DC Pension Plan/Group RRSP Conversion Exercise

This exercise is intended to help you understand the process involved in estimating the growth of existing savings (and contributions) in a defined contribution or group registered savings plan and how to convert the result to a **regular monthly income for life** as one option in designing your retirement income.

Step One - What Are Your Current Account Values & Contributions?

Current Value of your plan at work ____________

Do you want to include personal RRSP? ____________

What is the **total** current value of your plan(s)? **A.** _____________

What is your current annual gross salary? **B.** _____________

18% of your salary is your RRSP Room _____________

What are your Total Annual Contributions? **C.** _____________

Add ___% of B = Employer _____________

\+ ___% of B = Employee _____________

Plus Personal Contributions _____________

What is a reasonable expectation of long term growth? **D.** _____________

Canadian Money Market (Cash)	.4%
Canadian Short-Term Fixed Income	2.1%
Canadian Fixed Income	3.2%
Canadian Fixed Income Balanced	2.0%
Canadian Equity Balanced	2.7%
Canadian Dividend	5.0%
Canadian Equity	2.6%
Real Estate Equity	6.0%
Precious Metals	17.0%

Rates based on 10-year compound average returns at Jan. 31/10 (after inflation of 2%)
All rates net of MERs (Source: Globefund.com)

Step Two - What Will Be The Value of the Current Contributions at Retirement?

How many more years until you will retire? **E.** _____________

Using the tables on **next page**, look up the factor based on your years to retirement **(E)** and the growth rate of your investments **(D)**.

Current value (A) _______________ X Factor _____________ = F. _____________

Table - Future Worth of One Dollar With Amount Of Return Compounded Annually

Year	Annual Rate of Return 1%	2%	3%	4%
1	1.01	1.02	1.03	1.04
2	1.02	1.04	1.06	1.08
3	1.03	1.06	1.09	1.12
4	1.04	1.08	1.13	1.17
5	1.05	1.10	1.16	1.22
6	1.06	1.13	1.19	1.27
7	1.07	1.15	1.23	1.32
8	1.08	1.17	1.27	1.37
9	1.09	1.20	1.30	1.42
10	1.10	1.22	1.34	1.48
11	1.12	1.24	1.38	1.54
12	1.13	1.27	1.43	1.60
13	1.14	1.29	1.47	1.67
14	1.15	1.32	1.51	1.73
15	1.16	1.35	1.56	1.80
16	1.17	1.37	1.60	1.87
17	1.18	1.40	1.65	1.95
18	1.20	1.43	1.70	2.03
19	1.21	1.46	1.75	2.11
20	1.22	1.49	1.81	2.19
21	1.23	1.52	1.86	2.28
22	1.24	1.55	1.92	2.37
23	1.26	1.58	1.97	2.46
24	1.27	1.61	2.03	2.56
25	1.28	1.64	2.09	2.67
26	1.30	1.67	2.16	2.77
27	1.31	1.71	2.22	2.88
28	1.32	1.74	2.29	3.00
29	1.33	1.78	2.36	3.12
30	1.35	1.81	2.43	3.24
31	1.36	1.85	2.50	3.37
32	1.37	1.88	2.58	3.51
33	1.39	1.92	2.65	3.65
34	1.40	1.96	2.73	3.79
35	1.42	2.00	2.81	3.95
36	1.43	2.04	2.90	4.10
37	1.45	2.08	2.99	4.27
38	1.46	2.12	3.07	4.44
39	1.47	2.16	3.17	4.62
40	1.49	2.21	3.26	4.80

