



Houston Firefighters' Relief and Retirement Fund 2013 Experience Study

Buck Consultants

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Houston Firefighters' Relief and Retirement Fund

Demographics and Data for Experience Study

	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Active	2,755	2,870	2,898	2,933	2,912	2,926
DROP	1,121	1,079	1,013	928	876	819
Terminated Vested	8	8	8	7	8	8
Retiree & Beneficiary	2,198	2,277	2,331	2,423	2,466	2,579
Disabled	262	273	278	303	324	327
Total	<u>6,344</u>	<u>6,507</u>	<u>6,528</u>	<u>6,594</u>	<u>6,586</u>	<u>6,659</u>

Participants Included

Salary Increase Rates

Continuing Actives and DROP members for each year (e.g. active in 2008 and 2009, or active in 2010 and 2011)
New hires are excluded in the year of hire (i.e. each exposure must have two complete years of pay)

Retirement Rates

Actives and DROP members who were eligible to retire (commence payment) during each year
This is any member with 20+ years of service

Years in DROP

DROP members
Also include actives who went directly to retirement (no DROP)

Service at DROP Entry

Actives eligible for DROP entry
This is any member with 20+ years of service

Withdrawal Rates

Actives not eligible to retire during each year
This is any member with less than 20 years of service

Disability Rates

All Actives

Mortality Rates

All members

NOTE: All year numbering in the study refers to fiscal year end.

Salary

Exhibit H Experience Analysis for Years in DROP at Retirement

All Retirement by Years in DROP (Reflecting Back-DROP Elections)

