98%
Major Project Attributions to:									
1f. Healthcare Administration	308	0.66	0.00	0.28	0.00	0.12	9%	3%	1%
1g. Optional and Third Party Administered Benefits	95	0.20	0.01	0.33	0.00	0.12	3%	4%	1%
Total Administration Major Project cost	3,267	7.00	7.00	8.16	6.49	9.83	100%	100%	100%

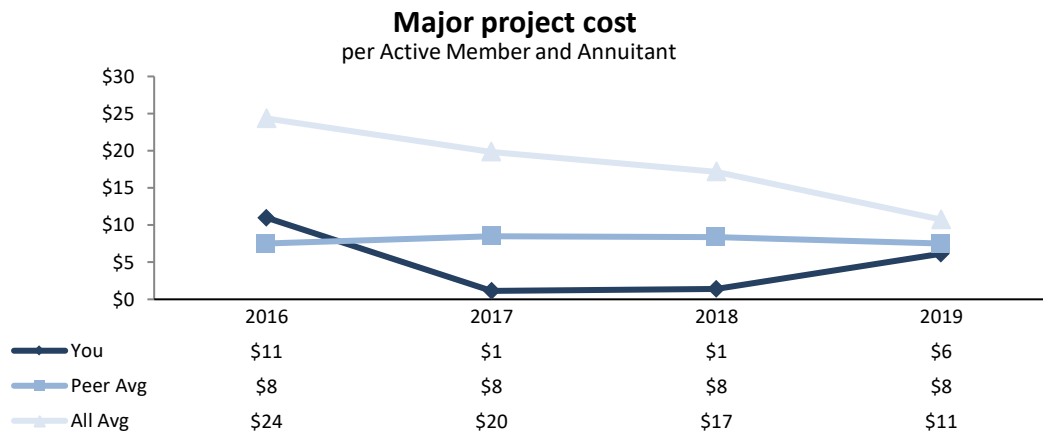
IT/IS cost included in major project costs

Your IT/IS major project costs as a percent of total major project costs was 100%. This was above the peer median of 97%.

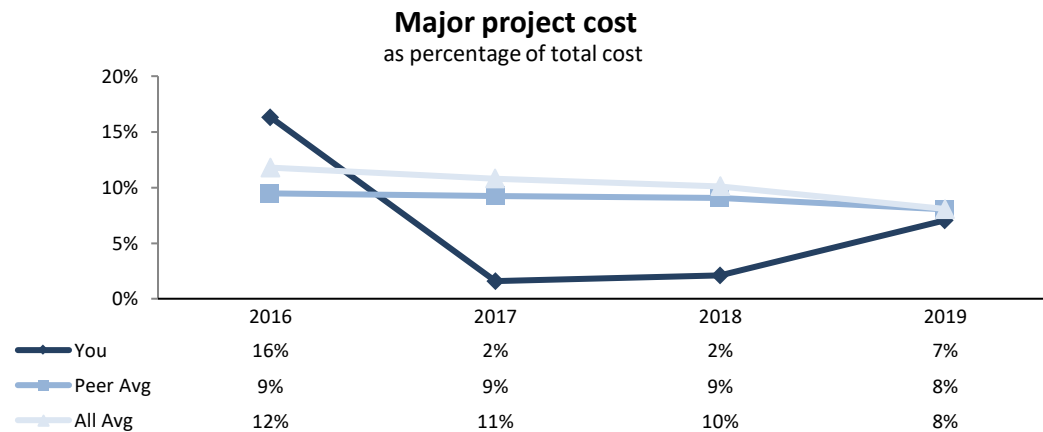


Major project cost trend

Major project cost per member for your peers that have participated for 4 consecutive years has grown at a compound annual rate of 0.2% between 2016 and 2019. The all participant average is -23.9%. Your growth rate over the same period is -17.7% 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 -5.3% between 2016 and 2019. The all participant average is -11.9%. Your growth rate over the same period is -24.4% per annum.



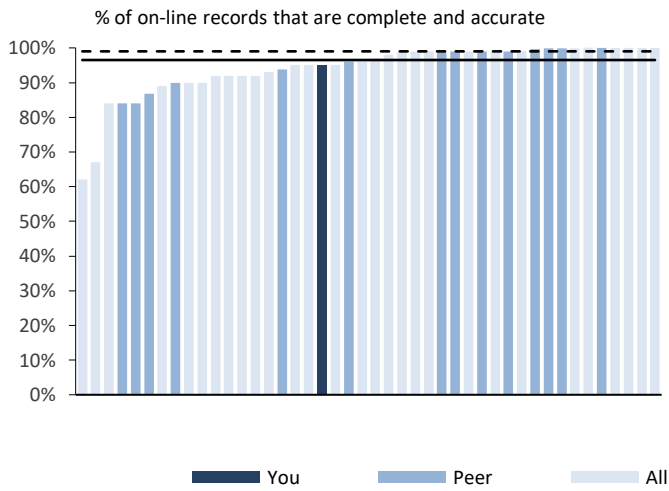
Trend analysis is based on systems that have provided 8 consecutive years of data.

IT and major project attributions by activity

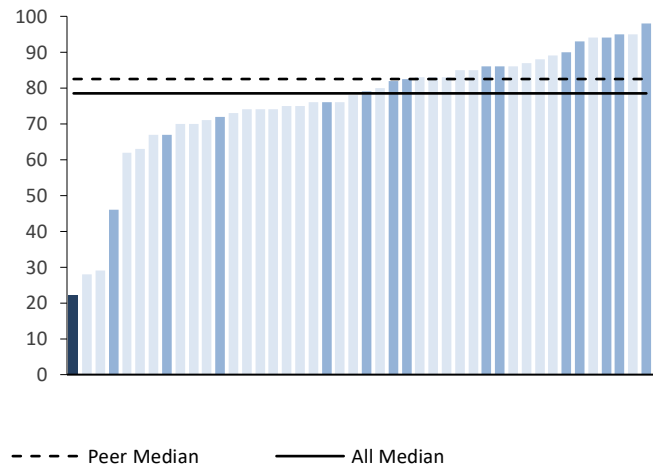
Activity	6a. IT Strategy, Database Management and Applications (excl. major projects)						Total Major Projects (5a. through 5d.)					
	\$s per Active Member and Annuitant			As a % of total			\$s per Active Member and Annuitant			As a % of total		
	Peer	All		Peer	All		Peer	All		Peer	All	
	You	Avg	Avg	You	Avg	Avg	You	Avg	Avg	You	Avg	Avg
1. Member Transactions												
a. Pension Payments	1.64	1.09	1.28	6%	6%	6%	0.38	0.74	0.88	6%	9%	8%
b. Pension Inceptions	2.27	2.05	2.23	8%	11%	12%	0.52	1.28	1.24	8%	15%	13%
c. Refunds, Withdrawals, and Transfers-	0.57	0.83	1.26	2%	5%	6%	0.13	0.23	0.53	2%	3%	5%
d. Purchases and Transfers-in	0.23	0.59	1.43	1%	4%	6%	0.05	0.34	0.93	1%	4%	6%
e. Disability	<u>1.22</u>	<u>0.75</u>	<u>0.59</u>	<u>5%</u>	<u>4%</u>	<u>3%</u>	<u>0.28</u>	<u>0.27</u>	<u>0.18</u>	<u>5%</u>	<u>4%</u>	<u>3%</u>
	5.92	5.32	6.79	22%	29%	33%	1.36	2.86	3.75	22%	35%	35%
2. Member Communication												
a. Call Center	5.16	3.97	2.98	19%	18%	15%	1.19	1.20	1.21	19%	16%	14%
b. Mail Room, Imaging	1.63	0.93	1.00	6%	5%	5%	0.38	0.30	0.41	6%	5%	5%
c. 1-on-1 Counseling	1.45	0.92	0.84	5%	4%	4%	0.33	0.29	0.31	5%	4%	4%
d. Member Presentations	0.91	0.74	0.53	3%	3%	3%	0.21	0.19	0.20	3%	3%	2%
e. Written Pension Estimates	1.89	0.72	0.71	7%	4%	4%	0.43	0.19	0.40	7%	3%	4%
f. Mass Communication	<u>1.32</u>	<u>1.12</u>	<u>1.00</u>	<u>5%</u>	<u>6%</u>	<u>5%</u>	<u>0.30</u>	<u>0.29</u>	<u>0.48</u>	<u>5%</u>	<u>4%</u>	<u>5%</u>
	12.35	8.40	7.06	46%	41%	36%	2.84	2.46	3.01	46%	35%	34%
3. Collections and Data Maintenance												
a. Data and Money from Employers	1.71	2.00	1.91	6%	10%	10%	0.39	1.11	0.88	6%	14%	11%
b. Service to Employers	2.89	1.05	1.03	11%	6%	5%	0.66	0.48	0.51	11%	6%	5%
c. Data Not from Employers	<u>1.02</u>	<u>0.74</u>	<u>0.76</u>	<u>4%</u>	<u>4%</u>	<u>4%</u>	<u>0.23</u>	<u>0.23</u>	<u>0.33</u>	<u>4%</u>	<u>3%</u>	<u>3%</u>
	5.62	3.79	3.71	21%	20%	18%	1.29	1.81	1.72	21%	23%	20%
4. Governance and Financial Control												
a. Financial Administration and Control	1.76	1.14	1.43	7%	5%	7%	0.41	0.25	0.55	7%	4%	6%
b. Board, Strategy, Policy	1.22	0.61	0.92	5%	3%	4%	0.28	0.14	0.42	5%	2%	4%
c. Government and Public Relations	<u>0.19</u>	<u>0.43</u>	<u>0.41</u>	<u>1%</u>	<u>2%</u>	<u>2%</u>	<u>0.04</u>	<u>0.05</u>	<u>0.16</u>	<u>1%</u>	<u>1%</u>	<u>2%</u>
	3.17	2.18	2.77	12%	10%	13%	0.73	0.44	1.13	12%	7%	11%
Total Pension Administration	27.07	19.69	20.32	100%	100%	100%	6.22	7.57	9.62	100%	100%	100%

Key measures of CRM/IT capability

On-Line Records

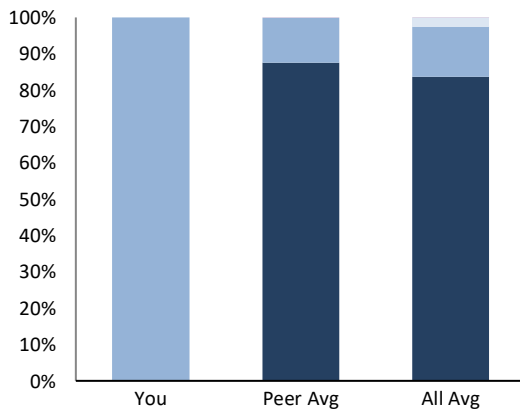


Member Website Capability Score



Active Member Data

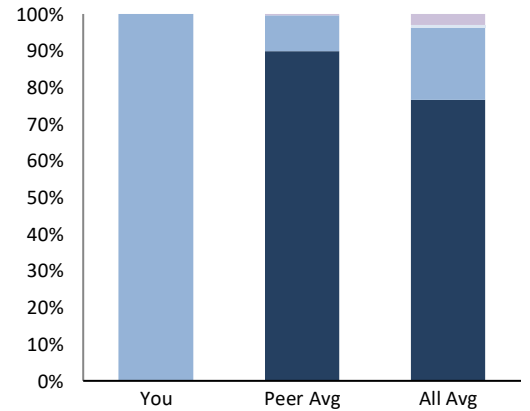
% by data format



- Paper
- Computer-readable
- Mostly electronic
- 100% electronic

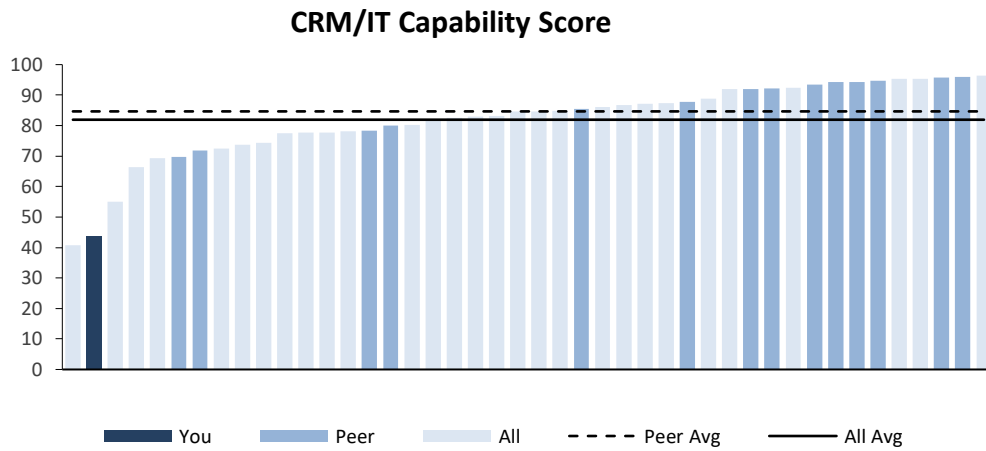
Collection Points

% by data format



- Paper
- Computer-readable
- Mostly electronic
- 100% electronic

Your CRM/IT Capability score was 44 out of 100. This was below 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>			
15%	<p>Q44 When a member calls in, do you have immediate computer access to the following member data:</p> <p>a) Record of the member's previous calls to the system?</p> <p>b) Copies of recent correspondence online?</p> <p>c) Knowledge based on-line help system available for use by the service representative?</p> <p><i>Score: 100 if all available, otherwise 33.3 for each yes</i></p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>100</p>	<p>80% Yes</p> <p>100% Yes</p> <p>93% Yes</p> <p>91</p>	<p>80% Yes</p> <p>98% Yes</p> <p>86% Yes</p> <p>88</p>
4%	<p>Q44 When a member calls in, do you have immediate computer access to the following member data:</p> <p>d) Most recent member statement?</p> <p>e) Beneficiary information?</p> <p><i>Score: 100 if all available, otherwise 50 for each yes</i></p>	<p>Yes</p> <p>Yes</p> <p>100</p>	<p>100% Yes</p> <p>100% Yes</p> <p>100</p>	<p>100% Yes</p> <p>100% Yes</p> <p>100</p>

CRM/IT capability score

page 2 of 3

Weight	Relevant Questions and Scoring	You	Peer Avg	All Avg
10%	<p>Q46 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'.]</p> <p>a) Estimates of the member's pension at retirement?</p> <p>a1) Can you easily model and provide alternate annuity payment scenarios? [i.e., joint and 50% survivor, joint and 70% survivor, etc.]</p> <p>a2) Is the estimate based on an interactive benefit calculator linked to the member's actual account data?</p> <p><i>Score: 20 if yes to a1, 80 if yes to a2, otherwise 0</i></p>	No n/a n/a 0	73% Yes 73% Yes 73% Yes 73	70% Yes 71% Yes 74% Yes 70
6%	<p>Q46 b) Refund or transfer value assuming the member exited employment</p> <p>c) Pensionable salary?</p> <p>d) Service credit history including gaps?</p> <p><i>Score: 100 if all available, otherwise 33.3 for each yes</i></p>	Yes Yes No 67	93% Yes 93% Yes 87% Yes 91	84% Yes 93% Yes 91% Yes 88
5%	<p>Q49 Do you have and use tools to help you project call volumes?</p> <p><i>Score: 100 if yes, otherwise 0</i></p>	No 0	93% Yes 93	89% Yes 89
5%	<p>Q35 c) Incoming calls satisfied by self-serve options, if any?</p> <p><i>Score: 100 if yes, otherwise 0</i></p>	No 0	60% Yes 60	41% Yes 41
	<p><u>Document Imaging</u></p>			
5%	<p>Q54 Do you use imaging technology?</p> <p>a) Do you keep images of ALL incoming member correspondence and submitted forms?</p> <p>c) Have all historical documents also been imaged?</p> <p><i>Score: 60 if you use imaging, 20 if you keep images of all incoming correspondence and forms, 20 if all historical documents are imaged</i></p>	Yes Yes Yes 100	100% Yes 100% Yes 80% Yes 96	100% Yes 98% Yes 77% Yes 95
	<p><u>Data Collection</u></p>			
5%	<p>Q104 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?</p> <p>a) 100% electronic</p> <p>b) Mostly electronic</p> <p>c) Computer-readable</p> <p>d) Paper</p> <p><i>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</i></p>	0% 100% 0% 0%	88% 12% 0% 0%	84% 14% 2% 0%
		90	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>			
5%	Q106 What % of your active and inactive member on-line records are complete and accurate? <i>Score: 100 X % of online records that are complete and accurate</i>	95% 95	95% 95	94% 94
	<u>Diagnostic Software</u>			
5%	Q108 Do you have a diagnostic software system for detecting and correcting contribution errors? <i>Score: 100 if yes, otherwise 0</i>	No 0	93% Yes 93	86% Yes 86
	<u>Integration</u>			
5%	Q109 When you get an address change, how many systems do you need to update? <i>Score: 100 if 1, otherwise 0</i>	7 0	2 80	1 91
	<u>Website</u>			
30%	Member website capability score [Refer to section 7 Service Levels: Mass communication - website for details.]	22	78	76
100%	Total CRM/ IT Capability Score - Average	44	85	82
	Total CRM/ IT Capability Score- Median	44	92	85