	Annual Rate of Return										
Year	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	1.05	1.06	1.07	1.08	1.09	1.10	1.11	1.12	1.13	1.14	1.15
2	1.10	1.12	1.15	1.17	1.19	1.21	1.23	1.25	1.28	1.30	1.32
3	1.16	1.19	1.23	1.26	1.30	1.33	1.37	1.40	1.44	1.48	1.52
4	1.22	1.26	1.31	1.36	1.41	1.46	1.52	1.57	1.63	1.69	1.75
5	1.28	1.34	1.40	1.47	1.54	1.61	1.69	1.76	1.84	1.93	2.01
6	1.34	1.42	1.50	1.59	1.68	1.77	1.87	1.97	2.08	2.20	2.31
7	1.41	1.50	1.61	1.71	1.83	1.95	2.08	2.21	2.35	2.50	2.66
8	1.48	1.59	1.72	1.85	1.99	2.14	2.31	2.48	2.66	2.85	3.06
9	1.55	1.69	1.84	2.00	2.17	2.36	2.56	2.77	3.00	3.25	3.52
10	1.63	1.79	1.97	2.16	2.37	2.59	2.84	3.10	3.40	3.71	4.05
11	1.71	1.90	2.11	2.33	2.58	2.85	3.15	3.48	3.84	4.23	4.65
12	1.80	2.01	2.25	2.52	2.81	3.14	3.50	3.90	4.34	4.82	5.35
13	1.89	2.13	2.41	2.72	3.07	3.45	3.88	4.36	4.90	5.50	6.15
14	1.98	2.26	2.58	2.94	3.34	3.80	4.31	4.86	5.54	6.26	7.08
15	2.08	2.40	2.76	3.17	3.64	4.18	4.79	5.47	6.25	7.14	8.14
16	2.18	2.54	2.95	3.43	3.97	4.60	5.31	6.13	7.07	8.14	9.36
17	2.30	2.69	3.16	3.70	4.33	5.05	5.90	6.87	7.99	9.28	10.76
18	2.41	2.85	3.38	4.00	4.72	5.56	6.54	7.69	9.02	10.58	12.38
19	2.53	3.03	3.62	4.32	5.14	6.12	7.26	8.61	10.20	12.06	14.23
20	2.65	3.21	3.87	4.67	5.60	6.73	8.06	9.65	11.52	13.74	16.37
21	2.79	3.40	4.14	5.03	6.11	7.40	8.95	10.80	13.02	15.67	18.82
22	2.93	3.60	4.43	5.44	6.66	8.14	9.93	12.10	14.71	17.86	21.65
23	3.07	3.82	4.74	5.87	7.26	8.95	11.03	13.55	16.63	20.36	24.89
24	3.23	4.05	5.07	6.34	7.91	9.85	12.24	15.18	18.79	23.21	28.63
25	3.39	4.29	5.43	6.86	8.62	10.83	13.59	17.00	21.23	26.46	32.92
26	3.56	4.55	5.81	7.40	9.40	11.92	13.08	19.04	23.99	30.17	37.86
27	3.73	4.82	6.21	7.99	10.25	13.11	16.74	21.33	27.11	34.39	43.54
28	3.92	5.11	6.65	8.63	11.17	14.42	18.58	23.88	30.63	39.20	50.07
29	4.12	5.42	7.11	9.32	12.17	15.86	20.62	26.75	34.62	44.69	57.58
30	4.32	5.74	7.61	10.06	13.27	17.45	22.90	29.95	39.12	50.95	66.21
31	4.54	6.09	8.15	10.87	14.46	19.19	25.41	33.56	44.20	58.08	76.14
32	4.77	6.45	8.72	11.74	15.76	21.11	28.21	37.58	49.95	66.22	87.57
33	5.00	6.84	9.33	12.68	17.18	23.23	31.31	42.09	56.44	75.49	100.70
34	5.25	7.25	9.98	13.69	18.73	25.55	34.75	47.14	63.78	86.05	115.81
35	5.52	7.69	10.68	14.79	20.41	28.10	38.58	52.80	72.07	98.10	133.18
36	5.79	8.15	11.42	15.97	22.25	30.91	42.82	59.14	81.44	111.83	153.15
37	6.08	8.64	12.22	17.25	24.25	34.00	47.53	66.23	92.02	127.49	176.13
38	6.39	9.15	13.08	18.63	26.44	37.40	52.76	74.18	103.99	145.34	202.54
39	6.71	9.70	14.00	20.12	28.82	41.15	58.56	83.08	117.51	165.69	232.93
40	7.04	10.29	14.97	21.73	31.41	45.26	65.00	93.05	132.78	188.88	267.86

Retirement/Life Challenge Ltd., 2010

Step Three - What Will Be The Value of My Future Contributions at Retirement?