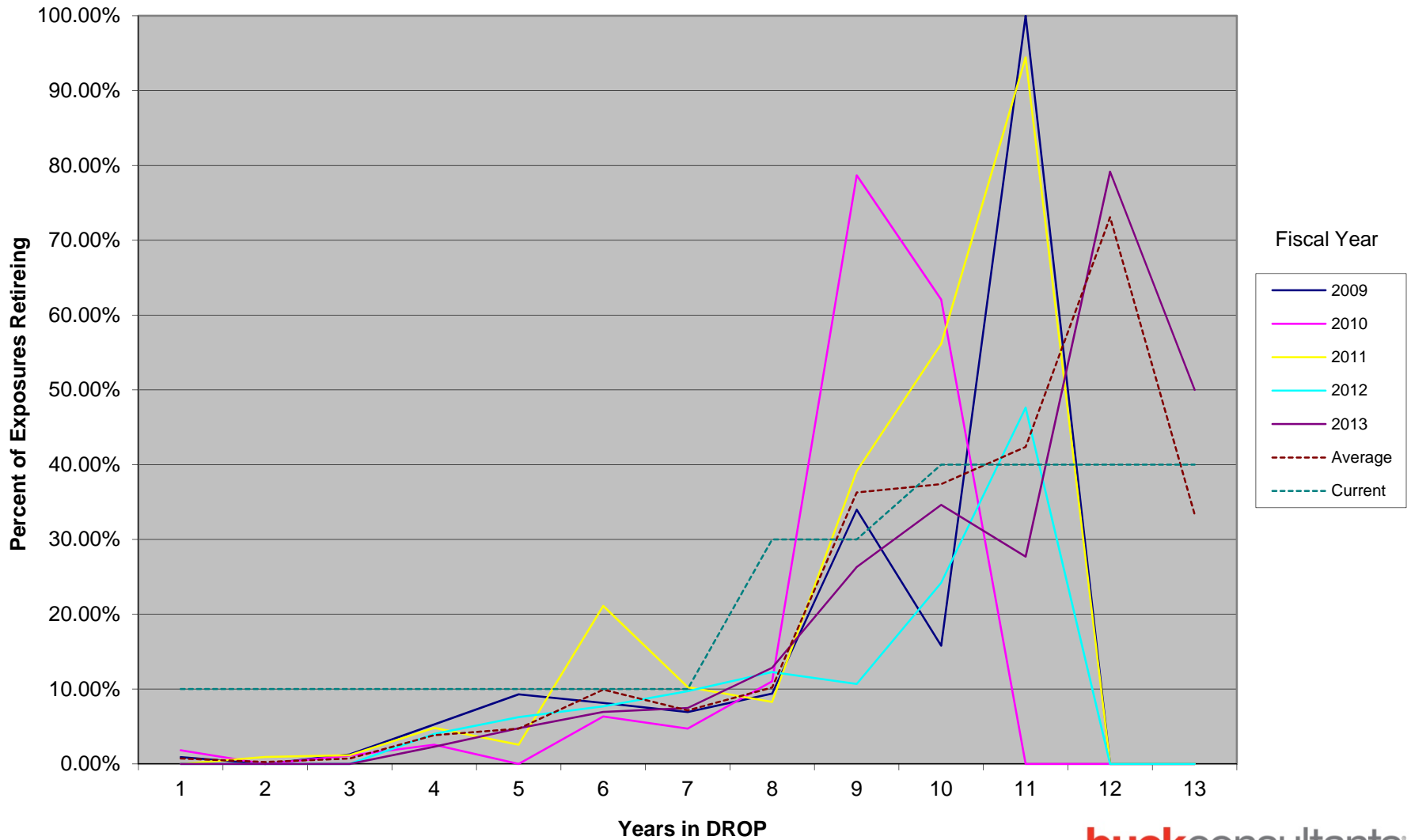
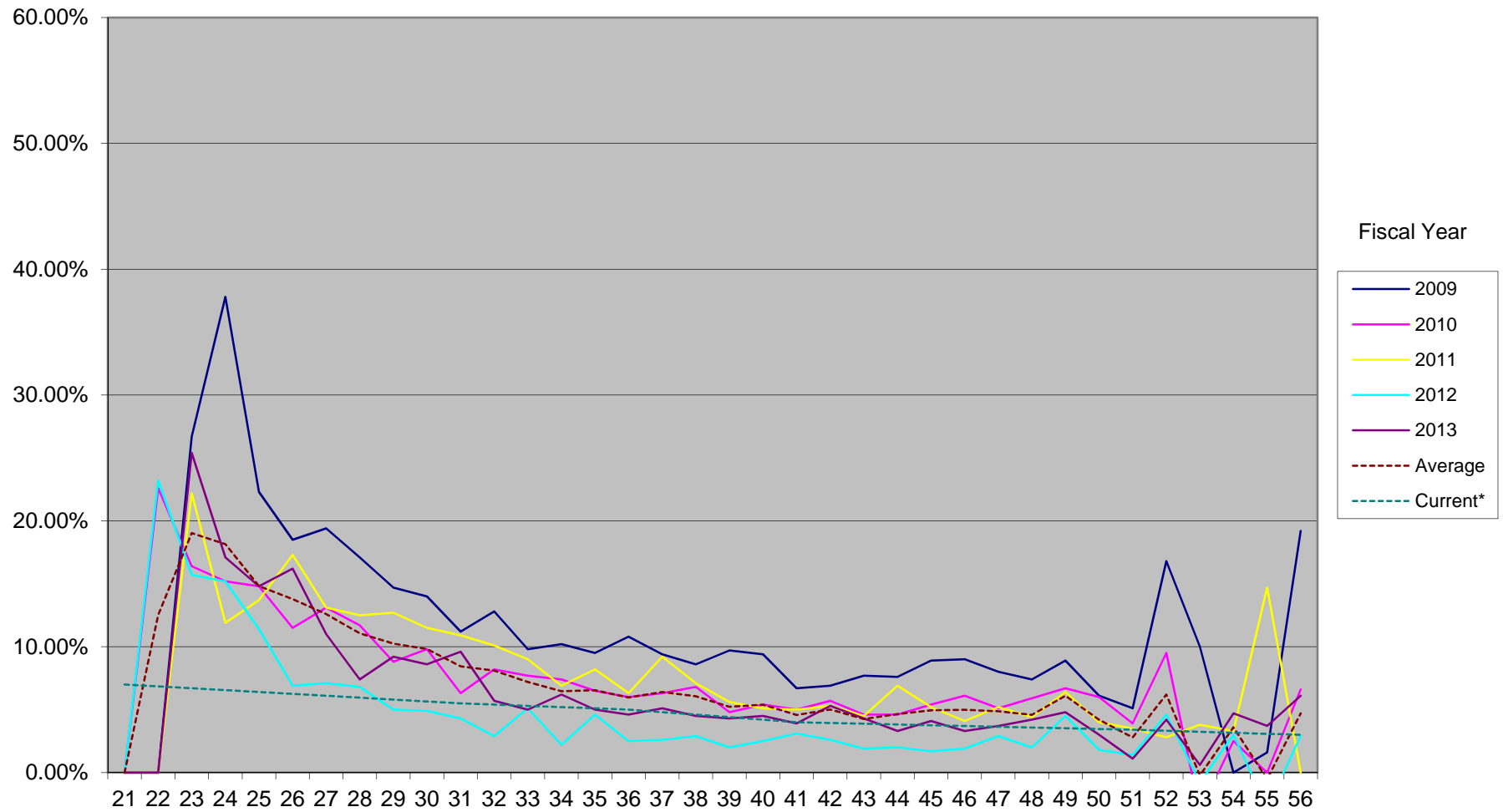


Exhibit B Experience Analysis for Salary Assumption

Pensionable Pay (Net of Inflation)



* Current salary scale assumption net of 3.0% inflation component.