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

Wisconsin DETF

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)
Total members						
a. Members at end of fiscal year 2018	257,413	172,089	203,300	257,285	167,191	197,647
b. Members at end of fiscal year 2019	257,911	174,922	209,059	257,413	172,089	203,300
Increase/-decrease to be explained	498	2,833	5,759	128	4,898	5,653
Decreases						
c. Full withdrawals/refunds/commuted value payments	2,200	6,298		2,239	5,861	
d. Transfers-out to external pension systems	0	0		0	0	
e. Annuity inceptions: service retirement	5,031	4,704		4,992	4,599	
f. Annuity inceptions: disability retirement	173	57		68	30	
g. Active members leaving to inactive status	17,384			18,801		
h. Re-hired inactives and annuitants (if annuity stops)		3,238	78		3,162	71
i. Deaths	97	254	4,167	107	251	3,996
j. Non-death stops of pensions (i.e., dependent no longer eligible)			31			11
k. Other decreases.	0	0	0	0	0	0
Increases						
l. New active members	22,067			23,102		
m. Annuity inceptions: survivor, partner, ex-partner,			70			42
n. Annuity inceptions: service retirement			9,735			9,591
o. Annuity inceptions: disability retirement			230			98
p. Active members leaving to inactive status		17,384			18,801	
q. Re-hired inactives and annuitants (if annuity stops)	3,316			3,233		
r. Other increases.	0	0	0	0	0	0
Explained increases/-decreases	498	2,833	5,759	128	4,898	5,653
Unexplained increases/-decreases	0	0	0	0	0	0

Appendix A - Survey responses: Cost by activity

Wisconsin DETF

	Your Response		
	2019	2018	
6. Complete the table below:			
a. Total administrative expenses per your financial statements (CAFR in the U.S.)	44,201.8	35,943.3	(\$000s)
Less (if included in administrative expenses):			
b. Investment administration costs	0.0	0.0	(\$000s)
Plus, if not included in administrative expenses:			
c. Amortization and depreciation of administrative assets	3,266.6	736.6	(\$000s)
d. Actuarial fees and costs	0.0	0.0	(\$000s)
e. Other costs and professional fees relating to pension administration	0.0	0.0	(\$000s)
f. Total benefit administration costs	47,468.4	36,679.9	(\$000s)

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

Wisconsin DETF

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)
1. Member Transactions				
a. Pension Payments	10.5	906.8	6.6	913.4
b. Pension Inceptions	14.5	1,132.0	0.7	1,132.7
c. Refunds, Withdrawals, and Transfers-out	3.6	301.5	2.8	304.3
d. Purchases and Transfers-in	1.5	129.1	1.2	130.3
e. Disability	7.8	615.2	4.7	619.8
f. Healthcare Administration	16.4	1,781.8	789.7	2,571.5
g. Optional and Third Party Administered Benefits	5.1	458.3	68.1	526.4
2. Member Communication				
a. Call Center	32.9	2,538.9	18.9	2,557.9
b. Mail Room, Imaging	10.4	885.3	307.5	1,192.9
c. 1-on-1 Counseling	9.2	747.0	8.1	755.1
d. Member Presentations	5.8	480.0	8.2	488.2
e. Written Pension Estimates	12.1	974.4	10.6	984.9
f. Mass Communication	8.5	795.9	716.6	1,512.5
3. Collections and Data Maintenance				
a. Data and Money from Employers	10.9	869.7	6.4	876.1
b. Service to Employers	18.5	1,446.7	83.1	1,529.8
c. Data Not from Employers	6.5	539.1	4.5	543.6
4. Governance and Financial Control				
a. Financial Administration and Control	11.3	1,040.8	71.2	1,112.0
b. Board, Strategy, Policy	7.8	1,156.0	177.0	1,333.0
c. Government and Public Relations	1.2	189.0	32.1	221.1
5. Major Projects				
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	3,266.6	3,266.6
d. IT Major Projects (if you don't capitalize)	0.0	0.0	0.0	0.0
6. Information Technology				
a. IT Strategy, Database Management and Applications (excl. major projects)	64.7	8,320.7	5,888.4	14,209.0
b. IT Desktop, Networks, Telecom	15.9	2,063.5	1,291.0	3,354.5
7. Support Services and Other				
a. Building and Utilities	1.7	142.1	1,959.0	2,101.1
b. Human Resources	10.3	907.9	311.2	1,219.2
c. Actuarial	1.2	113.8	281.7	395.5
d. Legal and Rule Interpretation	11.8	1,403.1	134.7	1,537.9
e. Internal and External Audit	4.1	438.4	398.5	836.9
f. Pay-as-you-go Benefits for Retired Staff	n/a	0.0	n/a	0.0
g. Other Support Services	10.2	931.3	311.2	1,242.5
Total Administration (includes 1f, 1g)	314.2	31,308.3	16,160.1	47,468.4
FTE relating to major projects capitalized, if any, during this fiscal year.	53.7			
Total Administration FTE	367.9			

Appendix A - Survey responses: Cost and FTE by activity - 2018

Wisconsin DETF

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)
1. Member Transactions				
a. Pension Payments	9.1	764.8	6.9	771.7
b. Pension Inceptions	13.1	975.1	0.1	975.2
c. Refunds, Withdrawals, and Transfers-out	3.4	274.2	3.0	277.2
d. Purchases and Transfers-in	1.4	118.3	1.3	119.6
e. Disability	7.3	553.3	1.1	554.3
f. Healthcare Administration	13.0	1,302.5	1,304.1	2,606.6
g. Optional and Third Party Administered Benefits	5.5	477.4	97.2	574.6
2. Member Communication				
a. Call Center	34.7	2,489.2	12.2	2,501.4
b. Mail Room, Imaging	12.0	963.9	392.9	1,356.8
c. 1-on-1 Counseling	8.5	690.9	7.8	698.7
d. Member Presentations	7.9	682.9	6.1	689.0
e. Written Pension Estimates	11.5	931.2	10.6	941.7
f. Mass Communication	9.2	870.6	241.3	1,111.9
3. Collections and Data Maintenance				
a. Data and Money from Employers	10.6	782.4	4.1	786.6
b. Service to Employers	19.2	1,397.2	56.6	1,453.7
c. Data Not from Employers	5.5	438.1	3.6	441.7
4. Governance and Financial Control				
a. Financial Administration and Control	8.5	788.8	12.6	801.5
b. Board, Strategy, Policy	8.3	1,245.6	100.8	1,346.4
c. Government and Public Relations	1.4	185.6	36.0	221.6
5. Major Projects				
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	736.6	736.6
d. IT Major Projects (if you don't capitalize)	0.0	0.0	0.0	0.0
6. Information Technology				
a. IT Strategy, Database Management and Applications (excl. major projects)	42.5	5,272.1	3,083.2	8,355.3
b. IT Desktop, Networks, Telecom	11.7	1,355.6	1,308.1	2,663.8
7. Support Services and Other				
a. Building and Utilities	2.6	265.8	1,797.7	2,063.5
b. Human Resources	7.9	635.5	285.0	920.5
c. Actuarial	0.1	6.5	252.7	259.2
d. Legal and Rule Interpretation	10.0	985.4	58.0	1,043.4
e. Internal and External Audit	3.8	389.5	277.9	667.4
f. Pay-as-you-go Benefits for Retired Staff	n/a	0.0	n/a	0.0
g. Other Support Services	14.2	1,305.7	434.4	1,740.2
Total Administration (includes 1f, 1g)	282.5	26,147.9	10,532.0	36,679.9
FTE relating to major projects capitalized, if any, during this fiscal year.	34.3			
Total Administration FTE	316.9			

Appendix A - Survey responses: Service and plan design

Wisconsin DETF

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
Start															
1 Wisconsin Department of Employee Trust Funds															
2 Main survey contact: Timothy Steiner Director of the Bureau of Budget, Contract Administration, and Procurement timothy.steiner@etf.wi.gov 608-261-2915															
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	June												
4 What was the end of fiscal year value of your pension fund assets (in billions)?	\$96.7	\$104.4	\$92.6												
8 What percentage of your total salary and benefits costs relates to benefits?	26.7%	27.3%	27.3%	44.0%	27.3%	25.0%	30.3%	15	52.0%	26.3%	5.0%	27.4%	42		
Service															
Activity 1a - Pension Payments															
10 Do you administer annuity pensions? If no, skip to question 21	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	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	No	0% Yes / 100% No / 0% n/a					15	0% Yes / 100% No / 0% n/a					44
	n/a	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	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")]?	0.5%	0.6%	0.6%	7.0%	1.7%	0.0%	2.4%	15	98.4%	1.0%	0.0%	4.7%	42		
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? b) Can you comply with a member's request not to send them payment advices?	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a					15	89% Yes / 11% No / 0% n/a					44
	Every Time	Every Time	Every Time												
	Amount	Amount	Amount												
	Changes	Changes	Changes	12	6	2	6	13	12	6	1	6	39		
	No	No	No	20% Yes / 67% No / 13% n/a					13	34% Yes / 55% No / 11% n/a					39

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
14 Will you issue a pension payment in a foreign currency if the member requests it? Activity 1b - Pension Inceptions	No	No	No	0% Yes / 100% No / 0% n/a					15	20% Yes / 80% No / 0% n/a					44
15 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"> 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.] When an annuitant or their beneficiary becomes eligible for social security, it often results in a reduction of the gross pension paid. Redesign of the payment option, appeal decisions, high low options shifting to low, etc. 	5,798	8,755	4,104	5,798	446	0	945	15	68,138	461	0	3,840	44		
16 How many formal appeals (non-disability) of pension inceptions did you have?	2	2	1	81	10	0	20	15	165	3	0	17	44		
17 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?	100.0%	99.9%	99.0%	100.0%	97.5%	6.2%	86.7%	15	100.0%	97.9%	6.2%	91.5%	44		
	99.7%	99.9%	99.0%	100.0%	83.9%	15.0%	76.4%	15	100.0%	92.0%	0.0%	74.9%	44		
18 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	Yes	87% Yes / 13% No / 0% n/a					15	77% Yes / 23% No / 0% n/a					44
	100.0%	99.9%	99.9%	100.0%	71.2%	0.5%	68.2%	13	100.0%	54.5%	0.0%	50.6%	34		
	4.0	4.0	5.0	18.0	1.4	0.0	4.2	13	18.0	1.3	0.0	3.0	33		
19 Do you require birth certificates and/or marriage certificates before incepting a pension?	No	No	No	40% Yes / 60% No / 0% n/a					15	61% Yes / 34% No / 5% n/a					42
20 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	No	20% Yes / 53% No / 27% Some / 0% n/a					15	23% Yes / 59% No / 18% Some / 0% n/a					44
21 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.]	5,070	4,250	277	34,418	5,070	0	8,797	13	34,418	5,756	0	8,343	38		

Survey Question	Your Response			Peers 2019					All Participants 2019					
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
22 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)?	24	28	27	120	22	2	29	15	132	25	2	32	42	
a) Are you legislated to have a wait period before you can effect a refund? If yes:	No	No	No	47% Yes / 53% No / 0% n/a				15	36% Yes / 59% No / 5% n/a					42
b) How long is the wait period? (in days)	n/a	n/a	n/a	60	30	10	33	8	120	31	10	49	16	
c) Can the wait period be waived?	n/a	n/a	n/a	20% Yes / 33% No / 47% n/a				8	9% Yes / 27% No / 64% n/a					16
23 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)?	27	29	22	120	7	1	23	13	372	30	1	67	36	
24 Do you require notarization of refund or transfer-out applications? (yes, some, no)	No	No	No	0% Yes / 47% No / 53% Some				15	14% Yes / 52% No / 34% Some					44
a) If some, describe those that require versus those that do not: n/a														
Activity 1d - Purchases and Transfers-in														
25 Number of actual:														
a) Service credit purchases such as for prior refunded service, military service, etc.?	383	390	496	22,418	1,300	31	2,877	15	119,248	1,617	8	7,297	41	
b) Upgrades or 'Top-ups' where members can improve their pensionable salary (but not service credit)?	0	0	0	0	0	0	0	14	448	0	0	14	38	
c) Upgrades where members can pay to upgrade from an older retirement formula to a new retirement formula?	0	0	0	2,852	0	0	206	14	2,852	0	0	176	38	
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.]	0	0	0	930	0	0	158	15	6,600	7	0	396	42	
26 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.]	660	746	795	9,697	2,938	0	3,166	15	120,127	3,315	0	10,294	44	
27 On average, how many business days does it take from the date of first request to provide a written service credit purchase cost?	6	8	7	220	7	1	22	14	220	7	1	20	40	
28 How long does it take on average for you to do individual transfers-in? [Months from request to completion including delays caused by external parties]	2	3	3	4	1	1	1	13	9	2	0	3	32	
Activity 1e - Disability														
29 Do you administer:														
a) Long-term disability/ disability pensions?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	80% Yes / 16% No / 5% n/a					42