Using the tables on **next two pages**, look up the factor based on the number of years to retirement (**E**), and your growth rate of your investments **(D)**:

Contributions (C) _______________ X Factor ____________ = G. _____________

Step Four - Total Plan Value At Retirement

The value of your current plan at retirement F. ________________

Add the value of contributions at retirement G. ________________

Total Value of your Plan at Retirement **H. _____________**

Table - Future Worth of One Dollar Invested Each Year With Interest (return) Payable And Reinvested at the End of Each Year

	Annual Rate of Return					
Year	1%	2%	3%	4%	5%	6%
1	1.00	1.00	1.00	1.00	1.00	1.00
2	2.01	2.02	2.03	2.04	2.05	2.06
3	3.03	3.06	3.09	3.12	3.15	3.18
4	4.06	4.12	4.18	4.25	4.31	4.37
5	5.10	5.20	5.31	5.42	5.53	5.64
6	6.15	6.31	6.47	6.63	6.80	6.98
7	7.21	7.43	7.66	7.90	8.14	8.39
8	8.29	8.58	8.89	9.21	9.55	9.90
9	9.37	9.75	10.16	10.58	11.03	11.49
10	10.46	10.95	11..46	12.01	12.58	13.18
11	11.57	12.17	12.81	13.49	14.21	14.97
12	12.68	13.41	14.19	15.03	15.92	16.87
13	13.81	14.68	15.62	16.63	17.71	18.88
14	14.95	15.97	17.09	18.29	19.60	21.02
15	16.10	17.29	18.60	20.02	21.58	23.27
16	17.26	18.64	20.16	21.82	23.66	23.67
17	18.43	20.01	21.76	23.70	25.84	28.21
18	19.61	21.41	23.41	25.65	28.13	30.91
19	20.81	22.84	25.12	27.67	30.54	33.76
20	22.02	24.30	26.87	29.78	33.07	36.78
21	23.24	25.78	28.68	31.97	35.72	39.99
22	24.47	27.30	30.54	34.25	38.51	43.39
23	25.72	28.84	32.45	36.62	41.43	47.00
24	26.97	30.42	34.43	39.08	44.50	50.82
25	28.24	32.03	36.46	41.65	47.73	54.86
26	29.53	33.67	38.55	44.31	51.11	59.16
27	30.82	35.34	40.71	47.08	54.67	63.71
28	32.13	37.05	42.93	49.97	58.40	68.53
29	33.45	38.79	45.22	52.97	62.32	73.64
30	34.78	40.57	47.58	56.08	66.44	79.06
31	36.13	42.38	50.00	59.33	70.76	84.80
32	37.49	44.23	52.50	62.70	75.30	90.89
33	38.87	46.11	55.08	66.21	80.06	97.34
34	40.26	48.03	57.73	69.86	85.07	104.18
35	41.66	49.99	60.46	73.65	90.32	111.44
36	43.08	51.99	63.28	77.60	95.84	119.12
37	44.51	54.03	66.17	81.70	101.63	127.27
38	45.95	56.11	69.16	85.97	107.71	135.90
39	47.41	58.24	72.23	90.41	114.10	145.06
40	48.89	60.40	75.40	95.03	120.80	154.76

