

# life\_insurance\_solutions

*Marcus Milazzo*

*11/21/2017*

x	Lives	Epected Deaths	Premium Collected	Payout for Deaths	PV Premiums at age 40	PV Payouts at age 40
40	93131.64	259.02	223515936	38853000	223515936	38853000
41	92872.62	276.92	222894288	41538000	214321430.8	39940384.62
42	92595.7	296.47	222229680	44470500	205463831.4	41115477.07
43	92299.23	317.76	221518152	47664000	196928830.5	42373122.44
44	91981.47	340.97	220755528	51145500	188702750.5	43719387.75
45	91640.5	366.25	219937200	54937500	180772346.5	45154620.43
46	91274.25	393.77	219058200	59065500	173124877.4	46680322.62
47	90880.48	423.7	218113152	63555000	165748069.5	48296576.62
48	90456.78	456.23	217096272	68434500	158630119.5	50004418.83
49	90000.55	491.55	216001320	73732500	151759662.3	51803476.48
50	89509	529.89	214821600	79483500	145125775.6	53696204.61
51	88979.11	571.43	213549864	85714500	138717919.6	55678504.76
52	88407.68	616.42	212178432	92463000	132526022.6	57752117
53	87791.26	665.06	210699024	99759000	126540373.8	59912670.26
54	87126.2	717.6	209102880	107640000	120751702.9	62159417.91
55	86408.6	774.27	207380640	116140500	115151107.9	64488696.98
56	85634.33	835.26	205522392	125289000	109730085.4	66892821.42
57	84799.07	900.82	203517768	135123000	104480577.1	69368533.1
58	83898.25	971.14	201355800	145671000	99394885.21	71907302.02
59	82927.11	1046.38	199025064	156957000	94465738.82	74498450.95
60	81880.73	1126.72	196513752	169008000	89686311.16	77133045
61	80754.01	1212.23	193809624	181834500	85050175.42	79795088.62
62	79541.78	1303	190900272	195450000	80551398.08	82471180.32
63	78238.78	1399	187773072	209850000	76184480	85141671.05
64	76839.78	1500.15	184415472	225022500	71944435.83	87786109.46
65	75339.63	1606.26	180815112	240939000	67826786.61	90380267.22
66	73733.37	1717.04	176960088	257556000	63827598.4	92897676.08
67	72016.33	1832.02	172839192	274803000	59943495.75	95306233.92
68	70184.31	1950.65	168442344	292597500	56171726.93	97574674.4
69	68233.66	2072.12	163760784	310818000	52510127.06	99664231.41
70	66161.54	2195.46	158787696	329319000	48957210.92	101535195.4
71	63966.08	2319.46	153518592	347919000	45512161.34	103144156.4
72	61646.62	2442.69	147951888	366403500	42174860.42	104446226.9
73	59203.93	2563.43	142089432	384514500	38945885.38	105393183.9
74	56640.5	2679.7	135937200	401955000	35826533.11	105936080.2
75	53960.8	2789.29	129505920	418393500	32818803.68	106027385.8

76	51171.51	2889.7	122811624	433455000	29925351.45	105619425.8
77	48281.81	2978.21	115876344	446731500	27149462.15	104667782.3
78	45303.6	3051.98	108728640	457797000	24494978.49	103134994.3
79	42251.62	3107.98	101403888	466197000	21966171.71	100987876.9
80	39143.64	3143.27	93944736	471490500	19567659.31	98206305.81
81	36000.37	3154.96	86400888	473244000	17304190.79	94780327.55
82	32845.41	3140.46	78828984	471069000	15180486.1	90716079.86
83	29704.95	3097.61	71291880	464641500	13200989.26	86036831.25
84	26607.34	3024.89	63857616	453733500	11369615.34	80785592.79
85	23582.45	2921.55	56597880	438232500	9689467.17	75024708.02
86	20660.9	2787.91	49586160	418186500	8162569.079	68839292.94
87	17872.99	2625.41	42895176	393811500	6789558.069	62333490.54
88	15247.58	2436.75	36594192	365512500	5569444.442	55629088.95
89	12810.83	2225.92	30745992	333888000	4499402.903	48861543.86
90	10584.91	1998.156	25403784	299723400	3574632.886	42174863.49
91	8586.754	1759.682	20608209.6	263952300	2788302.952	35712902.36
92	6827.072	1517.487	16384972.8	227623050	2131631.264	29613012.83
93	5309.585	1278.861	12743004	191829150	1594060.633	23996484.37
94	4030.724	1050.913	9673737.6	157636950	1163573.926	18960845.58
95	2979.811	840.045	7151546.4	126006750	827115.7662	14573375.29
96	2139.766	651.443	5135438.4	97716450	571097.8477	10866775.13
97	1488.323	488.6772	3571975.2	73301580	381951.3901	7838139.63
98	999.6458	353.4741	2399149.92	53021115	246674.1884	5451489.464
99	646.1717	245.6771	1550812.08	36851565	153317.651	3643249.529
100	400.4946	163.4494	961187.04	24517410	91370.82548	2330634.827
101	237.0452	103.656	568908.48	15548400	52000.64255	1421189.557
102	133.3892	62.37457	320134.08	9356185.5	28136.16312	822302.8344
103	71.01463	35.43584	170435.112	5315376	14403.19016	449193.6573
104	35.57879	18.90227	85389.096	2835340.5	6938.549656	230394.1811
105	16.67652	9.410455	40023.648	1411568.25	3127.156498	110289.6674
106	7.266065	4.343847	17438.556	651577.05	1310.117134	48951.43024
107	2.922218	1.845778	7013.3232	276866.7	506.629087	20000.32216
108	1.07644	0.7163166	2583.456	107447.49	179.4460888	7463.270841
109	0.3601234	0.2517149	864.29616	37757.235	57.72476477	2521.736888
110	0.1084085	0.07934139	260.1804	11901.2085	16.70862939	764.2884787
111	0.02906711	0.022202482	69.761064	3330.3723	4.307705509	205.6485707
112	0.006864628	0.005454072	16.4751072	818.1108	0.9782003629	48.57487552