Age

Exhibit C Experience Analysis for Salary Assumption

HFRRF Pay Increase Assumption

Age	Salary Experience Fiscal Year					Experience Average	Assumptions*
	2009	2010	2011	2012	2013	Current Study	2009 - 2013
25	24.40%	13.56%	10.07%	9.99%	12.80%	13.32%	6.25%
30	16.10%	8.56%	7.87%	3.49%	6.60%	8.67%	5.50%
35	11.60%	5.26%	4.57%	3.19%	3.00%	5.22%	5.00%
40	11.50%	4.16%	1.47%	1.09%	2.50%	4.05%	4.00%
45	11.00%	4.16%	1.57%	0.29%	2.10%	3.75%	3.70%
50	8.20%	4.76%	0.37%	0.39%	1.00%	2.87%	3.40%
55	3.70%	-1.24%	11.07%	-4.21%	1.70%	-1.41%	3.00%
Average	13.01%	6.14%	4.52%	2.25%	3.66%	5.73%	
CPI-U Inflation	-2.10%	1.24%	3.63%	1.41%	2.00%	1.24%	

* For purposes of comparison, a 3.0% inflation component was added to the salary increase assumptions.

Exhibit D Experience Analysis for Salary Assumption

Ratio of Highest 78 Pay Periods to Last 78 Pay Periods, Averaged by Rank

Rank	2010		2011		2012		2013		Difference
	Count	Ratio	Count	Ratio	Count	Ratio	Count	Ratio	
1035 Executive Assistant Fire Chief					1	106.87%	1	106.97%	0.10%
1021 Assistant Fire Chief	2	103.16%	4	106.71%	4	105.90%	4	102.83%	-3.07%
1036 Deputy Chief Communication & Index	1	103.75%	1	102.11%	1	102.64%	1	102.97%	0.33%
1025 Chief Fire Alarm Dispatcher					2	111.02%	2	111.53%	0.51%
1043 Assistant Arson Investigator	2	106.18%	1	100.63%	3	103.22%	3	104.44%	1.22%
1290 Master Mechanic	1	103.96%	1	102.81%	1	102.19%	1	101.68%	-0.51%
1047 Chief Inspector					1	103.97%	1	103.23%	-0.74%
1023 District Chief	21	107.14%	22	106.05%	19	105.99%	11	106.70%	0.71%
1044 Senior Investigator	4	108.29%	6	106.07%	7	108.06%	7	109.78%	1.72%
1291 Shop Supervisor	1	107.02%	1	104.70%	1	105.86%	1	106.73%	0.87%
1027 Senior Inspector	2	107.98%	2	104.76%	5	104.40%	5	104.12%	-0.28%
1037 Communications Senior Captain	8	106.41%	8	105.42%	10	107.39%	10	111.57%	4.18%
1030 Senior Captain	77	107.73%	79	106.04%	68	106.45%	61	107.00%	0.55%
1029 Communications Captain	34	107.75%	37	106.71%	34	107.72%	32	109.64%	1.92%
0470 Investigator	28	107.87%	32	105.02%	35	105.78%	29	106.74%	0.96%
1048 Inspector	43	107.29%	46	105.65%	58	106.45%	54	106.44%	-0.01%
1031 Captain	285	108.47%	285	107.04%	294	106.78%	272	107.43%	0.65%
1032 Engineer/Operator	775	107.45%	784	106.77%	822	106.79%	798	106.33%	-0.46%
1033 Firefighter	1102	107.56%	1199	106.11%	1252	104.40%	1343	104.10%	-0.30%
Average of All Ranks	2,386	107.63%	2,508	106.40%	2,618	105.62%	2,636	105.39%	-1.01%