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
b) Short-term disability? If you do not administer either short-term or long-term disability, or disability pensions skip to question 35.	Yes	Yes	Yes	20% Yes / 80% No / 0% n/a					15	9% Yes / 86% No / 5% n/a					42
30 Number of:															
a) Applications for disability pensions/ long-term disability?	549	583	751	2,070	372	92	532	15	4,993	150	0	467	41		
b) Members receiving long-term disability or a disability pension?	8,399	8,581	8,708	28,457	7,284	146	8,773	15	56,549	3,417	48	6,889	35		
c) Applications for short-term disability (if you administer)?	1,363	1,330	1,317	2,460	0	0	273	14	2,460	0	0	107	38		
d) Members receiving short-term disability (if you administer)?	1,667	1,668	1,638	2,415	834	0	1,021	4	2,415	464	0	909	5		
e) Independent medical examinations for disability application assessment or reassessment paid for by you, if any?	0	0	0	1,550	35	0	289	15	1,550	7	0	160	41		
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.]	284	266	368	1,247	0	0	139	15	1,247	0	0	53	40		
g) Formal appeals of disability decisions?	39	42	42	263	16	0	36	15	263	1	0	22	43		
h) Recertifications of disabled members? [For example, Arizona SRS requires an annual opinion from a physician to continue on disability.]	395	375	378	3,417	421	0	807	14	3,582	114	0	712	29		
31 Do you cover non-occupational disability? [Some systems only cover disabilities that happen at work.]	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	80% Yes / 0% No / 20% n/a					35
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	No	60% Yes / 40% No / 0% n/a					15	41% Yes / 39% No / 20% n/a					35
b) If yes to 'a' immediately above: Number of occupational disability applications?	n/a	n/a	n/a	777	36	3	118	9	1,632	41	0	231	18		
32 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?	3.0	3.0	3.0	15.0	3.0	1.0	3.1	15	15.0	2.0	0.3	2.9	35		
b) date of receipt of all necessary documentation to complete an application?	0.3	0.3	0.3	8.0	1.0	0.0	1.6	15	8.0	1.0	0.0	1.4	35		
33 Do you have an expedited method for processing disability for a terminally ill member?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	59% Yes / 20% No / 20% n/a					35
34 Do you require notarization of disability applications?	No	No	No	27% Yes / 73% No / 0% Some / 0% n/a					15	23% Yes / 52% No / 5% Some / 20% n/a					35
a) If some, describe those that require versus those that do not: n/a															
Activity 2a - Call Center Volumes															
35 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.)?	171,652	173,755	158,418	437,437	171,032	96,176	214,004	15	722,185	154,180	13,320	176,435	44
b) Outgoing calls from service representatives responding to messages (voice mail, receptionist, etc.) or following-up on previous calls?	5,254	5,982	4,827	49,654	5,254	0	10,282	15	49,654	6,478	0	10,453	44
c) Incoming calls satisfied by self-serve options, if any?	n/a	n/a	n/a	693,458	3,978	0	57,422	15	693,458	0	0	30,626	42
d) Email queries from members?	16,239	14,841	12,089	38,283	18,804	5,269	19,072	15	104,954	14,277	0	20,998	44
Before Reaching a Service Rep													
36 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?	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a				15	18% Yes / 82% No / 0% n/a				44
b) Caller gets pre-recorded 'call another time' message during business hours?	Yes	Yes	No	27% Yes / 73% No / 0% n/a				15	32% Yes / 68% No / 0% n/a				44
c) Voice mail takes a message during business hours?	No	No	No	7% Yes / 93% No / 0% n/a				15	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	Yes	87% Yes / 13% No / 0% n/a				15	70% Yes / 30% No / 0% n/a				44
e) Abandoned calls in a queue or on hold (i.e., caller hangs-up)?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	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	No	7% Yes / 93% No / 0% n/a				15	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	No	7% Yes / 93% No / 0% n/a				15	0% Yes / 100% No / 0% n/a				44
h) Busy signal after navigating an automated attendant menu, or after being transferred by a receptionist?	No	No	No	7% Yes / 93% No / 0% n/a				15	5% Yes / 95% No / 0% n/a				44
i) Call rings unanswered during business hours? If yes: volume				7% Yes / 93% No / 0% n/a				15	0% Yes / 100% No / 0% n/a				44
a) # Busy signal, never enters the system?	6,494	8,610	779	6,494	2,376	0	2,812	4	6,494	1,590	0	1,884	8
b) # Caller gets pre-recorded 'call another time' message during business hours?	2,216	2,876	n/a	60,319	8,067	1,800	22,890	5	85,605	2,092	0	17,526	14
c) # Voice mail takes a message during business hours?	n/a	n/a	n/a	3,972	2,733	1,494	2,733	2	6,385	998	25	1,784	15
d) # Abandoned calls (i.e., caller hangs-up while in a menu)?	15,788	11,494	10,289	93,329	3,331	0	15,205	13	93,329	4,161	0	10,704	31
e) # Abandoned calls (i.e., caller hangs-up while in a queue or on hold)?	14,205	16,740	11,714	108,315	14,205	1,225	22,068	15	108,315	6,404	118	16,643	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	n/a	335	335	335	335	1	335	233	131	233	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	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	n/a	174,982	92,569	10,155	92,569	2	174,982	92,569	10,155	92,569	2
i) # Call rings unanswered during business hours? If volume is unknown, estimate the % of total calls that this outcome represents	n/a	n/a	n/a	181	181	181	181	1	181	181	181	181	1
a) % Busy signal, never enters the system?	n/a	n/a	n/a	1.0%	1.0%	1.0%	1.0%	2	1.0%	1.0%	1.0%	1.0%	2
b) % Caller gets pre-recorded 'call another time' message during business hours?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0.1%	0.1%	0.0%	0.1%	2
c) % Voice mail takes a message during business hours?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	3.0%	1.5%	1.0%	1.8%	4
d) % Abandoned calls (i.e., caller hangs-up while in a menu)?	n/a	n/a	n/a	0.0%	0.0%	0.0%	0.0%	1	6.0%	1.0%	0.0%	2.0%	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	n/a	0	2.0%	1.5%	1.0%	1.5%	2
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	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	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	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	n/a	0	n/a	n/a	n/a	n/a	0
37 Do you have a menu system that callers negotiate before speaking to someone? If yes:	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	86% Yes / 14% No / 0% n/a				44
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.]	2	2	2	4	2	1	2	14	5	1	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)?	40	40	40	218	50	15	71	14	218	43	5	52	38
c) Is the menu system by-passed if a service representative is available?	No	No	No	0% Yes / 93% No / 7% n/a				14	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	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	#
38 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	No	0% Yes / 100% No / 0% n/a				15	7% Yes / 93% No / 0% n/a				44
If yes:													
a) Do you have a queue for the receptionist(s)?	n/a	n/a	n/a	0% Yes / 0% No / 100% n/a				0	5% Yes / 2% No / 93% n/a				3
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	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	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	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	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	n/a	0	2.0%	1.0%	0.0%	1.0%	2
39 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	Yes	100% Yes / 0% No / 0% n/a				15	98% Yes / 2% No / 0% n/a				44
If yes:													
a) Average wait time in seconds in queue for a service representative?	188	207	153	671	143	16	187	15	671	78	3	159	43
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	No	7% Yes / 93% No / 0% n/a				15	11% Yes / 86% No / 2% n/a				43
40 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?	No	No	No	73% Yes / 27% No / 0% n/a				15	52% Yes / 48% No / 0% n/a				44
41 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]	No	No	No	47% Yes / 53% No / 0% n/a				15	36% Yes / 64% No / 0% n/a				44
If yes:													
a) What was the total volume of callbacks?	n/a	n/a	n/a	105,114	9,395	162	24,805	8	109,893	9,395	104	26,338	16
b) Are callbacks made as soon as the caller's turn in the queue comes up or at a later, designated time?	n/a	n/a	n/a	47% Queue/7% Designated Time/47% n/a				8	30% Queue/7% Designated Time/64% n/a				16
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?	n/a	n/a	n/a	1,405	972	167	761	5	1,995	972	100	961	9
c) Does the caller have the option of either leaving his number for callback or choosing to remain on the line?	n/a	n/a	n/a	53% Yes / 0% No / 47% n/a				8	34% Yes / 2% No / 64% n/a				16
d) What is the callback completion rate (i.e., what percentage of callers that chose to be called back, were actually reached)?	n/a	n/a	n/a	98.8%	90.5%	86.7%	92.0%	8	98.8%	90.5%	64.4%	90.6%	16
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	#
42 What was the:													
a) % of callers transferred after first contact? (exclude receptionists)	6.7%	6.5%	6.3%	20.0%	3.0%	0.0%	5.1%	15	28.0%	2.1%	0.0%	5.2%	40
b) % of callers you called back because their needs were not fully satisfied at first contact?	3.1%	3.4%	3.0%	15.4%	2.7%	0.7%	4.2%	14	15.4%	1.9%	0.1%	3.5%	34
c) % of calls satisfied by the first contact?	90.2%	90.1%	90.7%	99.3%	93.5%	64.6%	90.9%	14	99.3%	94.0%	64.6%	91.5%	39
43 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.]	343	337	319	479	341	190	315	15	572	330	145	317	42
b) Average after call work time when service representative is unavailable to take another call?	105	97	105	202	59	5	83	14	232	65	0	92	38
c) Average occupancy %? [time spent handling calls, including after call work, as a percentage of total available time to answer calls.]	79.5%	82.6%	80.4%	88.4%	79.0%	60.1%	77.2%	13	95.0%	79.0%	0.0%	72.4%	35
44 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	Yes	80% Yes / 20% No				15	80% Yes / 20% No				44
b) Copies of recent correspondence online?	Yes	Yes	Yes	100% Yes / 0% No / 0% Some				15	98% Yes / 2% No / 0% Some				44
c) Knowledge based on-line help system available for use by the service representative?	Yes	Yes	Yes	93% Yes / 7% No				15	86% Yes / 14% No				44
d) Most recent member statement?	Yes	Yes	Yes	100% Yes / 0% No				15	100% Yes / 0% No				44
e) Beneficiary information?	Yes	Yes	Yes	100% Yes / 0% No				15	100% Yes / 0% No				44
45 Do your service representatives have real-time access to a workflow system that lets them know the status of open items?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	98% Yes / 2% No / 0% n/a				44
46 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	No	73% Yes / 27% No				15	70% Yes / 30% 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	n/a	73% Yes / 27% No				15	68% Yes / 27% No				42
a2) Is the estimate based on an interactive benefit calculator linked to the member's actual account data?	n/a	n/a	n/a	73% Yes / 27% No				15	70% Yes / 25% No				42
b) Refund or transfer value assuming the member exited employment at the time of the call?	Yes	Yes	Yes	93% Yes / 7% No				15	84% Yes / 16% 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	Yes	93% Yes / 7% No / 0% n/a					15	91% Yes / 7% No / 2% n/a					43
d) Service credit history including gaps?	No	No	No	87% Yes / 13% No / 0% n/a					15	89% Yes / 9% No / 2% n/a					43
e) Cost to purchase service credit?	No	No	No	67% Yes / 33% No / 0% n/a					15	73% Yes / 23% No / 5% n/a					42
f) If you administer a DC plan:															
f1) Current value of the DC account?	n/a	n/a	n/a	47% Yes / 0% No / 53% n/a					7	23% Yes / 0% No / 77% n/a					10
f2) Estimate of the value of the DC account at retirement?	n/a	n/a	n/a	27% Yes / 20% No / 53% n/a					7	16% Yes / 7% No / 77% n/a					10
f3) History of account transactions?	n/a	n/a	n/a	40% Yes / 7% No / 53% n/a					7	20% Yes / 2% No / 77% n/a					10
47 Can members calling in perform the following transactions over the phone:															
a) Change address?	Yes	Yes	Yes	80% Yes / 20% No / 0% n/a					15	77% Yes / 18% No / 5% n/a					42
b) Add or change email address?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a					15	86% Yes / 14% No / 0% n/a					44
c) Change payment instructions? [i.e., bank account]	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a					15	34% Yes / 61% No / 5% n/a					42
d) If you administer a DC plan, switches to investment options?	n/a	n/a	n/a	27% Yes / 20% No / 53% n/a					7	9% Yes / 11% No / 80% n/a					9
Quality and Other															
48 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	Yes	93% Yes / 7% No / 0% n/a					15	84% Yes / 16% No / 0% n/a					44
If yes:															
a) How many calls per agent per month (on average) do you monitor?	3	3	3	17	6	1	6	14	20	4	1	6	37		
b) Are you listening in on a live call or a recording?	Recording	Recording	Recording	47% Recording / 7% Live / 40% Both / 7% n/a					14	30% Recording / 14% Live / 41% Both / 16% n/a					37
49 Do you have and use tools to help you project call volumes?	No	No	No	93% Yes / 7% No					15	89% Yes / 11% No					44
50 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	Yes	100% Yes / 0% No / 0% n/a					15	91% Yes / 9% No / 0% n/a					44
51 How many hours per week is your 'call center' operational?	50.0	50.0	50.0	60.0	45.0	33.0	46.4	15	62.5	45.0	33.0	46.2	44		
52 Can members communicate questions using email?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	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.	1.0	1.0	1.0	3.1	1.0	0.4	1.5	15	5.0	1.0	0.4	1.9	42		
Activity 2b - Mail Room, Imaging															
53 What were your volumes of:															
a) Incoming mail?	163,583	162,524	166,906	431,417	205,670	19,623	172,642	15	888,990	91,534	6,363	145,165	44		
b) Outgoing mail?	1,733,636	1,937,802	1,659,263	3,661,199	1,000,000	35,823	1,203,729	15	3,661,199	325,316	6,350	745,664	44		

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
54 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? Activity 2c - 1-on-1 Member Counseling	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	100% Yes / 0% No / 0% n/a				44
	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	98% Yes / 2% No / 0% n/a				44
	Yes	Yes	Yes	80% Yes / 20% No / 0% n/a				15	77% Yes / 23% No / 0% n/a				44
55 Do you provide 1-on-1 counseling? If you do not offer 1-on-1 counseling skip to question 65.	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	98% Yes / 2% No / 0% n/a				44
56 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)	6,979	8,812	7,939	15,477	3,758	81	5,001	15	37,345	2,295	0	4,902	43
	65	27	7	26,990	2,000	0	4,066	15	59,914	343	0	3,527	44
	0	0	0	3,274	0	0	418	15	9,972	4	0	732	44
	870	699	157	11,092	196	0	1,096	15	104,078	0	0	3,517	44
	7,914	9,538	8,103	56,833	7,013	385	10,581	15	104,078	5,020	0	12,566	44
57 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	Yes	93% Yes / 7% No / 0% n/a				15	95% Yes / 2% No / 2% n/a				43
58 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	No	No	No	7% Yes / 93% No / 0% n/a				15	7% Yes / 91% No / 2% n/a				43
	No	No	No	7% Yes / 93% No / 0% n/a				15	5% Yes / 93% No / 2% n/a				43
	No	No	No	0% Yes / 100% No / 0% n/a				15	0% Yes / 98% No / 2% n/a				43
	No	No	No	7% Yes / 93% No / 0% n/a				15	2% Yes / 95% No / 2% n/a				43
59 Do you provide counseling for walk-in traffic?	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a				15	86% Yes / 11% 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	#	
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)	5	1	7	35	5	0	8	13	35	5	0	7	38	
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?	1.0%	0.0%	1.0%	99.0%	0.0%	0.0%	8.0%	13	99.0%	0.0%	0.0%	2.9%	38	
60 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	Yes	93% Yes / 7% No / 0% n/a				15	89% Yes / 9% No / 2% n/a				43	
	25	23	18	25	2	0	5	14	48	1	0	5	39	
61 Do you offer 1-on-1 counseling sessions after normal working hours, such as evenings and/or weekends?	No	No	No	67% Yes / 33% No / 0% n/a				15	50% Yes / 48% No / 2% n/a				43	
62 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 staffed on a full-time basis and located in cities different from your main office? b) Member's place of employment? c) Intermittent locations (such as hotels, offices) separate from the member's place of employment?	0	0	0	6	1	0	1	13	7	1	0	1	22	
	0	0	0	203	2	0	45	11	9,842	11	0	415	30	
	33	29	30	375	46	0	68	12	375	22	0	43	30	
63 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?	No	No	No	73% Yes / 13% No / 13% n/a				13	73% Yes / 14% No / 14% n/a				38	
	Yes	Yes	No	93% Yes / 0% No / 7% n/a				14	75% Yes / 14% No / 11% n/a				39	
	No	No	No	60% Yes / 20% No / 20% n/a				12	55% Yes / 18% No / 27% n/a				32	
	Yes	Yes	Yes	87% Yes / 0% No / 13% n/a				13	86% Yes / 0% No / 14% n/a				38	
	Yes	Yes	Yes	87% Yes / 7% No / 7% n/a				14	86% Yes / 2% No / 11% n/a				39	
	Yes	Yes	Yes	73% Yes / 7% No / 20% n/a				12	64% Yes / 9% No / 27% n/a				32	
	Yes	Yes	Yes	67% Yes / 20% No / 13% n/a				13	68% Yes / 18% 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	#		
c2) Pre-scheduled in-house?	Yes	Yes	Yes	80% Yes / 13% No / 7% n/a					14	80% Yes / 9% No / 11% n/a					39
c3) In-the-field?	No	No	No	53% Yes / 27% No / 20% n/a					12	55% Yes / 18% No / 27% n/a					32
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?	Yes	Yes	Yes	73% Yes / 13% No / 13% n/a					13	64% Yes / 20% No / 16% n/a					37
d2) pre-scheduled In-house?	Yes	Yes	Yes	67% Yes / 27% No / 7% n/a					14	68% Yes / 18% No / 14% n/a					38
d3) In-the-field?	No	No	No	47% Yes / 33% No / 20% n/a					12	45% Yes / 25% No / 30% n/a					31
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	n/a	33% Yes / 13% No / 53% n/a					7	14% Yes / 9% No / 77% n/a					10
e2) pre-scheduled In-house?	n/a	n/a	n/a	33% Yes / 20% No / 47% n/a					8	14% Yes / 9% No / 77% n/a					10
e3) In-the-field?	n/a	n/a	n/a	20% Yes / 20% No / 60% n/a					6	9% Yes / 7% No / 84% n/a					7
64 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.] Activity 2d - Member Presentations and Group Retirement	Yes	No	No	60% Yes / 40% No / 0% n/a					15	57% Yes / 41% No / 2% n/a					43
65 Do you offer member presentations (including group counseling)? If you do not offer member presentations skip to question 72.	Yes	Yes	Yes	100% Yes / 0% No					15	95% Yes / 5% No					44
66 How many benefit fairs did you host or participate in?	69	56	60	464	57	6	89	15	464	16	0	53	41		
67 How many presentations (including group counseling sessions) for members or annuitants [exclude presentations to employers] did you do that took place:															
a) In-house?	83	76	75	297	19	0	64	15	297	3	0	36	43		
b) In the field?	286	262	238	2,912	433	26	672	15	2,912	183	0	420	43		
c) Via live webinar? [i.e., a real-time, online presentation that allows two-way communication between the presenter and audience]	178	169	186	237	17	0	49	15	237	9	0	27	43		
(Total Presentations)	547	507	499	3,147	542	58	785	15	3,147	255	0	472	44		
68 What was the total number of attendees at all of the presentations per question 67 above? [Exclude benefit fair attendees per question 66]	16,799	14,033	15,113	32,147	16,776	1,994	16,950	15	38,677	9,413	807	12,301	42		
69 Did you do specific presentations for members, in the past fiscal year, targeted solely for:															
a) New members?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a					15	77% Yes / 18% No / 5% n/a					42
b) Members in mid career?	Yes	Yes	Yes	73% Yes / 27% No / 0% n/a					15	80% Yes / 16% No / 5% n/a					42