	Annual Rate of Return								
Year	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2	2.07	2.08	2.09	2.10	2.11	2.12	2.13	2.14	2.15
3	3.22	3.25	3.28	3.31	2.34	3.37	3.41	3.44	3.47
4	4.44	4.50	5.57	4.64	4.71	4.78	4.85	4.92	4.89
5	5.75	5.87	5.99	6.10	6.23	6.35	6.48	6.61	6.74
6	7.15	7.33	7.52	7.71	7.91	8.11	8.32	8.54	8.75
7	8.65	8.92	9.20	9.49	9.78	10.09	10.41	10.73	11.07
8	10.26	10.64	11.03	11.43	11.86	12.30	12.76	13.23	13.73
9	11.98	12.49	13.02	13.58	14.16	14.77	15.42	16.09	16.78
10	13.82	14.49	15.19	15.94	16.72	17.55	18.42	19.34	20.30
11	15.78	16.65	17.56	18.53	19.56	20.66	21.81	23.05	24.35
12	17.89	18.98	20.14	21.38	22.71	24.13	25.65	27.27	29.00
13	20.14	21.50	22.95	24.52	56.21	28.03	29.99	32.09	34.35
14	22.55	24.22	26.02	27.98	30.10	32.39	34.88	37.58	40.51
15	25.13	27.15	29.36	31.77	34.41	37.28	40.42	43.84	47.58
16	27.89	30.32	33.00	35.95	39.19	42.75	46.67	50.98	55.72
17	30.84	33.75	36.97	40.55	44.50	48.88	53.74	59.12	65.08
18	34.00	37.45	41.30	45.60	50.40	55.75	61.73	68.39	75.84
19	37.38	41.45	46.02	51.11	56.94	63.44	70.75	78.97	88.21
20	41.00	45.76	51.16	57.73	64.20	72.05	80.95	91.03	102.44
21	44.87	50.42	56.77	64.00	72.27	81.70	92.47	104.77	118.81
22	49.01	55.46	62.87	71.40	81.21	92.50	105.49	120.44	137.63
23	53.44	60.89	59.53	79.54	91.15	104.60	120.21	138.30	159.28
24	58.18	66.77	76.79	88.50	102.17	118.16	136.83	158.66	184.17
25	63.25	73.10	84.70	98.35	114.41	133.33	155.62	181.87	212.79
26	68.88	79.95	93.32	109.18	128.00	150.33	176.85	208.33	245.71
27	74.48	87.35	102.72	121.10	143.08	169.37	200.84	238.50	283.57
28	80.70	95.34	112.97	134.21	159.82	190.70	227.95	272.89	327.10
29	87.35	103.97	124.14	148.63	178.40	214.58	258.58	312.09	377.17
30	94.46	113.28	136.31	164.49	199.02	241.33	293.20	356.79	434.75
31	102.07	123.35	149.58	181.94	221.91	271.29	332.32	407.74	500.96
32	110.22	134.21	164.04	201.14	247.32	304.85	376.52	465.82	577.10
33	118.93	145.95	179.80	222.25	275.53	342.43	426.46	532.04	664.67
34	128.26	158.63	196.98	245.48	306.84	384.52	482.90	607.52	765.37
35	138.24	172.32	215.71	271.02	341.59	431.66	546.68	693.57	881.17
36	148.91	187.10	236.13	299.13	380.16	484.46	618.75	791.67	1014.35
37	160.34	203.07	258.38	330.14	422.98	543.60	700.19	903.51	1167.50
38	172.56	220.32	282.63	364.04	470.51	609.83	792.21	1031.00	1343.62
39	185.64	238.94	309.07	401.45	523.27	684.01	896.20	1176.34	1546.17
40	199..64	259.06	337.88	442.59	581.83	767.09	1013.70	1342.03	1779.09

Step Five - Determine How Long You Will Need Income

What will be your age at retirement? **I.** ________________

Using the Life Expectancy Table below and the closest age to your age at retirement, indicate the number of years you expect to live (on average) after you retire.

J. ________________

Age	**Average Life Expectancy Based On 1995-1997 Statistics Canada Data**	
	Males	**Females**
25	76.6	82.0
30	76.8	82.1
35	77.1	82.2
40	77.4	82.4
45	77.8	82.6
50	78.3	82.9
55	**78.9**	**83.4**
60	**79.8**	**84.1**
65	**81.0**	**84.9**
70	82.7	86.0
75	84.4	87.4
80	87.2	89.3
85	90.3	91.7
90	93.8	94.7

Step Six - What Monthly Income Can I Expect At Retirement?

Using the annuity table below, your life expectancy **(J)** _______ and a **4%** return rate