RETIREMENT

Exhibit E Experience Analysis for Retirement Assumption

Retirement Rates - Active and DROP

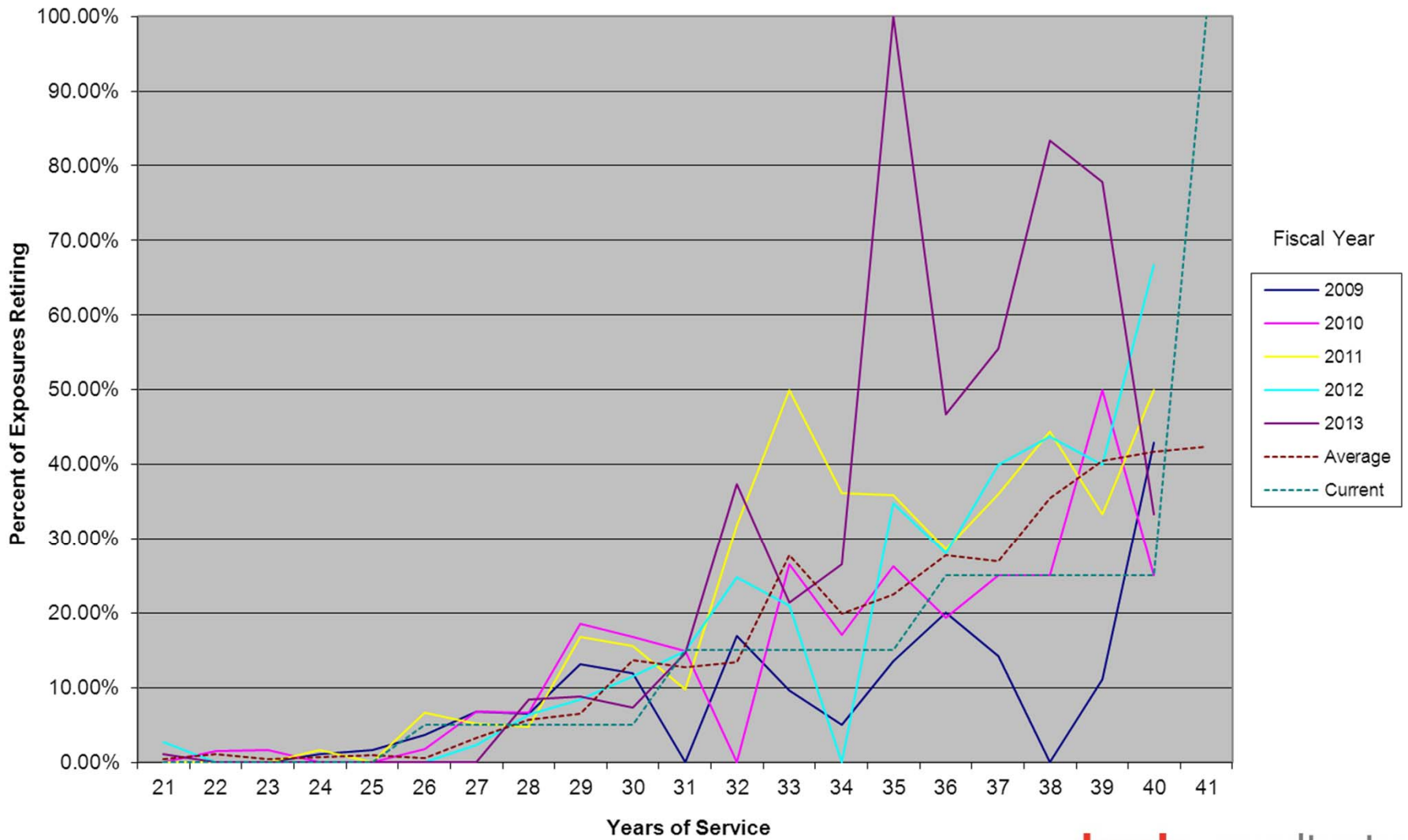


Exhibit F Experience Analysis for Retirement Assumption

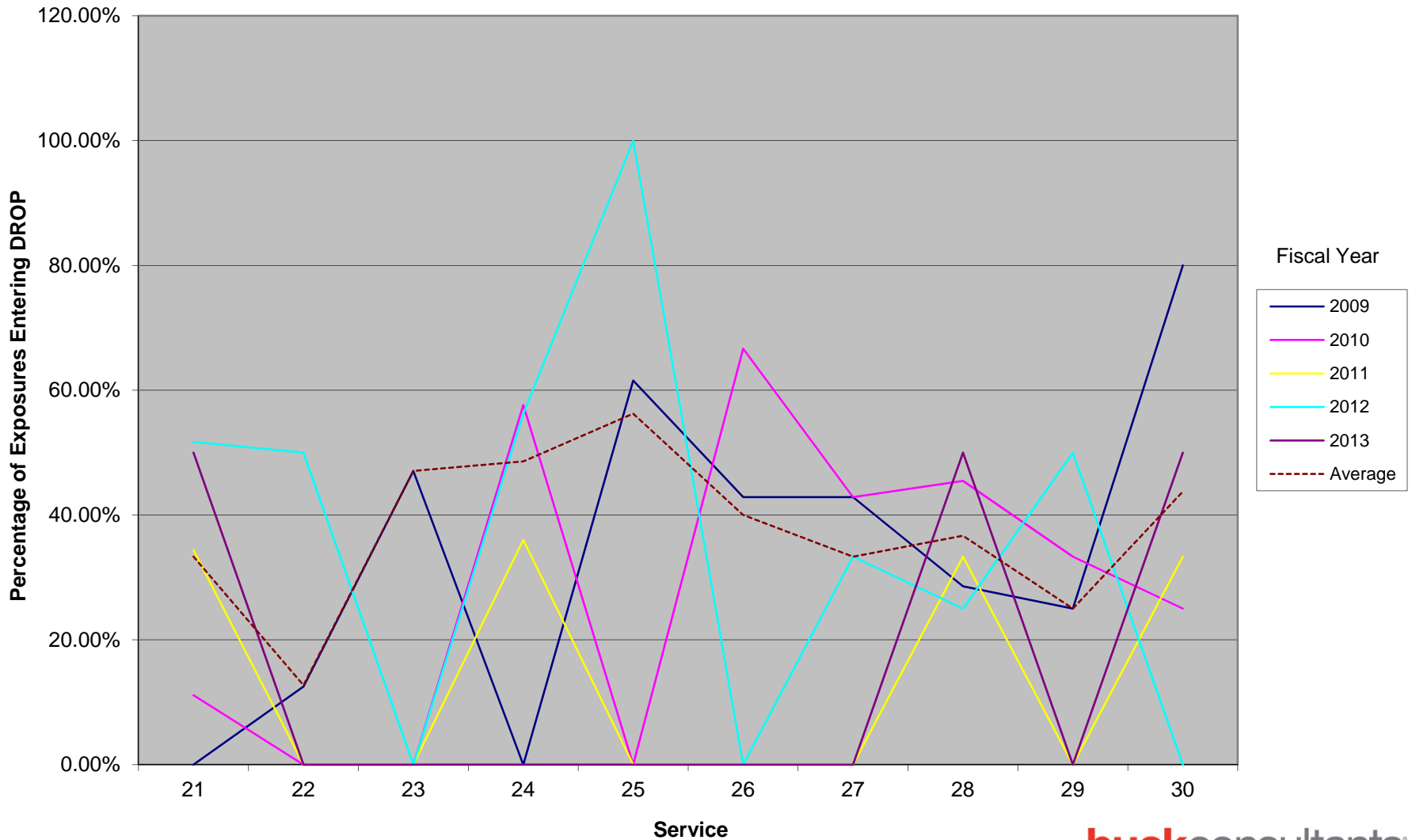
Years of Service	Retirement Experience by Fiscal Year					Experience Average Current Study	Assumptions 2009 - 2013	Suggested Assumption
	2009	2010	2011	2012	2013			
20	n/a	0.00%	1.33%	0.00%	0.00%	0.47%	0.00%	0.00%
21	0.00%	n/a	0.00%	2.74%	1.08%	1.12%	0.00%	0.00%
22	0.00%	1.49%	n/a	0.00%	0.00%	0.43%	0.00%	0.00%
23	0.00%	1.67%	0.00%	n/a	0.00%	0.62%	0.00%	0.00%
24	1.09%	0.00%	1.69%	0.00%	n/a	0.92%	0.00%	0.00%
25	1.68%	0.00%	0.00%	0.00%	0.00%	0.60%	5.00%	5.00%
26	3.60%	1.71%	6.59%	0.00%	0.00%	3.21%	5.00%	5.00%