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
c) Members approaching retirement or ready to retire?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	93% Yes / 2% No / 5% n/a					42
d) Healthcare?	Yes	Yes	Yes	60% Yes / 40% No / 0% n/a					15	39% Yes / 52% No / 9% n/a					40
e) Changes to benefits?	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a					15	41% Yes / 55% No / 5% n/a					42
f) Other? (Please describe) Layoffs, disability, Social Security, Deferred Compensation, presentations agencies leaving the WRS	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a					15	57% Yes / 39% No / 5% n/a					42
70 Do you offer presentations after normal working hours such as evenings and/or weekends?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	93% Yes / 2% No / 5% n/a					42
71 Do you review presenters for coaching purposes on a regular and recurring basis? [As opposed to intermittent or only while training new presenters, etc.] Activity 2e - Written Pension Estimates	Yes	No	No	87% Yes / 13% No / 0% n/a					15	80% Yes / 16% No / 5% n/a					42
72 Do you offer written pension estimates to members? If no, go directly to question 79.	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	100% Yes / 0% No / 0% n/a					44
73 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.]	24,003	24,715	23,254	259,137	14,893	1,223	33,989	15	259,137	7,860	327	20,479	44		
74 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?	Each Scenario	Each Scenario	Each Scenario	73% Each Scenario / 27% Single Estimate					15	52% Each Scenario / 48% Single Estimate					44
	1	1	1	23	2	1	4	11	23	2	1	3	23		
75 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)?	14.0	14.0	17.0	65.0	6.0	0.0	14.3	15	65.0	5.0	0.0	11.0	44		
	Regular	Regular	Regular	100% Regular / 0% Estimate					15	93% Regular / 7% Estimate					44
76 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? Not earlier than 13 months prior to earliest possible retirement date. Online pension estimate calculations are available for any time during their career.	No	No	No	73% Yes / 27% No / 0% n/a					15	82% Yes / 18% 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	#			
77 Do you place a limit on the number of written pension estimates that a member can request? a) If yes, describe the limit? n/a	No	No	No	7% Yes / 93% No / 0% n/a						15	18% Yes / 82% No / 0% n/a					44
78 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)? b) If your pension is coordinated with or reduced by social security (or CPP in Canada) is the impact explained? c) Discuss alternative scenarios that could improve the pension such as purchasing service credit or working longer? d) Model alternative retirement payment options?	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a						15	61% Yes / 39% No / 0% n/a					44
	Yes	Yes	Yes	40% Yes / 13% No / 47% n/a						8	50% Yes / 16% No / 34% n/a					29
	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a						15	84% Yes / 16% No / 0% n/a					44
	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a						15	93% Yes / 7% No / 0% n/a					44
Activity 2f Mass Communication: (i) Website																
79 Are all, most or some of your forms available online for either completion or downloading?	Most	Most	Most	40% All / 7% Some / 53% Most						15	45% All / 2% Some / 52% Most					44
80 Does your website have a secure member area where members can access their own data? If yes: a) How many unique members accessed the secure member area? [Count a member only once even if he visited multiple times.] b) How many visits in total were there by members to the secure member area? [Count each visit even if the same member visits multiple times.] c) If a member wants to register for the first time, does he/she have to wait for a password in the mail? d) Do you welcome the member by name on the home page of the secure member area? e) Are users required to acknowledge a disclaimer every time they log in? f) Are users required to acknowledge a disclaimer every time they generate a pension estimate? g) Do inactive members have access to the secure member area?	No	No	No	93% Yes / 7% No						15	95% Yes / 5% No					44
	n/a	n/a	n/a	394,697	127,872	65,134	169,681	14	1,152,367	116,552	6,740	197,858	42			
	n/a	n/a	n/a	2,957,066	841,236	250,815	1,052,669	14	4,254,756	451,529	24,115	870,455	42			
	n/a	n/a	n/a	7% Yes / 87% No / 7% n/a						14	5% Yes / 91% No / 5% n/a					42
	n/a	n/a	n/a	93% Yes / 0% No / 7% n/a						14	91% Yes / 5% No / 5% n/a					42
	n/a	n/a	n/a	13% Yes / 80% No / 7% n/a						14	9% Yes / 86% No / 5% n/a					42
	n/a	n/a	n/a	27% Yes / 60% No / 13% n/a						13	32% Yes / 61% No / 7% n/a					41
	n/a	n/a	n/a	93% Yes / 0% No / 7% n/a						14	86% Yes / 9% No / 5% n/a					42
81 Indicate whether the following capabilities are available on your website and provide volumes: a) Benefit calculator in non-secure area? b) Benefit calculator in secure area not linked to member data?	Yes	Yes	Yes	60% Yes / 40% No / 0% n/a						15	50% Yes / 50% No / 0% n/a					44
	No	No	No	27% Yes / 73% No / 0% n/a						15	20% Yes / 80% 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) Benefit calculator in secure area linked to member's salary and service data?	No	No	No	80% Yes / 20% No / 0% n/a					15	89% Yes / 11% No / 0% n/a					44
d) Service credit purchase calculator?	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a					15	73% Yes / 23% No / 5% n/a					42
e) Register for 1-on-1 counseling sessions?	No	No	No	47% Yes / 47% No / 7% n/a					14	41% Yes / 55% No / 5% n/a					42
e1) If yes, does the member have real-time access to available dates and times?	n/a	n/a	n/a	47% Yes / 0% No / 53% n/a					7	39% Yes / 0% No / 61% n/a					17
f) Register for presentations?	Yes	Yes	Yes	80% Yes / 20% No / 0% n/a					15	64% Yes / 30% No / 7% n/a					41
g) Live chat?	No	No	No	7% Yes / 93% No / 0% n/a					15	7% Yes / 91% No / 2% n/a					43
h) Change address?	No	No	No	93% Yes / 7% No / 0% n/a					15	86% Yes / 9% No / 5% n/a					42
i) Change beneficiary?	No	No	No	80% Yes / 20% No / 0% n/a					15	66% Yes / 30% No / 5% n/a					42
j) Change email address?	No	No	No	93% Yes / 7% No / 0% n/a					15	91% Yes / 9% No / 0% n/a					44
k) Reset password?	No	No	No	93% Yes / 7% No / 0% n/a					15	91% Yes / 9% No / 0% n/a					44
l) Change banking information for direct deposit?	No	No	No	67% Yes / 33% No / 0% n/a					15	52% Yes / 43% No / 5% n/a					42
m) Change tax withholding amount?	No	No	No	80% Yes / 20% No / 0% n/a					15	66% Yes / 30% No / 5% n/a					42
n) Download or print duplicate tax receipts? [i.e., 1099s in the U.S.]	No	No	No	87% Yes / 13% No / 0% n/a					15	80% Yes / 20% No / 0% n/a					44
o) View pension payment details? [i.e., gross amounts, deductions]	No	No	No	87% Yes / 13% No / 0% n/a					15	89% Yes / 11% No / 0% n/a					44
p) Submit a retirement application online?	No	No	No	60% Yes / 40% No / 0% n/a					15	50% Yes / 50% 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?	n/a	n/a	n/a	0% Final / 33% Neither / 27% Estimate / 40% n/a					9	7% Final / 23% Neither / 20% Estimate / 50% n/a					22
p2) Approximately what % of retirements submitted online require follow-up documents or signatures to be mailed in?	n/a	n/a	n/a	100.0%	42.5%	0.0%	46.6%	8	100.0%	37.4%	0.0%	49.9%	19		
q) View status of online retirement application?	No	No	No	47% Yes / 53% No / 0% n/a					15	36% Yes / 50% No / 14% n/a					38
r) Apply for a refund or transfer-out?	No	No	n/a	67% Yes / 33% No / 0% n/a					15	34% Yes / 61% No / 5% n/a					42
s) Secure mailbox or digital file including history of recent correspondence and member documents?	No	No	No	73% Yes / 27% No / 0% n/a					15	57% Yes / 41% No / 2% n/a					43
t) Download member statement? [i.e., Adobe format]	No	No	No	80% Yes / 20% No / 0% n/a					15	91% Yes / 7% No / 2% n/a					43
u) Upload documents (such as birth certificates)?	No	No	No	60% Yes / 40% No / 0% n/a					15	50% Yes / 48% No / 2% n/a					43
v) View pensionable earnings and/or service without downloading?	No	No	No	87% Yes / 13% No / 0% n/a					15	86% Yes / 11% No / 2% n/a					43
If yes:															
v1) Are both salary and service data available?	n/a	n/a	n/a	80% Yes / 7% No / 13% n/a					13	82% Yes / 5% No / 14% n/a					38
v2) Is online data up-to-date to the most recent pay period?	n/a	n/a	n/a	73% Yes / 13% No / 13% n/a					13	70% Yes / 16% No / 14% n/a					38
v3) Is a complete annual history from the beginning of employment provided?	n/a	n/a	n/a	47% Yes / 40% No / 13% n/a					13	57% Yes / 30% No / 14% n/a					38
w) If you administer a core DC or hybrid DB/ DC plan:															

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
w1) Switch between investment options?	n/a	n/a	No	47% Yes / 13% No / 40% n/a					9	20% Yes / 7% No / 73% n/a					12
w2) Change deferral percentage selections for regular contributions?	n/a	n/a	n/a	20% Yes / 40% No / 40% n/a					9	11% Yes / 16% No / 73% n/a					12
w3) Initiate withdrawals?	n/a	n/a	No	33% Yes / 27% No / 40% n/a					9	14% Yes / 14% No / 73% n/a					12
w4) View current valuation of their account?	n/a	n/a	No	53% Yes / 7% No / 40% n/a					9	23% Yes / 5% No / 73% n/a					12
If yes, volume?															
a) Benefit calculator in non-secure area?	283,002	261,912	361,470	283,002	108,507	19,513	146,521	9	283,002	62,198	8,639	96,926	22		
b) Benefit calculator in secure area not linked to member data?	n/a	n/a	n/a	27,896	12,868	3,236	14,217	4	27,896	5,484	853	9,841	9		
c) Benefit calculator in secure area linked to member's salary and service data?	n/a	n/a	n/a	598,149	169,593	26,746	199,104	12	2,358,311	151,055	6,346	266,078	39		
d) Service credit purchase calculator?	6,882	6,017	6,997	76,890	13,261	750	17,915	13	76,890	12,143	402	15,551	32		
e) Register for 1-on-1 counseling sessions?	n/a	n/a	n/a	9,024	3,020	547	3,443	7	22,245	2,473	547	4,741	14		
f) Register for presentations?	8,459	10,678	9,548	16,487	7,614	5,017	9,106	10	29,272	5,869	232	7,814	22		
g) Live chat?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	16,445	15,411	14,376	15,411	2		
h) Change address?	n/a	n/a	n/a	74,137	15,187	3,701	20,602	14	276,248	13,356	1,004	25,485	38		
i) Change beneficiary?	n/a	n/a	n/a	33,391	14,278	2,491	15,540	12	456,870	14,272	1,370	36,934	29		
j) Change email address?	n/a	n/a	n/a	77,358	16,923	2,394	28,504	11	296,982	10,919	707	34,331	26		
k) Reset password?	n/a	n/a	n/a	209,121	57,826	1,089	72,063	10	223,592	21,351	343	55,569	29		
l) Change banking information for direct deposit?	n/a	n/a	n/a	17,780	4,834	2,183	6,323	10	285,323	2,243	96	19,335	23		
m) Change tax withholding amount?	n/a	n/a	n/a	32,771	7,778	1,337	10,285	12	143,333	6,518	157	15,599	29		
n) Download or print duplicate tax receipts? [i.e., 1099s in the U.S.]	n/a	n/a	n/a	74,146	38,930	7,098	39,864	13	432,802	24,715	375	48,468	35		
o) View pension payment details? [i.e., gross amounts, deductions]	n/a	n/a	n/a	362,545	116,279	17,018	136,721	10	2,477,815	38,062	137	192,701	33		
p) Submit a retirement application?	n/a	n/a	n/a	10,668	6,579	2,277	5,736	9	39,800	3,958	53	6,613	21		
q) View status of online retirement application?	n/a	n/a	n/a	133,046	42,997	12,677	57,775	6	133,046	12,677	133	37,926	13		
r) Apply for a refund or transfer-out?	n/a	n/a	n/a	16,140	6,285	825	7,697	9	34,741	8,730	138	10,707	14		
s) Secure mailbox or digital file including history of recent correspondence and member documents?	n/a	n/a	n/a	487,371	145,732	4,105	209,529	6	2,941,142	90,285	1,326	382,697	17		
t) Download member statement? [i.e., Adobe format]	n/a	n/a	n/a	432,830	78,545	2,942	103,933	12	707,858	76,360	2,942	107,680	40		
u) Upload documents (such as birth certificates)?	n/a	n/a	n/a	14,376	903	6	3,531	5	35,562	7,058	6	12,347	17		
v) View pensionable earnings and/or service without downloading?	n/a	n/a	n/a	3,269,737	332,950	67,819	548,469	13	4,482,877	182,555	4,748	525,879	38		
w) If you administer a core DC or hybrid DB/ DC plan:															
w1) Switch between investment options?	n/a	n/a	n/a	13,504	1,612	1,110	3,529	6	13,504	2,038	1,110	3,947	7		
w2) Change deferral percentage selections for regular contributions?	n/a	n/a	n/a	5,083	2,952	820	2,952	2	63,406	5,083	820	23,103	3		
w3) Initiate withdrawals?	n/a	n/a	n/a	2,148	1,234	897	1,378	4	18,815	1,515	897	4,866	5		

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? Videos	n/a	n/a	n/a	671,687	179,367	31,601	251,189	5	1,241,968	235,104	31,601	416,319	6
82 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	Yes	100% Yes / 0% No / 0% n/a				15	91% Yes / 9% No / 0% n/a				44
a) How many different videos do you have for members online? During your most recent fiscal year:	20	53	76	305	27	2	47	15	1,063	20	1	58	40
b) What was the total number of new views for all streamed videos?	31,469	36,796	39,462	82,930	26,100	4,565	29,927	15	375,196	11,682	162	28,776	38
Activity 2f Mass Communication: (ii) News and Targeted Communication													
83 What % of email addresses do you have in your system for the following groups: a) Active members? b) Inactive members? c) Annuitants?	18.1%	14.5%	11.1%	85.5%	63.4%	18.1%	58.2%	15	100.0%	61.5%	0.0%	59.3%	42
b) Inactive members?	17.2%	11.5%	8.7%	50.0%	31.4%	1.6%	29.0%	15	60.6%	31.5%	0.0%	29.0%	42
c) Annuitants?	43.0%	33.5%	25.8%	86.9%	57.5%	27.0%	53.5%	15	86.9%	50.4%	0.0%	50.0%	42
84 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)? b) Active and inactive members? c) Active members and annuitants? d) Active members only? e) Inactive members only? f) Annuitants only? g) Age segments (i.e., under 35, 35-50, 50 plus)? h) Women only or men only? i) Employer or employment category (i.e., a different newsletter for teachers vs. bus drivers)? j) Other? (describe your other newsletter segments below) n/a If yes: # of times you sent last year? a) All members (active, inactive and annuitants)?	No	No	No	27% Yes / 73% No / 0% n/a				15	32% Yes / 68% No / 0% n/a				44
b) Active and inactive members?	No	No	No	40% Yes / 60% No / 0% n/a				15	32% Yes / 68% No / 0% n/a				44
c) Active members and annuitants?	No	No	No	0% Yes / 100% No / 0% n/a				15	0% Yes / 100% No / 0% n/a				44
d) Active members only?	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a				15	45% Yes / 55% No / 0% n/a				44
e) Inactive members only?	No	No	No	7% Yes / 93% No / 0% n/a				15	11% Yes / 89% No / 0% n/a				44
f) Annuitants only?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	80% Yes / 20% No / 0% n/a				44
g) Age segments (i.e., under 35, 35-50, 50 plus)?	No	No	No	20% Yes / 80% No / 0% n/a				15	18% Yes / 82% No / 0% n/a				44
h) Women only or men only?	No	No	No	0% Yes / 100% No / 0% n/a				15	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	No	27% Yes / 73% No / 0% n/a				15	11% Yes / 89% No / 0% n/a				44
j) Other? (describe your other newsletter segments below) n/a	No	No	No	40% Yes / 60% No / 0% n/a				15	27% Yes / 73% No / 0% n/a				44
If yes: # of times you sent last year? a) All members (active, inactive and annuitants)?	n/a	n/a	n/a	12	3	1	5	4	12	3	1	4	13

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
b) Active and inactive members?	n/a	n/a	n/a	70	4	2	14	6	70	3	1	8	14
c) Active members and annuitants?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	4	4	4	4	1
d) Active members only?	4	4	4	10	4	2	4	8	12	2	1	4	20
e) Inactive members only?	n/a	n/a	n/a	2	2	1	2	2	4	1	1	2	5
f) Annuitants only?	3	3	3	15	3	2	4	15	15	2	1	3	35
g) Age segments (i.e., under 35, 35-50, 50 plus)?	n/a	n/a	n/a	47	8	4	20	3	47	10	1	14	8
h) Women only or men only?	n/a	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	n/a	14	12	2	10	5	14	11	2	9	6
j) Other? (describe your other newsletter segments below)	n/a	n/a	n/a	12	8	2	7	6	12	3	1	5	12
Approx. % sent by email													
a) All members (active, inactive and annuitants)?	n/a	n/a	n/a	100.0%	65.5%	0.0%	57.8%	4	100.0%	57.5%	0.0%	54.6%	14
b) Active and inactive members?	n/a	n/a	n/a	100.0%	56.5%	20.0%	59.4%	6	100.0%	56.0%	0.0%	51.0%	14
c) Active members and annuitants?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	100.0%	100.0%	100.0%	100.0%	1
d) Active members only?	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	64.0%	8	100.0%	88.2%	0.0%	60.7%	20
e) Inactive members only?	n/a	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?	0.0%	0.0%	0.0%	100.0%	4.1%	0.0%	22.5%	15	100.0%	13.0%	0.0%	27.7%	35
g) Age segments (i.e., under 35, 35-50, 50 plus)?	n/a	n/a	n/a	100.0%	52.0%	0.0%	50.7%	3	100.0%	63.5%	0.0%	57.3%	8
h) Women only or men only?	n/a	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	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	n/a	100.0%	100.0%	11.8%	74.5%	6	100.0%	80.0%	0.0%	66.8%	12
85 Are new members issued a 'welcome' kit describing their benefits?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	91% Yes / 9% No / 0% n/a				44
a) If yes, does it include a personalized letter addressing the new member by name?	No	No	No	60% Yes / 33% No / 7% n/a				14	73% Yes / 18% No / 9% n/a				40
86 Do you send your members a general brochure with a summary of the benefits every year in either paper or email format?	No	Yes	Yes	27% Yes / 73% No / 0% n/a				15	36% Yes / 64% No / 0% n/a				44
87 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	No	No	33% Yes / 60% No / 7% n/a				14	32% Yes / 50% No / 18% n/a				36
b) Vested for disability benefits (if member is not vested immediately)?	No	No	No	13% Yes / 80% No / 7% n/a				14	9% Yes / 64% No / 27% n/a				32
c) Expiration of disability benefits for inactive members or members that have exited employment?	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a				15	18% Yes / 59% No / 23% n/a				34
d) Approaching eligibility, or becoming eligible, for retirement?	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a				15	57% Yes / 43% 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	No	27% Yes / 73% No / 0% n/a					15	32% Yes / 64% No / 5% n/a					42
f) Missing beneficiary?	No	No	No	20% Yes / 80% No / 0% n/a					15	36% Yes / 59% No / 5% n/a					42
g) Missing email address?	No	No	No	7% Yes / 93% No / 0% n/a					15	16% Yes / 84% No / 0% n/a					44
h) Never visited the secure member area?	n/a	n/a	n/a	13% Yes / 80% No / 7% n/a					14	9% Yes / 86% No / 5% n/a					42
i) Other milestone communication? (describe below) Two milestone communications: 1. Forced Distribution Letter for Age 69.5 or Older, in compliance with IRS regulations (ET-4840) 2. Lost Contact Search Letter (ET-2954)	Yes	No	No	60% Yes / 40% No / 0% n/a					15	70% Yes / 30% No / 0% n/a					44
88 Do you actively solicit member feedback on your publications through:															
a) Focus groups?	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a					15	30% Yes / 70% No / 0% n/a					44
b) Tear out surveys or feedback cards in the publications themselves?	No	No	No	0% Yes / 100% No / 0% n/a					15	5% Yes / 95% No / 0% n/a					44
c) Surveys sent to members who request a publication?	No	No	No	7% Yes / 93% No / 0% n/a					15	9% Yes / 91% No / 0% n/a					44
d) Other (describe)? n/a	No	No	No	47% Yes / 53% No / 0% n/a					15	61% Yes / 39% No / 0% n/a					44
89 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?	No	No	No	0% Yes / 100% No / 0% n/a					15	11% Yes / 89% No / 0% n/a					44
b) Annual report?	No	No	No	0% Yes / 100% No / 0% n/a					15	20% Yes / 80% No / 0% n/a					44
c) Newsletters?	No	No	No	7% Yes / 93% No / 0% n/a					15	18% Yes / 82% No / 0% n/a					44
d) Website?	No	No	No	20% Yes / 80% No / 0% n/a					15	30% Yes / 70% No / 0% n/a					44
e) Brochures and pamphlets?	No	No	No	7% Yes / 93% No / 0% n/a					15	27% Yes / 73% No / 0% n/a					44
Activity 2f Mass Communication: (iii) Member Statement															
90 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	5	1	1	1	15	5	1	0	1	44		
b) Inactive members?	1	1	1	5	1	1	1	15	5	1	0	1	44		
91 Approximately what % of members complain about the accuracy of data in their member statements?	0.0%	0.0%	0.0%	2.1%	0.1%	0.0%	0.4%	15	3.0%	0.1%	0.0%	0.6%	44		
92 Indicate the approximate percentage breakdown of how you send member statements to active members:															
a) Directed through the employer?	66.5%	75.8%	50.0%	66.5%	0.0%	0.0%	7.7%	15	100.0%	0.0%	0.0%	13.1%	42		
b) Mailed directly to members' homes?	21.9%	12.3%	42.0%	100.0%	56.0%	0.0%	50.7%	15	100.0%	43.0%	0.0%	45.3%	43		
c) Email or text message to members that the statement is available in the secure member area?	11.6%	11.7%	8.0%	100.0%	26.5%	0.0%	38.0%	15	100.0%	27.1%	0.0%	43.7%	43		