Total plan value (H) ____________ X factor _____________ = K _____________

Divide K by 12 to get your monthly income L _____________

Annuity payment for $1 invested compounded annually

Yrs	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%
1	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200	1.1300
2	0.5226	0.5302	0.5378	0.5454	0.5531	0.5608	0.5685	0.5762	0.5839	0.5917	0.5995
3	0.3535	0.3603	0.3672	0.3741	0.3811	0.3880	0.3951	0.4021	0.4092	0.4163	0.4235
4	0.2690	0.2755	0.2820	0.2886	0.2952	0.3019	0.3087	0.3155	0.3223	0.3292	0.3362
5	0.2184	0.2246	0.2310	0.2374	0.2439	0.2505	0.2571	0.2638	0.2706	0.2774	0.2843
6	0.1846	0.1908	0.1970	0.2034	0.2098	0.2163	0.2229	0.2296	0.2364	0.2432	0.2502
7	0.1605	0.1666	0.1728	0.1791	0.1856	0.1921	0.1987	0.2054	0.2122	0.2191	0.2261
8	0.1425	0.1485	0.1547	0.1610	0.1675	0.1740	0.1807	0.1874	0.1943	0.2013	0.2084
9	0.1284	0.1345	0.1407	0.1470	0.1535	0.1601	0.1668	0.1736	0.1806	0.1877	0.1949
10	0.1172	0.1233	0.1295	0.1359	0.1424	0.1490	0.1558	0.1627	0.1698	0.1770	0.1843
11	0.1081	0.1141	0.1204	0.1268	0.1334	0.1401	0.1469	0.1540	0.1611	0.1684	0.1758
12	0.1005	0.1066	0.1128	0.1193	0.1259	0.1327	0.1397	0.1468	0.1540	0.1614	0.1690
13	0.0940	0.1001	0.1065	0.1130	0.1197	0.1265	0.1336	0.1408	0.1482	0.1557	0.1634
14	0.0885	0.0947	0.1010	0.1076	0.1143	0.1213	0.1284	0.1357	0.1432	0.1509	0.1587
15	0.0838	0.0899	0.0963	0.1030	0.1098	0.1168	0.1241	0.1315	0.1391	0.1468	0.1547
16	0.0796	0.0858	0.0923	0.0990	0.1059	0.1130	0.1203	0.1278	0.1355	0.1434	0.1514
17	0.0760	0.0822	0.0887	0.0954	0.1024	0.1096	0.1170	0.1247	0.1325	0.1405	0.1486
18	0.0727	0.0790	0.0855	0.0924	0.0994	0.1067	0.1142	0.1219	0.1298	0.1379	0.1462
19	0.0698	0.0761	0.0827	0.0896	0.0968	0.1041	0.1117	0.1195	0.1276	0.1358	0.1441
20	0.0672	0.0736	0.0802	0.0872	0.0944	0.1019	0.1095	0.1175	0.1256	0.1339	0.1424
21	0.0649	0.0713	0.0780	0.0850	0.0923	0.0998	0.1076	0.1156	0.1238	0.1322	0.1408
22	0.0627	0.0692	0.0760	0.0830	0.0904	0.0980	0.1059	0.1140	0.1223	0.1308	0.1395
23	0.0608	0.0673	0.0741	0.0813	0.0887	0.0964	0.1044	0.1126	0.1210	0.1296	0.1383
24	0.0590	0.0656	0.0725	0.0797	0.0872	0.0950	0.1030	0.1113	0.1198	0.1285	0.1373
25	0.0574	0.0640	0.0710	0.0782	0.0858	0.0937	0.1018	0.1102	0.1187	0.1275	0.1364
26	0.0559	0.0626	0.0696	0.0769	0.0846	0.0925	0.1007	0.1092	0.1178	0.1267	0.1357
27	0.0546	0.0612	0.0683	0.0757	0.0834	0.0914	0.0997	0.1083	0.1170	0.1259	0.1350
28	0.0533	0.0600	0.0671	0.0746	0.0824	0.0905	0.0989	0.1075	0.1163	0.1252	0.1344
29	0.0521	0.0589	0.0660	0.0736	0.0814	0.0896	0.0981	0.1067	0.1156	0.1247	0.1339
30	0.0510	0.0578	0.0651	0.0726	0.0806	0.0888	0.0973	0.1061	0.1150	0.1241	0.1334
31	0.0500	0.0569	0.0641	0.0718	0.0798	0.0881	0.0967	0.1055	0.1145	0.1237	0.1330
32	0.0490	0.0559	0.0633	0.0710	0.0791	0.0875	0.0961	0.1050	0.1140	0.1233	0.1327
33	0.0482	0.0551	0.0625	0.0703	0.0784	0.0869	0.0956	0.1045	0.1136	0.1229	0.1323
34	0.0473	0.0543	0.0618	0.0696	0.0778	0.0863	0.0951	0.1041	0.1133	0.1226	0.1321
35	0.0465	0.0536	0.0611	0.0690	0.0772	0.0858	0.0946	0.1037	0.1129	0.1223	0.1318