27	6.77%	6.72%	5.22%	2.35%	0.00%	5.69%	5.00%	5.00%
28	6.47%	6.70%	4.80%	6.42%	8.43%	6.46%	5.00%	5.00%
29	13.19%	18.60%	16.77%	8.40%	8.82%	13.62%	5.00%	5.00%
30	11.90%	16.80%	15.53%	11.51%	7.34%	12.68%	15.00%	15.00%
31	0.00%	14.86%	9.71%	14.94%	14.63%	13.37%	15.00%	15.00%
32	16.95%	0.00%	31.75%	24.73%	37.33%	27.74%	15.00%	15.00%
33	9.62%	26.53%	50.00%	20.93%	21.43%	19.91%	15.00%	15.00%
34	5.00%	17.02%	36.11%	0.00%	26.47%	22.46%	15.00%	15.00%
35	13.51%	26.32%	35.90%	34.78%	100.00%	27.73%	25.00%	25.00%
36	20.00%	19.35%	28.57%	28.00%	46.67%	27.00%	25.00%	25.00%
37	14.29%	25.00%	36.00%	40.00%	55.56%	35.44%	25.00%	30.00%
38	0.00%	25.00%	44.44%	43.75%	83.33%	40.43%	25.00%	35.00%
39	11.11%	50.00%	33.33%	40.00%	77.78%	41.67%	25.00%	40.00%
40	42.86%	25.00%	50.00%	66.67%	33.33%	42.31%	100.00%	100.00%