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
93 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.]	3	3	3	5	2	0	2	15	11	3	0	3	43
94 Do your statements for active members include:													
a) Total accumulated service credit?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	93% Yes / 2% No / 5% n/a				42
b) Pensionable earnings?	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a				15	84% Yes / 14% No / 2% n/a				43
c) A historical summary of salary and service credit earned each year?	No	No	No	47% Yes / 53% No / 0% n/a				15	32% Yes / 66% No / 2% n/a				43
d) The refund value if you left at the statement date?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	70% Yes / 27% 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	Yes	73% Yes / 27% No / 0% n/a				15	82% Yes / 16% No / 2% n/a				43
New Media and Other													
95 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?	No	No	No	80% Yes / 20% No				15	59% Yes / 41% No				44
b) Twitter?	Yes	Yes	Yes	67% Yes / 33% No				15	48% Yes / 52% No				44
c) YouTube?	Yes	Yes	Yes	60% Yes / 40% No				15	66% Yes / 34% No				44
d) Google+?	No	No	No	7% Yes / 93% No				15	11% Yes / 89% No				44
e) LinkedIn?	No	No	No	73% Yes / 27% No				15	59% Yes / 41% No				44
f) Pinterest?	No	No	No	7% Yes / 93% No				15	5% Yes / 95% No				44
g) Instagram?	No	No	No	7% Yes / 93% No				15	20% Yes / 80% No				44
h) WhatsApp?	No	No	No	0% Yes / 100% No				15	5% Yes / 95% No				44
i) Blog?	No	No	No	27% Yes / 73% No				15	20% Yes / 80% No				44
j) Other? Please describe below. n/a	No	No	No	7% Yes / 93% No				15	16% Yes / 84% No				44
If available, number of regular users?													
a) Facebook?	n/a	n/a	New	28,915	4,527	1,309	9,073	9	28,915	3,729	15	7,077	19
b) Twitter?	905	766	New	3,621	1,234	905	1,635	7	17,388	1,246	98	2,575	15
c) YouTube?	128	101	New	1,337	283	128	494	6	12,363	283	0	1,211	20
d) Google+?	n/a	n/a	New	n/a	n/a	n/a	n/a	0	4	4	4	4	1
e) LinkedIn?	n/a	n/a	New	3,440	1,604	36	1,619	8	28,220	1,854	15	4,588	19

Survey Question	Your Response			Peers 2019						All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
f) Pinterest?	n/a	n/a	New	n/a	n/a	n/a	n/a	0	545	545	545	545	1	
g) Instagram?	n/a	n/a	New	346	346	346	346	1	2,296	346	97	688	5	
h) WhatsApp?	n/a	n/a	New	n/a	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	0	
i) Blog?	n/a	n/a	New	30,893	2,239	1,882	11,671	3	30,893	2,061	0	8,754	4	
j) Other? Please describe below.	n/a	n/a	New	12	8	4	8	2	12	8	4	8	2	
96 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)?	n/a	Unknown	n/a	14.3%	4.7%	1.1%	5.4%	11	15.0%	5.2%	0.2%	5.4%	22	
b) For Twitter, what is your average tweet engagement rate (combined clicks, retweets, replies, follows, and likes divided by total impressions)?	Unknown	Unknown	0.5%	1.7%	0.8%	0.0%	0.8%	11	12.0%	0.8%	0.0%	1.3%	22	
97 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	1.0	1.0	4.0	1.0	0.0	1.1	15	5.5	0.9	0.0	0.8	44	
98 Do you support private two-way communication with members through any social media platforms?	Yes	Yes	Yes	73% Yes / 27% No / 0% n/a				15	41% Yes / 59% No / 0% n/a				44	
99 Do you have a mobile app(s)? If yes, briefly describe each app: n/a n/a n/a If yes, volume:	No	No	No	0% Yes / 100% No / 0% n/a				15	5% Yes / 95% No / 0% n/a				44	
	n/a	n/a	New	n/a	n/a	n/a	n/a	0	276	276	276	276	1	
	n/a	n/a	New	n/a	n/a	n/a	n/a	0	774	774	774	774	1	
	n/a	n/a	New	n/a	n/a	n/a	n/a	0	402	402	402	402	1	
100 Do you have a mobile version of your website? [i.e., a version of your website designed specifically for smart phones and tablets]	Yes	No	No	87% Yes / 13% No / 0% n/a				15	77% Yes / 23% No / 0% n/a				44	
a) If yes, can members access their own data via the mobile version of your website?	No	n/a	n/a	53% Yes / 33% No / 13% n/a				13	55% Yes / 23% No / 23% n/a				34	
Activity 3 Collections and Data Maintenance														
101 Number of:														

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
a) Employers at the end of your fiscal year?	1,507	1,537	1,534	3,220	1,357	631	1,561	15	164,000	740	1	5,200	44
b) Employers that joined your system during the fiscal year?	13	13	13	38	7	0	9	15	20,297	4	0	526	44
c) Employers that exited your system during the fiscal year?	5	2	5	21	5	0	6	15	18,235	2	0	455	44
<hr/>													
102 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?	1,507	1,502	1,502	3,063	1,121	91	1,435	15	4,873	570	1	893	44
b) Money (i.e., contributions)?	1,507	1,502	1,502	3,399	1,121	92	1,442	15	24,697	570	1	1,394	44
[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.]													
<hr/>													
103 How many 'reconciliation points' (i.e., employers, state agencies, departments and/or service providers, etc.) do you deal with when:													
a) Validating member data?	1,507	1,502	1,502	3,063	1,357	564	1,558	15	164,000	740	1	4,716	44
b) Reconciling money issues (i.e., contributions)?	1,507	1,502	1,502	3,063	1,121	92	1,449	15	164,000	641	1	5,140	44
[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.]													
<hr/>													
104 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.]	0	0	0	3,119	834	0	1,304	15	4,873	494	0	776	44
b) Mostly electronic? [For example, some systems receive files by internet and then must manually start a program that uploads the file.]	1,507	1,502	1,502	1,507	0	0	134	15	1,521	0	0	110	44
c) Computer readable? [i.e., via computer tape or disk]	0	0	0	0	0	0	0	15	1	0	0	0	44
d) Paper?	0	0	0	108	0	0	9	15	333	0	0	11	44
Total # of active members													
a) 100% electronic? [No manual steps required unless there are errors.]	0.0k	0.0k	0.0k	533.6k	210.0k	0.0k	238.6k	15	3,161.0k	174.0k	0.0k	301.0k	44

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
b) Mostly electronic? [For example, some systems receive files by internet and then must manually start a program that uploads the file.]	257.9k	259.3k	259.3k	257.9k	0.0k	0.0k	39.6k	14	45,142.0k	0.0k	0.0k	1,182.4k	39
c) Computer readable? [i.e., via computer tape or disk]	0.0k	0.0k	0.0k	0.0k	0.0k	0.0k	0.0k	12	99.2k	0.0k	0.0k	2.9k	35
d) Paper?	0.0k	0.0k	0.0k	2.3k	0.0k	0.0k	0.2k	12	4.0k	0.0k	0.0k	0.3k	35
105 How many warrants of execution or court orders did you obtain against delinquent employers?	0	0	0	1	0	0	0	15	5,743	0	0	195	44
106 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.]	95.0%	95.0%	95.0%	100.0%	99.0%	84.0%	95.0%	15	100.0%	96.5%	62.0%	94.0%	44
107 Do you actively keep track of the addresses of inactive members?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	77% Yes / 23% No / 0% n/a				44
108 Do you have a diagnostic software system for detecting and correcting contribution errors?	No	No	No	93% Yes / 7% No / 0% n/a				15	86% Yes / 14% No / 0% n/a				44
109 When you get an address change, how many systems do you need to update? Activity 3b - Service to Employers	7	7	7	7	1	1	2	15	7	1	1	1	44
110 Number of:													
a) Incoming calls from employers?	12,691	15,373	7,342	55,907	12,691	1,806	17,025	15	90,043	9,602	0	13,925	44
b) Email queries from employers?	48,920	37,660	16,421	113,724	13,875	1,828	21,998	15	113,724	12,268	330	14,016	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].	6	8	7	6	0	0	1	15	67	0	0	3	44
d) Presentations given to employers such as orientation workshops or seminars on benefit changes, etc. (do not include presentations given at conferences)?	56	81	92	233	42	11	67	15	649	35	0	62	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.]	1	0	0	415	20	0	62	15	415	1	0	53	44

Survey Question	Your Response			Peers 2019					All Participants 2019					
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
f) Other site visits to employers (exclude 'd' and 'e' above)?	1	0	2	40	2	0	8	15	2,831	3	0	114	44	
111 Do you have an employer targeted section on your website or a separate website for your employers? [Do not include PDF documents.]	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	95% Yes / 5% No / 0% n/a				44
112 Do you have online videos targeted for employers?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a					15	66% Yes / 34% No / 0% n/a				44
113 How many different types of presentations did you give to employers?	31	22	23	31	9	2	10	15	43	6	0	8	44	
114 Do you have a newsletter dedicated to employers that is different from the newsletter for members?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a					15	80% Yes / 20% No / 0% n/a				44
a) If yes, how many times did you prepare and send an employer dedicated newsletter last year?	57	58	35	57	9	2	14	14	61	6	2	14	35	
115 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	No	27% Yes / 73% No / 0% n/a					15	32% Yes / 68% No / 0% n/a				44
116 Do you offer and maintain generalized reporting software for your employer collection points?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	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	Yes	100% Yes / 0% No / 0% n/a					15	89% Yes / 5% No / 7% n/a				41
b) Can the software integrate both data collection and billing?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a					15	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?]	No	No	No	73% Yes / 27% No / 0% n/a					15	66% Yes / 27% No / 7% n/a				41
117 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	No	7% Yes / 93% No / 0% n/a					15	20% Yes / 80% No / 0% n/a				44
Activity 4 - Governance and Financial Control														
118 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	Yes	87% Yes / 13% No / 0% n/a					15	84% Yes / 16% No / 0% n/a				44
b) Non-board legislative oversight committee?	No	No	No	67% Yes / 33% No / 0% n/a					15	50% Yes / 50% No / 0% n/a				44
c) Advisory committee?	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a					15	43% Yes / 55% No / 2% n/a				43
d) Members' Council?	No	No	Yes	0% Yes / 100% No / 0% n/a					15	0% Yes / 100% No / 0% n/a				44
e) Other (describe below)?	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a					15	45% Yes / 55% No / 0% n/a				44
Group Insurance Board: 5; Teachers Retirement Board: 2; Wisconsin Retirement Board: 2; Deferred Compensation Board: 5														

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
# of meetings, including sub-committees, last year													
a) Board of Trustees?	4	4	4	43	12	4	17	13	102	14	4	23	37
b) Non-board legislative oversight committee?	n/a	n/a	n/a	35	4	1	7	10	35	5	1	9	22
c) Advisory committee?	14	16	16	14	5	1	6	7	14	3	0	5	19
d) Members' Council?	n/a	n/a	2	n/a	n/a	n/a	n/a	0	8	8	8	8	1
e) Other (describe below)?	13	12	12	13	4	2	6	8	98	5	1	14	20
119 Do you have back-up equipment and premises arranged for your operations if substantial damage occurs at your principal location?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	100% Yes / 0% No / 0% n/a				44
120 Do you have an independent auditor that reviews and tests the disaster recovery plan?	Yes	No	No	60% Yes / 40% No / 0% n/a				15	70% Yes / 30% No / 0% n/a				44
121 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	1	5	1	0	1	15	5	1	0	1	44
b) Begin doing new pension inceptions at normal volumes?	1	3	3	30	4	0	8	15	30	3	0	7	44
c) Collect data and money from employers?	1	5	5	14	1	0	2	15	14	1	0	3	44
d) Respond to member calls at close to current service levels?	1	1	1	30	3	0	6	15	30	2	0	5	44
122 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	No	27% Yes / 73% No				15	30% Yes / 70% No				44
a) If yes, describe: n/a													
Customer Experience													
123 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	New	New	64% Yes / 36% No / 0% n/a				14	55% Yes / 43% No / 2% n/a				41
a1. Active members													
a1a. Satisfaction	Yes	New	New	57% Yes / 0% No / 43% n/a				8	45% Yes / 5% No / 50% n/a				20
a1b. Net Promoter Score (NPS)	No	New	New	21% Yes / 36% No / 43% n/a				8	15% Yes / 35% No / 50% n/a				20
a1d. Engagement	Yes	New	New	50% Yes / 7% No / 43% n/a				8	25% Yes / 18% No / 58% n/a				17
a2. Annuitant													
a2a. Satisfaction	Yes	New	New	57% Yes / 0% No / 43% n/a				8	45% Yes / 5% No / 50% n/a				20
a2b. Net Promoter Score (NPS)	No	New	New	21% Yes / 36% No / 43% n/a				8	15% Yes / 35% No / 50% n/a				20
a2d. Engagement	Yes	New	New	50% Yes / 7% No / 43% n/a				8	25% Yes / 18% No / 58% n/a				17

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
a3. Inactive members															
a3a. Satisfaction	Yes	New	New	21% Yes / 36% No / 43% n/a					8	23% Yes / 28% No / 50% n/a					20
a3b. Net Promoter Score (NPS)	No	New	New	0% Yes / 57% No / 43% n/a					8	8% Yes / 43% No / 50% n/a					20
a3d. Engagement	Yes	New	New	21% Yes / 36% No / 43% n/a					8	10% Yes / 35% No / 55% n/a					18
a4. Employers															
Did you survey satisfaction regarding this activity in your most recently ended fiscal year?															
a4a. Satisfaction	Yes	New	New	43% Yes / 14% No / 43% n/a					8	40% Yes / 10% No / 50% n/a					20
a4b. Net Promoter Score (NPS)	No	New	New	7% Yes / 43% No / 50% n/a					7	13% Yes / 38% No / 50% n/a					20
a4d. Engagement	Yes	New	New	14% Yes / 43% No / 43% n/a					8	10% Yes / 35% No / 55% n/a					18
b. Survey focused exclusively on a single-channel touchpoint?	Yes	New	New	100% Yes / 0% No / 0% n/a					14	90% Yes / 7% No / 2% n/a					40
b1. 1-on-1 meeting															
b1a. Satisfaction	Yes	Yes	Yes	73% Yes / 27% No / 0% n/a					15	73% Yes / 14% No / 14% n/a					38
b1b. Net Promoter Score (NPS)	No	New	New	21% Yes / 71% No / 7% n/a					13	8% Yes / 75% No / 18% n/a					33
b1c. Effort	No	New	New	7% Yes / 86% No / 7% n/a					13	15% Yes / 65% No / 20% n/a					32
b1e. What was the longest possible time in days between the activity/ journey end and the survey?	0	0	0	14	1	0	3	11	30	1	0	5	32		
b1f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	Continuous	Continuous	Continuous	250	250	250	250	11	250	250	12	216	32		
b1g. Can you break down results by service agent?	Yes	Yes	Yes	73% Yes / 0% No / 27% n/a					11	59% Yes / 14% No / 27% n/a					32
b1h. Can you break down the survey results by topic or journey covered?	Yes	Yes	Yes	53% Yes / 20% No / 27% n/a					11	52% Yes / 20% No / 27% n/a					32
b2. Member presentation or group counseling session															
b2a. Satisfaction	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	86% Yes / 2% No / 11% n/a					39
b2b. Net Promoter Score (NPS)	No	New	New	21% Yes / 71% No / 7% n/a					13	22% Yes / 59% No / 20% n/a					33
b2c. Effort	No	New	New	14% Yes / 71% No / 14% n/a					12	20% Yes / 60% No / 20% n/a					32
b2e. What was the longest possible time in days between the activity/ journey end and the survey?	0	0	0	30	2	0	5	15	30	1	0	4	38		
b2f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	Continuous	Continuous	Continuous	250	250	12	234	15	250	250	1	213	38		
b2g. Can you break down results by service agent?	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a					15	77% Yes / 9% No / 14% n/a					38
b3. Telephone call															
b3a. Satisfaction	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a					15	66% Yes / 20% No / 14% n/a					38
b3b. Net Promoter Score (NPS)	No	New	New	7% Yes / 79% No / 14% n/a					12	5% Yes / 75% No / 20% n/a					32
b3c. Effort	n/a	New	New	14% Yes / 64% No / 21% n/a					11	18% Yes / 63% No / 20% n/a					32
b3e. What was the longest possible time in days between the activity/ journey end and the survey?	0	0	0	60	0	0	8	10	60	3	0	9	29		