113	0.001410556	0.001161733	3.3853344	174.25995	0.1932714948	9.948642301
114	0.000248823	2.12E-04	0.5971752	3.18E+01	0.03278194034	1.74E+00
115	3.71E-05	3.25E-05	8.90E-02	4.87E+00	4.70E-03	2.57E-01
116	4.61E-06	4.14E-06	1.11E-02	6.21E-01	5.62E-04	3.15E-02
117	4.68E-07	4.30E-07	1.12E-03	6.45E-02	5.48E-05	3.15E-03
118	3.82E-08	3.58E-08	9.17E-05	5.36E-03	4.30E-06	2.52E-04
119	2.44E-09	2.32E-09	5.86E-06	3.48E-04	2.64E-07	1.57E-05
120	1.20E-10	1.16E-10	2.88E-07	1.73E-05	1.25E-08	7.52E-07
121	4.39E-12	4.27E-12	1.05E-08	6.41E-07	4.40E-10	2.67E-08
122	1.17E-13	1.15E-13	2.81E-10	1.72E-08	1.13E-11	6.91E-10
123	2.20E-15	2.17E-15	5.28E-12	3.26E-10	2.04E-13	1.26E-11
124	2.82E-17	2.80E-17	6.77E-14	4.19E-12	2.51E-15	1.56E-13
125	2.38E-19	2.37E-19	5.71E-16	3.55E-14	2.04E-17	1.27E-15
126	1.26E-21	1.26E-21	3.02E-18	1.88E-16	1.04E-19	6.46E-18
127	4.04E-24	4.03E-24	9.70E-21	6.05E-19	3.20E-22	1.99E-20
128	7.45E-27	7.44E-27	1.79E-23	1.12E-21	5.67E-25	3.54E-23
129	7.47E-30	7.47E-30	1.79E-26	1.12E-24	5.46E-28	3.41E-26
130	3.85E-33	3.85E-33	9.24E-30	5.77E-28	2.71E-31	1.69E-29
131	9.54E-37	9.54E-37	2.29E-33	1.43E-31	6.45E-35	4.03E-33
132	1.06E-40	1.06E-40	2.54E-37	1.59E-35	6.89E-39	4.31E-37
133	4.92E-45	4.92E-45	1.18E-41	7.38E-40	3.08E-43	1.92E-41
134	8.70E-50	8.70E-50	2.09E-46	1.30E-44	5.23E-48	3.27E-46
135	5.35E-55	5.35E-55	1.28E-51	8.02E-50	3.09E-53	1.93E-51
136	1.03E-60	1.03E-60	2.47E-57	1.54E-55	5.73E-59	3.58E-57
137	5.61E-67	5.61E-67	1.35E-63	8.41E-62	3.00E-65	1.87E-63
138	7.58E-74	7.58E-74	1.82E-70	1.14E-68	3.90E-72	2.43E-70
139	2.23E-81	2.23E-81	5.35E-78	3.35E-76	1.10E-79	6.89E-78
				<b>Total</b>	4222283791	3972826363
				<b>Profit</b>		249457428.48