SERVICE AT DROP ENTRY

Exhibit G Experience Analysis for Service at DROP Entry

Service at DROP Entry (Reflecting Back-DROP Elections)

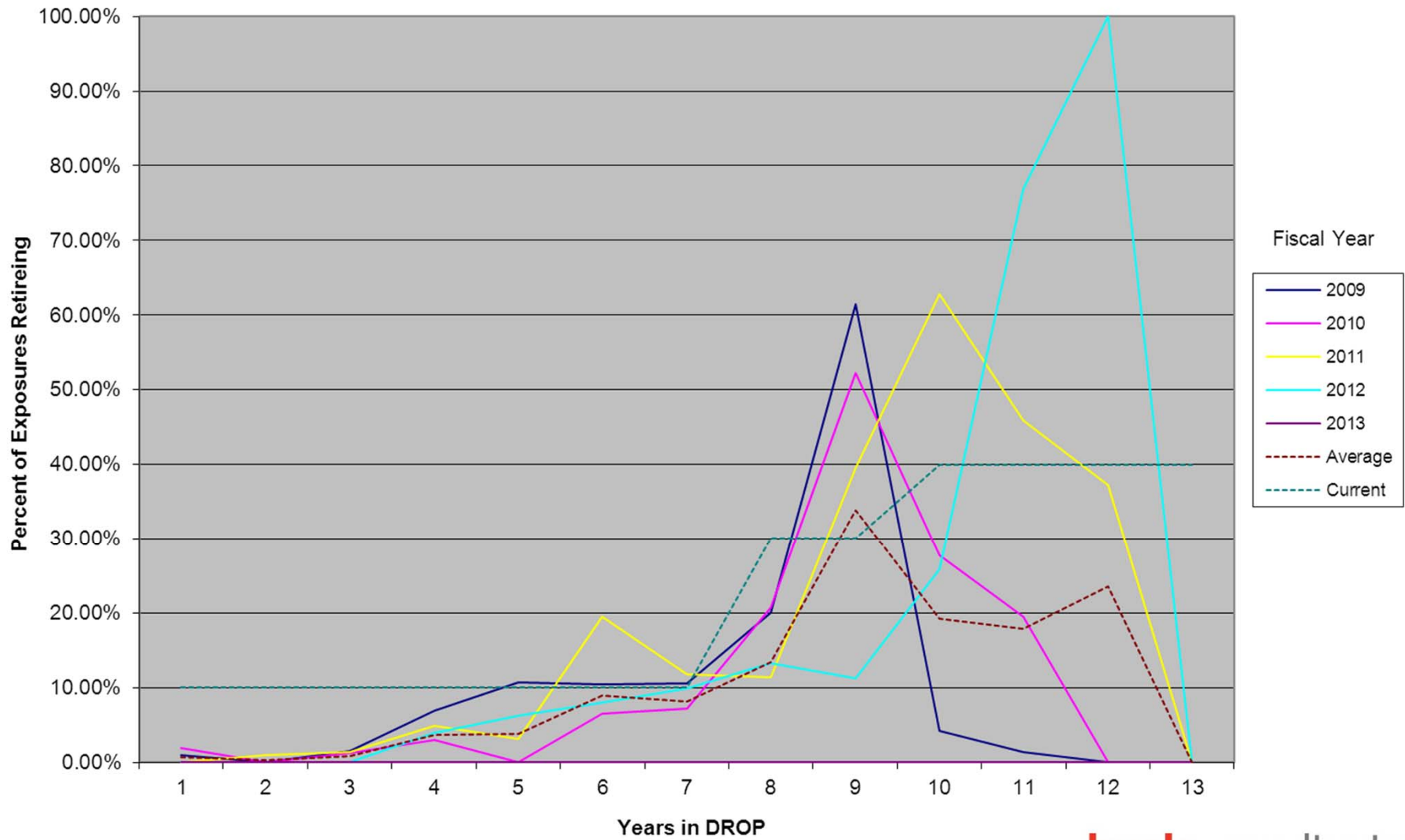




YEARS IN DROP

Exhibit H Experience Analysis for Years in DROP at Retirement

All Retirement by Years in DROP (Reflecting Back-DROP Elections)