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
b3f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	Continuous	Continuous	Continuous	250	250	4	182	10	250	250	4	151	29
b3g. Can you break down results by service agent?	Yes	Yes	Yes	67% Yes / 0% No / 33% n/a				10	50% Yes / 16% No / 34% n/a				29
b3h. Can you break down the survey results by topic or journey covered?	No	No	No	27% Yes / 40% No / 33% n/a				10	41% Yes / 25% No / 34% n/a				29
b4. Website visit - secure member area													
b4a. Satisfaction	n/a	n/a	n/a	40% Yes / 53% No / 7% n/a				14	41% Yes / 39% No / 20% n/a				35
b4b. Net Promoter Score (NPS)	n/a	New	New	7% Yes / 71% No / 21% n/a				11	5% Yes / 70% No / 25% n/a				30
b4c. Effort	n/a	New	New	14% Yes / 57% No / 29% n/a				10	18% Yes / 55% No / 28% n/a				29
b4e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	n/a	n/a	90	7	0	22	6	90	1	0	11	17
b4f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	n/a	n/a	250	250	4	209	6	250	250	4	197	17
b4h. Can you break down the survey results by topic or journey covered?	n/a	n/a	n/a	20% Yes / 20% No / 60% n/a				6	27% Yes / 11% No / 61% n/a				17
c. Survey focused exclusively on a single customer journey?	No	New	New	50% Yes / 50% No / 0% n/a				14	55% Yes / 43% No / 3% n/a				39
A member:													
c1. Starts a new job													
c1a. Satisfaction	n/a	New	New	0% Yes / 36% No / 64% n/a				5	10% Yes / 35% No / 55% n/a				18
c1b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 43% No / 57% n/a				6	3% Yes / 45% No / 53% n/a				19
c1c. Effort	n/a	New	New	0% Yes / 36% No / 64% n/a				5	10% Yes / 35% No / 55% n/a				18
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	n/a	0	90	22	5	35	4
c1f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	250	32	12	82	4
c2. Exits their job													
c2a. Satisfaction	n/a	New	New	0% Yes / 43% No / 57% n/a				6	10% Yes / 38% No / 53% n/a				19
c2b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 43% No / 57% n/a				6	0% Yes / 48% No / 53% n/a				19
c2c. Effort	n/a	New	New	0% Yes / 43% No / 57% n/a				6	10% Yes / 38% No / 53% n/a				19
c2e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	n/a	n/a	n/a	n/a	0	35	29	5	25	4
c2f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	250	32	12	82	4
c3. Takes a leave of absence													
c3a. Satisfaction	n/a	New	New	0% Yes / 43% No / 57% n/a				6	5% Yes / 43% No / 53% n/a				19
c3b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 43% No / 57% n/a				6	0% Yes / 48% No / 53% n/a				19
c3c. Effort	n/a	New	New	0% Yes / 43% No / 57% n/a				6	5% Yes / 43% No / 53% n/a				19

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
c3e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	n/a	n/a	n/a	n/a	0	30	18	5	18	2
c3f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	52	32	12	32	2
c4. Marries and/or has children													
c4a. Satisfaction	n/a	New	New	0% Yes / 43% No / 57% n/a				6	3% Yes / 44% No / 54% n/a				18
c4b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 43% No / 57% n/a				6	0% Yes / 46% No / 54% n/a				18
c4c. Effort	n/a	New	New	0% Yes / 43% No / 57% n/a				6	3% Yes / 44% No / 54% n/a				18
c4e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	n/a	n/a	n/a	n/a	0	14	14	14	14	1
c4f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	250	250	250	250	1
c5. Divorces													
c5a. Satisfaction	n/a	New	New	0% Yes / 43% No / 57% n/a				6	3% Yes / 44% No / 54% n/a				18
c5b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 43% No / 57% n/a				6	0% Yes / 46% No / 54% n/a				18
c5c. Effort	n/a	New	New	0% Yes / 36% No / 64% n/a				5	3% Yes / 41% No / 56% n/a				17
c5e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	n/a	n/a	n/a	n/a	0	14	14	14	14	1
c5f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	250	250	250	250	1
c6. Becomes disabled													
c6a. Satisfaction	n/a	n/a	n/a	47% Yes / 13% No / 40% n/a				9	43% Yes / 11% No / 45% n/a				24
c6b. Net Promoter Score (NPS)	n/a	New	New	7% Yes / 36% No / 57% n/a				6	3% Yes / 44% No / 54% n/a				18
c6c. Effort	n/a	New	New	7% Yes / 29% No / 64% n/a				5	15% Yes / 28% No / 56% n/a				17
c6e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	n/a	n/a	365	14	1	75	7	365	30	0	51	19
c6f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	n/a	n/a	250	26	1	113	7	250	26	1	114	19
c7. Retires													
c7a. Satisfaction	n/a	New	New	36% Yes / 7% No / 57% n/a				6	46% Yes / 2% No / 51% n/a				20
c7b. Net Promoter Score (NPS)	n/a	New	New	7% Yes / 36% No / 57% n/a				6	8% Yes / 38% No / 55% n/a				18
c7c. Effort	n/a	New	New	21% Yes / 14% No / 64% n/a				5	25% Yes / 18% No / 58% n/a				17
c7e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	365	31	1	93	5	365	30	0	42	18
c7f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	250	250	12	202	5	250	12	1	95	18
c8. Death and implications for survivors													
c8a. Satisfaction	n/a	New	New	0% Yes / 43% No / 57% n/a				6	13% Yes / 33% No / 54% n/a				18

Survey Question	Your Response			Peers 2019					All Participants 2019					
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
c8b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 43% No / 57% n/a				6	0% Yes / 46% No / 54% n/a					18
c8c. Effort	n/a	New	New	0% Yes / 36% No / 64% n/a				5	8% Yes / 36% No / 56% n/a					17
c8e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	n/a	n/a	n/a	n/a	0	84	35	0	35	5	
c8f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	250	52	12	115	5	
An employer:														
c9. Joins the pension plan														
c9a. Satisfaction	n/a	New	New	0% Yes / 36% No / 64% n/a				5	8% Yes / 31% No / 62% n/a					15
c9b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 29% No / 71% n/a				4	0% Yes / 36% No / 64% n/a					14
c9c. Effort	n/a	New	New	0% Yes / 29% No / 71% n/a				4	8% Yes / 28% No / 64% n/a					14
c9e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	n/a	n/a	n/a	n/a	0	270	35	14	106	3	
c9f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	250	12	1	88	3	
c10. Assigns a new primary contact for the pension plan														
c10a. Satisfaction	n/a	New	New	0% Yes / 36% No / 64% n/a				5	3% Yes / 36% No / 62% n/a					15
c10b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 29% No / 71% n/a				4	0% Yes / 36% No / 64% n/a					14
c10c. Effort	n/a	New	New	0% Yes / 29% No / 71% n/a				4	3% Yes / 33% No / 64% n/a					14
c10e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	New	New	n/a	n/a	n/a	n/a	0	270	270	270	270	1	
c10f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	New	New	n/a	n/a	n/a	n/a	0	1	1	1	1	1	
d. Survey focused exclusively on a single transaction that may be part of a customer journey?	No	New	New	50% Yes / 50% No / 0% n/a				14	58% Yes / 40% No / 3% n/a					39
d1. Written benefit estimates														
d1a. Satisfaction	n/a	n/a	n/a	47% Yes / 7% No / 47% n/a				8	48% Yes / 9% No / 43% n/a					25
d1b. Net Promoter Score (NPS)	n/a	New	New	7% Yes / 21% No / 71% n/a				4	5% Yes / 43% No / 53% n/a					19
d1c. Effort	n/a	New	New	0% Yes / 21% No / 79% n/a				3	18% Yes / 28% No / 55% n/a					18
d1e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	n/a	n/a	90	7	0	28	7	365	15	0	39	20	
d1f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	n/a	n/a	250	250	4	147	7	250	52	4	118	21	
d2. Refunds, withdrawals and transfers-out														
d2a. Satisfaction	n/a	n/a	n/a	20% Yes / 20% No / 60% n/a				6	30% Yes / 20% No / 50% n/a					22
d2b. Net Promoter Score (NPS)	n/a	New	New	0% Yes / 29% No / 71% n/a				4	0% Yes / 45% No / 55% n/a					18
d2c. Effort	n/a	New	New	0% Yes / 21% No / 79% n/a				3	10% Yes / 33% No / 58% n/a					17

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
d2e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	n/a	n/a	90	31	7	43	3	213	30	0	40	14
d2f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	n/a	n/a	250	12	4	89	3	250	52	4	106	14
d3. Purchases and transfers-in													
d3a. Satisfaction	n/a	n/a	n/a	33% Yes / 13% No / 53% n/a				7	39% Yes / 16% No / 45% n/a				24
d3b. Net Promoter Score (NPS)	n/a	New	New	7% Yes / 21% No / 71% n/a				4	5% Yes / 40% No / 55% n/a				18
d3c. Effort	n/a	New	New	0% Yes / 21% No / 79% n/a				3	18% Yes / 25% No / 58% n/a				17
d3e. What was the longest possible time in days between the activity/ journey end and the survey?	n/a	n/a	n/a	90	30	7	35	5	365	30	0	48	18
d3f. How often did you survey about the activity or journey? (once, monthly, continuous, etc.)	n/a	n/a	n/a	250	12	4	61	5	250	26	4	86	18
124 If you surveyed satisfaction regarding the secure member area on your website, was the survey electronic? [i.e., email or web based]	No	n/a	n/a	40% Yes / 53% No / 7% n/a				14	36% Yes / 48% No / 16% n/a				37
If yes:													
a) Was the survey a menu item that the user had to find and select (as opposed to a survey actively sent to the user via email or a pop up)?	n/a	n/a	n/a	7% Yes / 33% No / 60% n/a				6	7% Yes / 30% No / 64% n/a				16
b) Did you survey 100% of users (versus a sample such as every 100th user)?	n/a	n/a	n/a	27% Yes / 13% No / 60% n/a				6	16% Yes / 20% No / 64% n/a				16
If yes:													
b1) Do you survey all visitors (meaning the same unique user can be surveyed multiple times)?	n/a	n/a	n/a	7% Yes / 20% No / 73% n/a				4	7% Yes / 9% No / 84% n/a				7
Plan Design													
Plan Characteristics													
125 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	No	0% Yes / 100% No / 0% n/a				15	9% Yes / 86% No / 5% n/a				42
b) Participating Local Employers (i.e., municipalities have a choice in participating in your plan)?	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a				15	50% Yes / 45% No / 5% n/a				42
c) State, Province, Country?	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a				15	68% Yes / 27% No / 5% n/a				42
d) Teachers?	Yes	Yes	Yes	80% Yes / 20% No / 0% n/a				15	57% Yes / 39% No / 5% n/a				42
e) School Employees (Custodians, Admin. Staff)?	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a				15	66% Yes / 30% No / 5% n/a				42
f) Safety (Police, Fire, Sheriff's Dept, etc) ?	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a				15	59% Yes / 36% No / 5% n/a				42
g) Other (Judges, Legislators, etc)?	Yes	Yes	Yes	73% Yes / 27% No / 0% n/a				15	55% Yes / 41% No / 5% n/a				42
h) Corporate?	No	No	No	0% Yes / 100% No / 0% n/a				15	5% Yes / 91% No / 5% n/a				42

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
i) Industry? i1) If Industry, describe the industry: n/a	No	No	No	0% Yes / 100% No / 0% n/a					15	11% Yes / 89% No / 0% n/a					44
126 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	No	93% Yes / 7% No / 0% n/a					15	93% Yes / 7% No / 0% n/a					44
b) DB Cash Balance (aka Money Purchase)?	No	No	No	7% Yes / 93% No / 0% n/a					15	7% Yes / 93% No / 0% n/a					44
c) Hybrid DB/ DC Cash Balance?	No	No	No	7% Yes / 93% No / 0% n/a					15	5% Yes / 95% No / 0% n/a					44
d) Hybrid DB/ Money Match?	No	No	No	7% Yes / 93% No / 0% n/a					15	5% Yes / 91% No / 5% n/a					42
e) DROP savings?	No	No	No	7% Yes / 93% No / 0% n/a					15	9% Yes / 86% No / 5% n/a					42
f) Defined Contribution ("DC")?	No	No	No	27% Yes / 73% No / 0% n/a					15	16% Yes / 84% No / 0% n/a					44
g) Hybrid DB/ DC?	No	No	Yes	47% Yes / 53% No / 0% n/a					15	25% Yes / 75% No / 0% n/a					44
h) Other (describe)? n/a	No	No	No	7% Yes / 93% No / 0% n/a					15	9% Yes / 91% No / 0% n/a					44
127 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'?	Yes	Yes	Yes	7% Yes / 93% No / 0% n/a					15	7% Yes / 89% No / 5% n/a					42
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.]	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a					15	11% Yes / 84% No / 5% n/a					42
c) To change their contribution rate in order to get either more money at retirement or earlier eligibility to retire?	No	No	No	0% Yes / 100% No / 0% n/a					15	2% Yes / 93% No / 5% n/a					42
128 Do you have a Highly Compensated Employee replacement benefit program for employees that exceed legal or contractual limits of maximum pensionable earnings?	No	No	No	67% Yes / 33% No / 0% n/a					15	64% Yes / 32% No / 5% n/a					42

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
129 Are any of the following activities administered by a third party:															
a) DB administration?	No	No	No	0% Yes / 100% No / 0% n/a					15	7% Yes / 93% No / 0% n/a					44
b) DC administration?	No	No	Yes	67% Yes / 20% No / 13% n/a					13	30% Yes / 36% No / 34% n/a					29
c) Pensioner data maintenance?	No	No	No	7% Yes / 93% No / 0% n/a					15	9% Yes / 91% No / 0% n/a					44
d) Active member data maintenance?	No	No	No	7% Yes / 93% No / 0% n/a					15	7% Yes / 93% No / 0% n/a					44
e) Contribution collection?	No	No	No	0% Yes / 100% No / 0% n/a					15	7% Yes / 93% No / 0% n/a					44
f) Disability decisions?	No	No	Yes	27% Yes / 73% No / 0% n/a					15	32% Yes / 64% No / 5% n/a					42
130 Which of the following programs do you offer to members AND administer yourself? [i.e., design, enrolment, premium collection]															
a) Pre-retirement health?	Yes	Yes	Yes	7% Yes / 93% No / 0% n/a					15	7% Yes / 89% No / 5% n/a					42
b) Post-retirement health?	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a					15	23% Yes / 73% No / 5% n/a					42
c) Pre-retirement dental and vision?	No	No	No	7% Yes / 93% No / 0% n/a					15	2% Yes / 93% No / 5% n/a					42
d) Post-retirement dental and vision?	No	No	No	40% Yes / 60% No / 0% n/a					15	16% Yes / 80% No / 5% n/a					42
e) Long-term care insurance?	No	No	No	7% Yes / 93% No / 0% n/a					15	5% Yes / 91% No / 5% n/a					42
f) Loans to members?	No	No	No	20% Yes / 80% No / 0% n/a					15	11% Yes / 84% No / 5% n/a					42
g) Optional tax deferred savings plans? [i.e., 457, 403, 401k, 401a, etc.]	Yes	Yes	Yes	40% Yes / 60% No / 0% n/a					15	18% Yes / 77% No / 5% n/a					42
h) Optional insurance? [i.e., life and/or auto and/or home]	Yes	Yes	Yes	20% Yes / 80% No / 0% n/a					15	11% Yes / 84% No / 5% n/a					42
i) Other (describe)? Employee reimbursement accounts (medical, dependent care, commuter) Sick leave conversion (for post-retirement health insurance) Disability (40.63, LTDI, ICI, duty disability)	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a					15	18% Yes / 77% No / 5% n/a					42
131 Is your organization directly responsible for both investments and pension administration?	No	No	No	73% Yes / 27% No / 0% n/a					15	66% Yes / 34% No / 0% n/a					44
132 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	No	0% Yes / 100% No / 0% n/a					15	11% Yes / 89% No / 0% n/a					44
133 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.]	No	No	No	33% Yes / 60% No / 7% n/a					14	48% Yes / 45% No / 7% n/a					41