WITHDRAWAL

Exhibit I Experience Analysis for Withdrawal Assumption

Withdrawal Rates

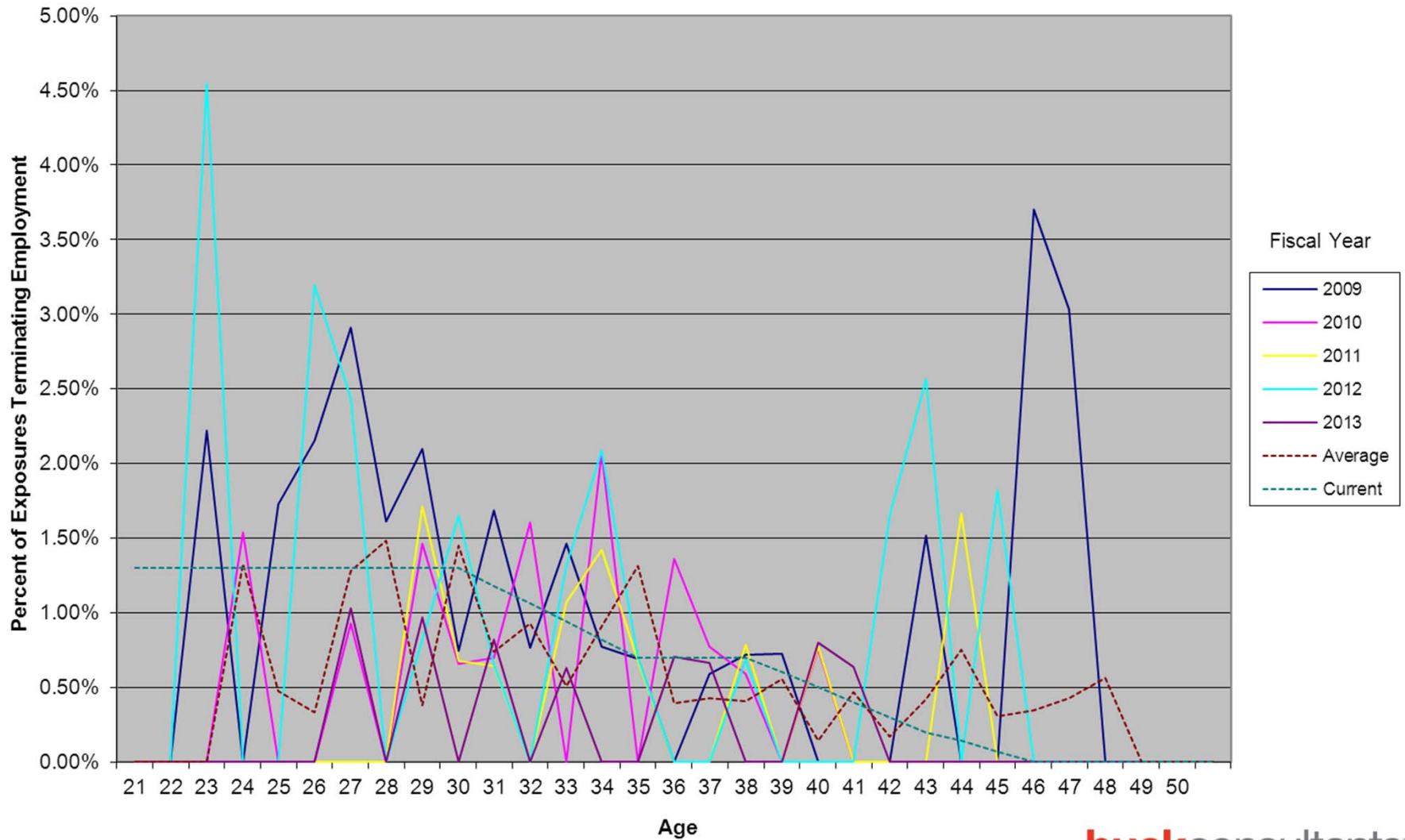


Exhibit J Experience Analysis for Withdrawal Assumption

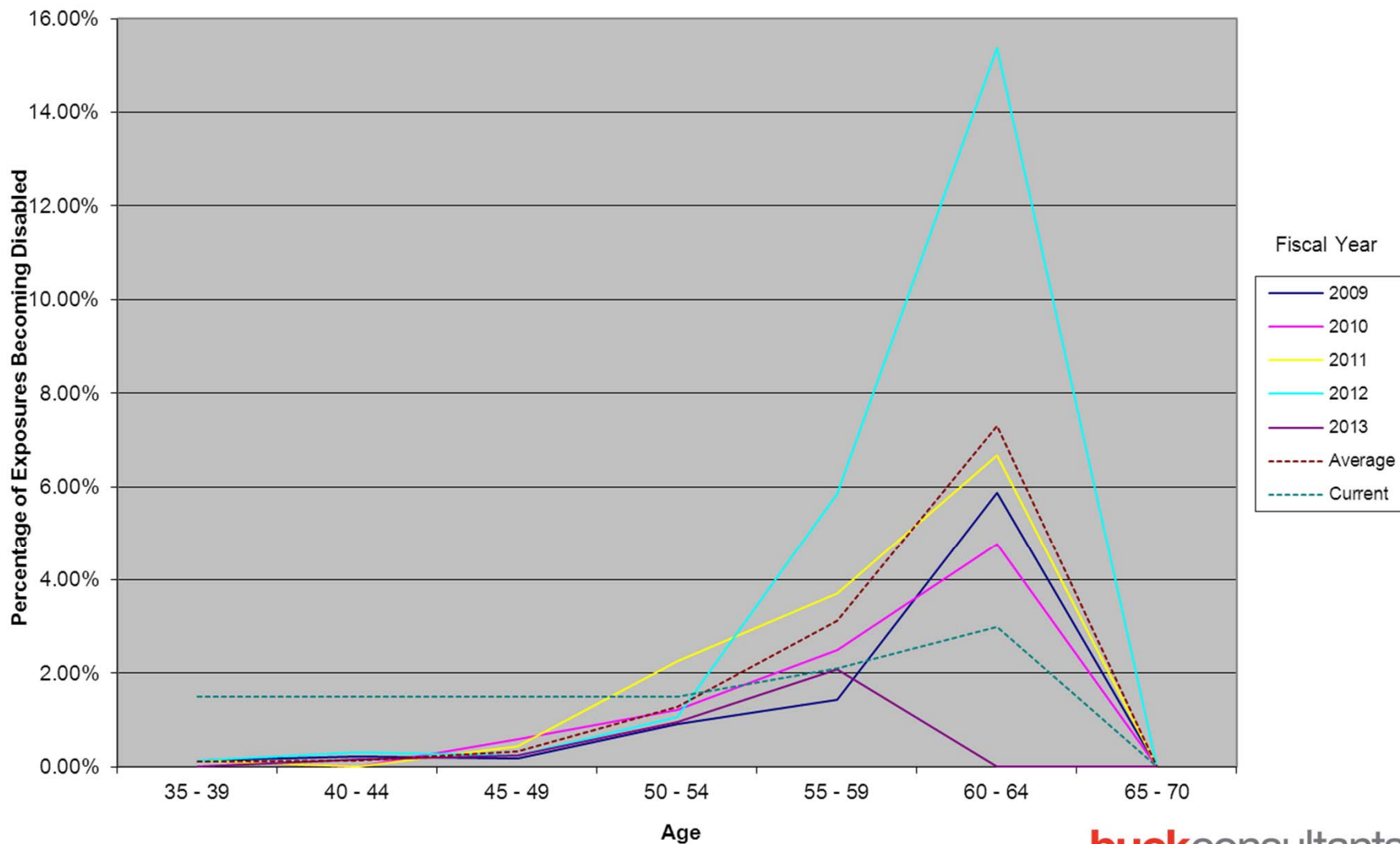
Age	Withdrawal Experience by Fiscal Year					Experience Average	Assumption 2009 - 2013
	2009	2010	2011	2012	2013		
21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.30%
25	1.72%	0.00%	0.00%	0.00%	0.00%	0.33%	1.30%
30	0.75%	0.65%	0.68%	1.65%	0.00%	0.74%	1.18%
35	0.69%	0.00%	0.68%	0.70%	0.00%	0.39%	0.70%
40	0.00%	0.76%	0.77%	0.00%	0.80%	0.47%	0.40%
45	0.00%	0.00%	0.00%	1.82%	0.00%	0.34%	0.00%
50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



DISABILITY

Exhibit K Experience Analysis for Disability Assumption

Disability Rates



Proposed retirement rates, 37 - 39 years of service

<u>Years of Service</u>	<u>Proposed</u>	<u>Current</u>
37	30%	25%
38	35%	25%
39	40%	25%

Proposed termination rates, ages 42 - 47

<u>Age</u>	<u>Proposed</u>	<u>Current</u>
42	0.45%	0.20%
43	0.45%	0.14%
44	0.45%	0.07%
45	0.45%	0%
46	0.45%	0%
47	0.45%	0%