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
Paying Pension Rules															
134 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	Yes	80% Yes / 20% No / 0% n/a					15	41% Yes / 55% No / 5% n/a					42
135 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.]	No	No	No	40% Yes / 60% No / 0% n/a					15	39% Yes / 57% No / 5% n/a					42
b) Check income of disabled members after they have started receiving disability payments?	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a					15	57% Yes / 30% No / 14% n/a					38
c) Check school status? [For example, some systems will check that a dependent beneficiary is still eligible to receive a survivor pension benefit.]	Yes	Yes	Yes	40% Yes / 60% No / 0% n/a					15	55% Yes / 41% No / 5% n/a					42
d) Do proof-of-life checks that require individual annuitants to provide affidavits or notarization or similar proof of life?	No	No	No	87% Yes / 13% No / 0% n/a					15	86% Yes / 9% No / 5% n/a					42
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.]	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	91% Yes / 5% No / 5% n/a					42
Payment Options															
136 Do you offer "joint and survivor" options that are:															
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	Yes	80% Yes / 20% No / 0% n/a					15	68% Yes / 27% No / 5% n/a					42
b) Reduced to Last Survivor? [For example, if either the retiree or beneficiary dies the survivor receives a reduced pension (such as 70%, etc.).]	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a					15	27% Yes / 68% No / 5% n/a					42

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
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	Yes	87% Yes / 13% No / 0% n/a					15	57% Yes / 39% No / 5% n/a					42
137 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	Yes	60% Yes / 40% No / 0% n/a					15	64% Yes / 32% No / 5% n/a					42
a) How many percentages do you permit?	2	2	2	91	3	2	13	9	91	4	1	8	28		
138 Do any of your retirement formula for members explicitly subtract estimated Social Security (or CPP in Canada) when determining the benefit?	No	No	No	27% Yes / 73% No / 0% n/a					15	48% Yes / 48% No / 5% n/a					42
a) If yes, is this true for all of your members or are some pensions reduced to reflect Social Security and others not?	n/a	n/a	n/a	0% All / 27% Some / 73% n/a					4	18% All / 30% Some / 52% n/a					21
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?	n/a	n/a	n/a	20% Yes / 7% No / 73% n/a					4	43% Yes / 5% No / 52% n/a					21
139 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	No	7% Yes / 93% No / 0% n/a					15	7% Yes / 89% No / 5% n/a					42
140 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.]	Yes	Yes	Yes	60% Yes / 40% No / 0% n/a					15	50% Yes / 45% No / 5% n/a					42
141 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	No	7% Yes / 93% No / 0% n/a					15	9% Yes / 86% No / 5% n/a					42
142 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.]	No	No	No	0% Yes / 100% No / 0% n/a					15	5% Yes / 91% No / 5% n/a					42

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
143 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	No	20% Yes / 80% No / 0% n/a				15	16% Yes / 80% No / 5% n/a				42
144 At retirement, can a member convert: a) Part of his benefit into a partial lump sum payment? 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	No	67% Yes / 33% No / 0% n/a				15	41% Yes / 55% No / 5% n/a				42
	Yes	Yes	No	27% Yes / 73% No / 0% n/a				15	23% Yes / 73% No / 5% n/a				42
145 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?	Any Day	Any Day	Any Day	27% Any Day / 73% Set Day / 0% n/a				15	39% Any Day / 57% Set Day / 5% n/a				42
146 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.] Cost of Living Adjustments	1	1	1	272	2	1	21	15	272	2	0	10	42
147 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.) [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]	2	2	2	13	2	1	4	15	13	2	0	3	42
148 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.)? b) Conditional COLA based on the level of funding?	No	No	No	20% Yes / 80% No / 0% n/a				15	27% Yes / 68% No / 5% n/a				42
	No	No	No	27% Yes / 73% No / 0% n/a				15	25% Yes / 70% No / 5% n/a				42

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
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.]	Yes	Yes	No	20% Yes / 80% No / 0% n/a					15	16% Yes / 80% No / 5% n/a					42
149 Do you have COLA clauses that increase the base pensionable earnings of inactive members? a) If yes, are these COLA increases the same as they are for annuitants?	No	No	No	20% Yes / 80% No / 0% n/a					15	23% Yes / 73% No / 5% n/a					42
Benefit Formulas	n/a	n/a	n/a	0% Yes / 20% No / 80% n/a					3	16% Yes / 7% No / 77% n/a					10
150 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.]	14	14	13	91	8	2	14	15	91	6	1	10	42		
151 Can members retire earlier than the age required for an unreduced retirement formula? [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.]	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	91% Yes / 5% No / 5% n/a					42
152 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.]	3	3	3	15	3	1	6	15	15	3	0	4	42		
153 How many different 'formula percentage' rule sets could apply in unreduced retirement formulas?	9	9	8	91	4	2	12	15	91	4	1	9	42		

Survey Question	Your Response			Peers 2019					All Participants 2019					
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
[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.]														
154 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.]	No	No	No	67% Yes / 33% No / 0% n/a					15	48% Yes / 48% No / 5% n/a				42
a) Each system uses its own formula and salary data to determine the benefit.	n/a	n/a	n/a	33% Yes / 33% No / 33% n/a					10	25% Yes / 23% No / 52% n/a				21
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.	n/a	n/a	n/a	20% Yes / 47% No / 33% n/a					10	18% Yes / 30% No / 52% n/a				21
c) The highest formula will apply.	n/a	n/a	n/a	13% Yes / 53% No / 33% n/a					10	5% Yes / 43% No / 52% n/a				21
d) The formula of the plan where the member works last will apply.	n/a	n/a	n/a	20% Yes / 47% No / 33% n/a					10	14% Yes / 34% No / 52% n/a				21
e) Other (describe). n/a	n/a	n/a	n/a	7% Yes / 60% No / 33% n/a					10	11% Yes / 36% No / 52% n/a				21
External Reciprocity														
155 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.]	Yes	Yes	Yes	40% Yes / 60% No / 0% n/a					15	34% Yes / 61% No / 5% n/a				42
156 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.]	No	No	No	27% Yes / 73% No / 0% n/a					15	14% Yes / 82% No / 5% n/a				42
Service Credit Rules														

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
<p>157 How many different definitions do you have for a "full year" of service credit? [For example, a system could have:</p> <ul style="list-style-type: none"> • 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.] 	2	2	2	10	4	1	4	15	100	3	1	7	42
<p>158 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.]</p> <p>a) If yes, how many different payroll years exist in your system?</p>	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a				15	27% Yes / 68% No / 5% n/a				42
	2	2	2	12	2	2	4	5	30	3	2	6	12
<p>159 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.]</p>	1	1	1	8	2	0	3	15	8	2	0	2	42
<p>160 Do you permit:</p> <p>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.]</p> <p>b) Casual/ temporary/ intermittent/ seasonal employees to be members? [An example of a "temporary" employee is an infrequent substitute teacher.]</p>	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	93% Yes / 2% No / 5% n/a				42
	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	70% Yes / 25% No / 5% n/a				42
<p>161 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.]</p>	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	84% Yes / 11% No / 5% n/a				42

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
Service Credit Purchases													
162 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	Yes	100% Yes / 0% No / 0% n/a				15	93% Yes / 0% No / 7% n/a				41
b) Lump sum payments from members?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a				15	93% Yes / 2% No / 5% n/a				42
c) Installment payments direct from members?	No	No	No	60% Yes / 40% No / 0% n/a				15	61% Yes / 32% No / 7% n/a				41
d) Installment payments via payroll deduction through employers?	No	No	No	60% Yes / 40% No / 0% n/a				15	57% Yes / 39% No / 5% n/a				42
163 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'.]	6	6	7	32	14	6	14	15	54	12	2	13	41
164 How many different service credit purchase calculation formula or methodologies do you have? [For example, one system has the following 4 different cost calculation formula: • Previously refunded contributions X the actuarial earnings rate. • Salary X Contribution Rate (no interest) for active duty military service. • Salary X Contribution Rate X 5% per annum for out-of-state government, or private school teaching service • Actuarial Cost for up to 5 years of any non-government, non-teaching work done outside of the pension system.]	9	9	9	19	6	3	8	15	19	5	1	6	41
165 Are your service credit purchase rules (category definitions, eligibility requirements and calculation methodologies):													
a) Essentially identical for all your members?	No	No	No	7% Yes / 93% No / 0% n/a				15	34% Yes / 57% No / 9% n/a				40
b) Similar for all member groups, albeit with some differences?	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a				15	48% Yes / 45% No / 7% n/a				41
c) Very different for different member groups?	No	No	No	20% Yes / 80% No / 0% n/a				15	16% Yes / 75% No / 9% n/a				40
Refunds, Transfers-out and Terminating Payments													
166 Do you pay a one-time death payment when a member, retiree or the retiree's beneficiary dies (separate from the survivor pension)?													
a) If yes, how many different one-time death payment rule sets do you have? [i.e., \$5,000, \$2,000 etc.]	n/a	n/a	n/a	60% Yes / 40% No / 0% n/a				15	57% Yes / 39% No / 5% n/a				42
	n/a	n/a	n/a	6	4	2	4	9	8	4	1	4	25

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
167 How many different refund formulas do you have? [For example, a few systems have different formulas for vested and non-vested members, or for different member groups.] Disability	1	1	4	7	3	1	3	15	8	2	0	3	42
168 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.)?	No	No	No	80% Yes / 20% No / 0% n/a				15	68% Yes / 16% No / 16% n/a				37
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	No	27% Yes / 73% No / 0% n/a				15	11% Yes / 75% No / 14% n/a				38
c) Disabled members receive service retirement (time on disability counts as eligible service credit)?	No	No	No	27% Yes / 73% No / 0% n/a				15	32% Yes / 55% No / 14% n/a				38
d) Other (describe)? Disability Retirement benefits do not change. Income Continuation Insurance (ICI) & Long-Term Disability Insurance (LTDI) - end at age 65, which is normal retirement age for all but protective & executive/elected employees (exceptions: ICI - benefits may be payable longer if age 62 or older when first disabled; LTDI - benefits payable longer if age 61 or older on LTDI effective date.) Duty Disability benefits are offset by regular retirement benefits at Minimum Retirement Age, which is age 50 for protective occupation employees.	Yes	Yes	Yes	40% Yes / 60% No / 0% n/a				15	18% Yes / 66% No / 16% n/a				37
169 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?	No	No	No	20% Yes / 80% No / 0% n/a				15	11% Yes / 68% No / 20% n/a				35
b) An amount that is potentially greater than the difference between his old salary and his new lower salary?	No	No	No	7% Yes / 93% No / 0% n/a				15	5% Yes / 75% No / 20% n/a				35
170 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	No	20% Yes / 80% No / 0% n/a				15	11% Yes / 70% No / 18% n/a				36
b) Employer decides?	No	No	No	0% Yes / 100% No / 0% Some / 0% n/a				15	2% Yes / 77% No / 5% Some / 16% n/a				37
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	Yes	100% Yes / 0% No / 0% n/a				15	77% Yes / 5% No / 18% n/a				36

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
d) Other (describe)? n/a	No	No	No	7% Yes / 93% No / 0% n/a				15	11% Yes / 70% No / 18% n/a			36	
171 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)?	No	No	No	47% Yes / 53% No / 0% n/a				15	48% Yes / 34% No / 18% n/a			36	
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.]	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a				15	14% Yes / 68% No / 18% n/a			36	
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	No	27% Yes / 73% No / 0% n/a				15	23% Yes / 55% No / 23% n/a			34	
d) Other (describe)? n/a	No	No	No	7% Yes / 93% No / 0% n/a				15	7% Yes / 70% No / 23% n/a			34	
172 If you administer short-term disability:													
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]	No	No	No	20% Yes / 13% No / 67% n/a				5	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.]	No	No	No	7% Yes / 27% No / 67% n/a				5	5% Yes / 11% No / 84% n/a			7	
c) Are there materially different approval processes for short-term and long-term disability/ disability pensions?	Yes	Yes	Yes	20% Yes / 13% No / 67% n/a				5	7% Yes / 9% No / 84% n/a			7	

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
173 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? 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.]	7	7	7	96	3	1	11	15	96	3	1	7	36
	2	2	2	2	2	1	2	4	2	1	0	1	7
174 Do you reduce payments if the member qualifies or receives: a) Disability social security? b) Worker's compensation? c) Other public funds (i.e., federal military disability)? d) Income protection plans/other disability insurance? e) Employer sick leave and annual leave pay? f) Unemployment compensation? g) Income from other employment? h) Other (describe)? other system administered benefits including retirement Pensionable Earnings	Yes	Yes	Yes	47% Yes / 53% No / 0% n/a				15	27% Yes / 55% No / 18% n/a				36
	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a				15	39% Yes / 41% No / 20% n/a				35
	No	No	No	20% Yes / 80% No / 0% n/a				15	7% Yes / 73% No / 20% n/a				35
	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a				15	7% Yes / 73% No / 20% n/a				35
	Yes	Yes	Yes	40% Yes / 60% No / 0% n/a				15	16% Yes / 64% No / 20% n/a				35
	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a				15	11% Yes / 68% No / 20% n/a				35
	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a				15	41% Yes / 39% No / 20% n/a				35
	Yes	Yes	Yes	27% Yes / 73% No / 0% n/a				15	16% Yes / 64% No / 20% n/a				35
175 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? b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance? c) Overtime pay? d) Commissions or similar payments such as fees paid to sheriffs for process serving? If yes, is all, some or none of it included in pensionable earnings? a) Bonuses? b) Allowances, such as remote location pay or 'high risk' duty allowance or a car allowance? c) Overtime pay?	Yes	Yes	Yes	80% Yes / 20% No / 0% n/a				15	75% Yes / 20% No / 5% n/a				42
	Yes	Yes	Yes	87% Yes / 13% No / 0% n/a				15	80% Yes / 16% No / 5% n/a				42
	Yes	Yes	Yes	93% Yes / 7% No / 0% n/a				15	80% Yes / 16% No / 5% n/a				42
	No	No	Yes	27% Yes / 73% No / 0% n/a				15	36% Yes / 59% No / 5% n/a				42
	All	All	All	20% All / 13% None / 47% Some / 20% n/a				12	14% All / 11% None / 50% Some / 25% n/a				33
	Some	Some	Some	13% All / 13% None / 60% Some / 13% n/a				13	14% All / 14% None / 52% Some / 20% n/a				35
	All	All	All	73% All / 0% None / 20% Some / 7% n/a				14	41% All / 14% None / 25% Some / 20% n/a				35

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
d) Commissions or similar payments such as fees paid to sheriffs for process serving?	n/a	n/a	All	13% All / 0% None / 20% Some / 67% n/a					5	14% All / 5% None / 18% Some / 64% n/a					16
176 When determining a member's pensionable earnings does a cap on salary increases apply? Customization Options	No	No	No	47% Yes / 53% No / 0% n/a					15	45% Yes / 50% No / 5% n/a					42
177 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	No	27% Yes / 73% No / 0% n/a					15	18% Yes / 77% No / 5% n/a					42
b) Whether or not part-time employees are eligible?	No	No	No	7% Yes / 93% No / 0% n/a					15	9% Yes / 86% No / 5% n/a					42
c) Whether employee contributions are paid pre or post tax?	No	No	No	47% Yes / 53% No / 0% n/a					15	16% Yes / 80% No / 5% n/a					42
d) Whether they pay for employee contributions themselves, or not?	No	Yes	Yes	47% Yes / 53% No / 0% n/a					15	25% Yes / 70% No / 5% n/a					42
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	No	20% Yes / 80% No / 0% n/a					15	9% Yes / 86% No / 5% n/a					42
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	No	7% Yes / 93% No / 0% n/a					15	14% Yes / 82% No / 5% n/a					42
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.]	Yes	Yes	Yes	7% Yes / 93% No / 0% n/a					15	14% Yes / 82% No / 5% n/a					42
178 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	No	0% Yes / 100% No / 0% n/a					15	2% Yes / 93% No / 5% n/a					42
b) Final salary definition? [i.e., Sick Leave in or out, Final 1 year, Highest 5 consecutive years, etc.]	No	No	No	7% Yes / 93% No / 0% n/a					15	5% Yes / 91% No / 5% n/a					42
c) Retirement eligibility rules? [i.e., age and/or years of service required to retire]	No	No	No	0% Yes / 100% No / 0% n/a					15	0% Yes / 95% No / 5% n/a					42
d) Cost of living adjustment rules? [i.e., CPI capped at 2%, CPI uncapped, etc]	No	No	No	0% Yes / 100% No / 0% n/a					15	7% Yes / 89% No / 5% n/a					42
e) Vesting period?	No	No	No	0% Yes / 100% No / 0% n/a					15	0% Yes / 95% No / 5% n/a					42
f) Service credit purchase categories?	No	No	Yes	7% Yes / 93% No / 0% n/a					15	9% Yes / 86% No / 5% n/a					42

Survey Question	Your Response			Peers 2019					All Participants 2019				
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#
g) Death benefit coverage? [i.e., one system has 3 choices: none, \$5,000 and \$10,000]	No	No	No	0% Yes / 100% No / 0% n/a				15	5% Yes / 91% No / 5% n/a				42
h) Disability coverage rules?	No	No	Yes	0% Yes / 100% No / 0% n/a				15	9% Yes / 86% No / 5% n/a				42
i) Choice as to whether and how contributions and benefits are coordinated with social security?	No	No	No	0% Yes / 100% No / 0% n/a				15	5% Yes / 91% No / 5% n/a				42
j) Other (describe)? n/a	No	No	No	7% Yes / 93% No / 0% n/a				15	16% Yes / 80% No / 5% n/a				42
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	n/a	n/a	n/a	n/a	n/a	0	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	n/a	2	2	2	2	1	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	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	n/a	n/a	n/a	n/a	n/a	0	6	4	2	4	3
e) Vesting period?	n/a	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	5	2	2	2	2	1	10	2	2	4	4
g) Death benefit coverage? [i.e., one system has 3 choices: none, \$5,000 and \$10,000]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	6	4	2	4	2
h) Disability coverage rules?	n/a	n/a	2	n/a	n/a	n/a	n/a	0	4	2	2	3	4
i) Choice as to whether and how contributions and benefits are coordinated with social security?	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	2	2	1	2	2
j) Other (describe)?	n/a	n/a	n/a	1	1	1	1	1	30	3	1	6	7
179 Can an existing employer change any of the choices (per question 178 above), effectively creating a new or altered rule set, at any time?	No	No	No	7% Yes / 93% No / 0% n/a				15	20% Yes / 73% No / 7% n/a				41
Collections and Data Maintenance													
180 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.]	3	3	4	3,213	13	1	414	15	4,331	6	0	297	42
b) Members?	3	3	4	56	4	1	9	15	228	4	1	13	42
181 Which of the following payment methods for employee contributions occur in the plans that you administer:													
a) No employee contributions?	No	No	No	27% Yes / 73% No / 0% n/a				15	27% Yes / 68% No / 5% n/a				42
b) Employer pays his part and also the employee contributions?	Yes	Yes	Yes	67% Yes / 33% No / 0% n/a				15	50% Yes / 45% No / 5% n/a				42

Survey Question	Your Response			Peers 2019					All Participants 2019						
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#		
c) Employer withholds employee contributions pre-tax from his salary?	Yes	Yes	Yes	100% Yes / 0% No / 0% n/a					15	91% Yes / 5% No / 5% n/a					42
d) Employer withholds employee contributions post-tax from his salary?	No	No	No	67% Yes / 33% No / 0% n/a					15	39% Yes / 57% No / 5% n/a					42
182 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.] a) If yes, describe: n/a	No	No	No	47% Yes / 53% No / 0% n/a					15	43% Yes / 52% No / 5% n/a					42
183 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]	No	No	No	27% Yes / 73% No / 0% n/a					15	30% Yes / 66% No / 5% n/a					42
184 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	Yes	47% Yes / 47% No / 7% n/a					14	41% Yes / 43% No / 16% n/a					37
185 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	Yes	100% Yes / 0% No / 0% n/a					15	91% Yes / 5% No / 5% n/a					42
186 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? b) Invoice employers in arrears based on actual member service and salary data? c) Invoice employers in advance based on estimated member service and salary data, and then adjust based on actual experience?	Yes	Yes	Yes	73% Yes / 27% No / 0% n/a					15	70% Yes / 20% No / 9% n/a					40
	No	No	No	67% Yes / 33% No / 0% n/a					15	52% Yes / 39% No / 9% n/a					40
	No	No	No	27% Yes / 73% No / 0% n/a					15	14% Yes / 77% No / 9% n/a					40
187 How many times per year do you send invoices or 'advices' to each employer? Divorce	1	1	1	42	12	0	12	15	46	2	0	9	40		

Survey Question	Your Response			Peers 2019					All Participants 2019					
	2019	2018	2017	Max	Med	Min	Avg	#	Max	Med	Min	Avg	#	
188 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	No	7% Yes / 93% No / 0% n/a				15	11% Yes / 84% No / 5% n/a				42	
b) Minimal impact unless children are involved. With children you may be required to redirect payment.	No	No	No	0% Yes / 100% No / 0% n/a				15	0% Yes / 95% No / 5% n/a				42	
c) A portion of the pension is paid to the ex-spouse, but ONLY when the member begins receiving benefits.	No	No	No	60% Yes / 40% No / 0% n/a				15	48% Yes / 48% No / 5% n/a				42	
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.	Yes	Yes	Yes	40% Yes / 60% No / 0% n/a				15	30% Yes / 66% No / 5% n/a				42	
e) Other (describe)	No	No	No	7% Yes / 93% No / 0% n/a				15	16% Yes / 80% No / 5% n/a				42	
n/a														

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 ¹			
	2019	2018	2017	2016
United States Dollars - USD	1.000	1.000	1.000	1.000
Canada Dollars - CAD	0.835	0.801	0.794	0.804
Euro - EUR	1.397	1.427	1.338	1.337
Denmark Kroner - DKK	0.148	0.147	0.136	0.139
Sweden Kronor - SEK	0.113	0.113	0.110	0.112
United Kingdom Pounds - GBP	1.455	1.452	1.422	1.450
Australia Dollars - AUD	0.689	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"> • EFT processing. • Check processing and postage. • Resolving failed, misdirected and lost payments. • Paying, but not calculating, adjustments to pensions. For example, many systems pay retroactive adjustments to pensions initiated based on incomplete data. • Collecting overpayments. • The processing of return payments from annuitants. • Stopping pension payments upon the death of an annuitant. <p>2. Processing deductions from the gross pension payment. For example:</p> <ul style="list-style-type: none"> • Processing and paying taxes and other governmental deductions, such as social security. • Processing legally required deductions such as liens on wages ordered by a judge. • Processing and effecting payment of optional deductions that the member can request, such as for health care or optional life insurance or union dues. • Processing and mailing of check stubs or EFT payment advices. • Processing and mailing of annual tax receipts to annuitants. • Keeping track of the rules and regulations for deductions. <p>3. Confirming payment eligibility. This includes:</p> <ul style="list-style-type: none"> • Cross referencing pension payrolls with death records. • Obtaining proof that someone is alive. • Checking eligibility. <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"> • Maintaining banking, address and beneficiary data for retirees. These belong in 3c Data Not from Employers. • The work of inflation adjustments. It belongs in 1b Pension Inceptions.
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"> • Adjusting pensions that were initiated based on incomplete or estimated data. • Reducing the annuity payment when pensioner begins receiving social security (NL: AOW, Canada: CPP). • Cost of living adjustments for pensioners. • Last survivor options that reduce the amount paid to the pensioner when a spouse dies. • High/Low construction: Reducing the gross annuity paid from the "High" amount to the "Low" amount. • Pop-up options that increase the amount paid to the pensioner if spouse dies first. • Redesign of the payment option (such as changing from 0% survivor to 50% survivor) at request of the annuitant. <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

<p>1c. Withdrawals, Refunds, Transfers-out</p>	<p>Payments that terminate your relationship with a member including:</p> <ul style="list-style-type: none"> • Withdrawals and Refunds of contributions. • Lump sum and commuted value payments. • Pre-retirement death that results in a final payment (refund, commuted value, death payment). • 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. • Hardship withdrawals (including partials). • Excess contribution refunds (For example, 50% Rule Refunds in Canada). • Individual rollovers of DB monies to internal DC accounts which effectively terminate the DB pension entitlement. • Individual transfers-out of monies to authorized external systems. • Collective transfers-out when an employer exits your system. <p>The activity also includes:</p> <ul style="list-style-type: none"> • 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). • Calculating, arranging and making estimated and final payments. • Related tax deductions, filings and reporting sent to members and tax authorities. • Reminders to speed up processing by external parties. • Collecting overpayments of lump sums or other terminating payments.
<p>1d. Purchases and Transfers-in</p>	<ul style="list-style-type: none"> • Service credit purchases for refunded past service, military service, etc. • Purchases that provide members with additional pensionable salary. • Individual transfers-in/ rollover of monies from external retirement systems. • Collective transfers-in such as when a new employer is merged into your system. <p>The activity also includes:</p> <ul style="list-style-type: none"> • Providing formal written estimates of purchases and transfers-in/ rollovers. • Posting purchases and applying payments. • Receiving purchase payments. • Related tax reporting sent to members and tax authorities. • Purchases applicant dealing directly with the Purchase division, subsequent to an initial request for a purchase.
<p>1e. Disability</p>	<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"> • Written disability estimates. • Disability approval process. • Applications and inceptions. • 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. • Monitoring and reviewing disabled pensioners and/ or temporarily disabled members for continuing entitlement, including checks on income and medical reviews. • Checks on eligibility of disability payments. • Rehabilitation of disability recipients (very few systems perform this activity). • Medical assessment reviews of new hires for eligibility for death and disability benefits. <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

<p>1f. Healthcare Administration</p>	<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"> • 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. • 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.
<p>1g. Optional and Third Party Administered Benefits</p>	<p>Examples of optional and third party administered benefits are:</p> <ul style="list-style-type: none"> • 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. • Third party administered benefits. For example, the defined contribution portion of hybrid DB/DC plans are often outsourced. <p>Include the costs of:</p> <ul style="list-style-type: none"> • Specialists responsible for optional and third party benefits, including design, vendor management and enrolment. • Fees paid to third parties to administer outsourced benefits. <p>Do NOT include:</p> <ul style="list-style-type: none"> • 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. • Actuarial and legal costs. These belong in activities 7c Actuarial and 7d Legal and Rules Interpretation.

2. Member Communication

<p>2a. Call Center</p>	<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"> • 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. • 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. • Email: reading, responding to simple requests, redirecting activity specific requests. • Written correspondence: reading, responding to simple requests, redirecting activity specific requests. <p>Includes contact center hardware and software.</p> <p>Do NOT include:</p> <ul style="list-style-type: none"> • 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. • Subsequent follow-up activity specific communication. For example, a disability applicant dealing directly with the disability division belongs in 1e Disability.
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Appendix C - Activity definitions

2b. Mail Room, Imaging	<ul style="list-style-type: none"> • Managing incoming and outgoing mail. • Incoming written correspondence: sorting, redirecting activity specific requests. • Scanning and imaging of incoming documents and forms to start a workflow process. <p>Do NOT include:</p> <ul style="list-style-type: none"> • 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.
2c. 1-on-1 Counseling	<ul style="list-style-type: none"> • Walk-in traffic that meets with counselors. • 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. • If written pension estimates are prepared during a counseling session the cost belongs in counseling and not in written estimates.
2d. Presentations and Group Counseling	<ul style="list-style-type: none"> • All presentations to members and retirees. • Group retirement counseling. • Webinars.
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"> • Annuity pensions including early and service retirement. • Giving customized written insight into pension consequences of divorce, death, layoffs, taxes, gaps in pension coverage, etc. • Lump sum or commuted value payouts. <p>Do NOT include:</p> <ul style="list-style-type: none"> • Estimates for transfers, purchases or refunds of contributions. These belong in 1c Withdrawals, Refunds, Transfers-out and 1d Purchases and Transfers-in. • 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. • Non-written estimates such as verbal estimates provided over the phone or obtained by the member from the website. • Time spent during a counseling session preparing written estimates. This belongs in 2c 1-on-1 Counseling.
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"> • Member statements. • Brochures and publications. • Newsletters and information letters. • Videos, CD-ROMS. • 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. • 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. • Welcome kits. • Letters informing members when they reach or approach certain milestones such as becoming vested, eligible for disability, eligibility for retirement, etc. <p>Do NOT include:</p> <ul style="list-style-type: none"> • 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. • 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. • Payment advices, check stubs, letters informing of changes in gross amount, and annual tax receipts prepared for retirees. These belong in 1a Pension Payments. • Employer targeted communication such as the employer portions of the website and employer newsletters. These belong in 3b Service to Employers.

Appendix C - Activity definitions

3. Collections and Data Maintenance	
3a. Data and Money from Employers	<ul style="list-style-type: none"> • Collection and cashing of member and employer contributions from employers. • Collection of member data (service credit, salary, personal information, employer, etc) from employers. • Reconciliation of required versus remitted money. • Analysis, correction and confirmation with employer of member data. • Setting up the data and money collection process for new employers. • Improving the data collection process for existing employers (i.e., converting paper systems to electronic, etc). <ul style="list-style-type: none"> • Registering member choices and instructions that are received through the employer. For example: <ul style="list-style-type: none"> ▫ Some hybrid DB/ DC systems require that a member's DC instructions come through the employer. ▫ Members at some Dutch systems can choose to contribute more to get early retirement. This choice is registered via the employer. <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"> • Advising employers of the required contribution rate (but excluding the actuarial cost of determining the rates which belongs in 7c Actuarial). • Billing employers for regular contributions, special contributions to cover funding shortfalls, additional payments to retirees funded by the employer, etc. • Collecting bad debts. But do not include legal costs. These belong in 7d Legal and Rules Interpretation. • 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. • 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).
3b. Service to Employers	<ul style="list-style-type: none"> • Training employers. • Helping new employers. • Maintaining employer relationships. • Presentations, counseling, workshops for employers. • Publications and newsletters for employers (as opposed to materials sent to members through employers). • Employer helpdesk/ Employer Call Center. • Employer website including the design, development and maintenance. as well as the pro rata share of the website infrastructure. • Advice, account management, HRM support re: pensions. <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"> • Retiree and Inactive data maintenance such as change of address, change of beneficiary, change in marital status, death, registering changes in payments, etc. • Tracking 'lost' inactive members. • If applicable, registering cost of living adjustments to the salary base of inactive members (a few systems do this). • 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. • 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. • Registering member choices and instructions that are received directly from the member. For example: <ul style="list-style-type: none"> ▫ Defined Contribution instructions obtained directly from active, inactive or retired members, such as changes in asset allocation. <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"> • Budgeting and forecasting. • Financial reporting including preparing the annual report. • The chief financial officer's office including assistants. Exclude time spent on investments. • Compliance unless it is done by the legal department. If this is the case compliance costs belong in 7d Legal and Rules Interpretation. • Risk. <p>Do NOT include:</p> <ul style="list-style-type: none"> • Internal auditing of activity processes, or auditing of financial statements. These belong in 7e Auditing. • Actuarial work. This belongs in 7c Actuarial. • Printing and mailing, including postage, of annual reports to members. This goes in 2f Mass Communication. • Administration work that pertains to the Investment division, such as investment accounting.
4b. Board, Strategy, Policy	<ul style="list-style-type: none"> • Board of Trustees: elections, fees, expenses, etc. • The CEO's office including assistants. Exclude time spent on investments (when in doubt we suggest 50% administration, 50% investments). • Benchmarking studies, strategic planning, fiduciary audits, asset liability studies. But exclude portions attributed to investments. • New and existing plan/ product development. • Strategic market research. <p>Do NOT include:</p> <ul style="list-style-type: none"> • Actuarial or legal advisors to the Board. These costs belong in 7c Actuarial and 7d Legal, respectively.
4c. Government and Public Relations	<ul style="list-style-type: none"> • Maintaining relationships with government, unions and employer organizations. • Anticipating, influencing and initiating plan rule changes by government, by unions, by employers, and by employer organizations. • Costs of coordination with organizations of employers and employees. • Formulating a Governmental Policy document. • Media relations. • 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. • General communication/ marketing to support the position of the pension system in the community or in the industry. • Memberships in Councils of Industry Funds, Company Funds or International Organizations.
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"> • Acquisitions of long lived assets such as computer hardware or a new building. • Major software development projects that will have an extended life. <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"> • 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.

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"> • Amortization of the IT portion major projects. This belong in activity 5c Amortization of IT major projects. • Amortization of leaseholds or office furniture. This belongs in activity 7a Building and Utilities.
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"> • Amortization of the non-IT portion major projects. This belongs in activity 5a Amortization of non-IT major projects. • Amortization/depreciation of IT infrastructure such as mainframes and servers. This belongs in 6a IT Strategy, Database Management and Applications (excl. major projects). • Amortization/depreciation of desktop hardware and software, or telecommunications equipment. This belongs in activity 6b. IT Desktop, Network, and Telecommunication. • Amortization of projects that relate to investment management.
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>
6. Information Technology	
6a. IT Strategy, Database Management and Applications (excl. major projects)	<ul style="list-style-type: none"> • IT management and strategy. • IT architecture. • Data center i.e., current year cost (whether cash or amortization) of mainframe, servers, data center • Training. • Head of the IT department's office. • Database management including: building databases, testing databases for data integrity, maintaining databases, ensuring operation of databases. • Application maintenance, enhancement and development that is not capitalized. • Project management that is not included in Major Projects. <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"> • User services including application licenses, personal computer hardware and software, help desk. • Network (i.e., LAN/ WAN, network security). • Telecommunications including call center equipment and mobile devices. If any of the above costs are capitalized, include current year amortization. <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"> • Building occupancy costs including rent, lease, amortization of leaseholds and building and office furniture depreciation. • Building depreciation if you own the building. • Building insurance. • Building maintenance services such as custodial, maintenance, security services etc. • Utilities. <p>Do NOT include the portion of the above that relates to investment management.</p>
7b. Human Resources	<ul style="list-style-type: none"> • Human resources staff and human resources consulting, including recruitment, training, career development, induction, disciplinary action etc. • Include time spent in the development of the HR framework, including policies and procedures. <p>Do NOT include:</p> <ul style="list-style-type: none"> • Time spent by non HR staff interviewing or training. For example the training of a call center agent belongs in activity 2a Call Center. • The portion of the above that relates to investment management. • Recruitment fees - these should be added to the staff costs of the people to which they relate in the different business units. <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"> • Actuarial work for financial and government reporting. • Actuarial work to determine funding policy, contribution rates or billing rates. • Quantifying the impact of changes in the plan. • Advice on plan design / redesign, funding and contributions, the employer's covenant, mergers and acquisitions etc. • Inception, disability and healthcare calculations that require actuarial input. • Formulating an Actuarial Policy document.
7d. Legal and Rule Interpretation	<ul style="list-style-type: none"> • All external legal fees. • Internal legal department (including legal fees charged by sister organizations or the corporate parent). • Appeals concerning pension inceptions (as well as any other appeals) if they are handled by the legal department or by external legal counsel. • Plan contract amendments. Adding new participating employers. • Interpretation of existing rule sets and laws. • Developing rules that simplify the interpretation of the plan contract and related legislation on behalf of staff, employers or members. • Support to the communications department in writing brochures and other communication material. <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"> • Fees paid to the external auditor, particularly for the audit opinion on the accounts. • 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. • The costs of internal audit and / or quality assurance departments.
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
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Appendix E - Service, cost and complexity model changes

Service

Changed the 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 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.