

# SUPERINTENDENCIA FINANCIERA DE COLOMBIA

## Anexo 8: Tablas de mortalidad para la población del servicio social complementario de beneficios económicos periódicos – BEPS

(Resolución 0110 de 2014)

Convenciones aplicables

$x$  : Edad actuarial

$l(x)$  : Indica el número de sobrevivientes a la edad  $x$  tomando un grupo inicial supuesto de 1'000.000 de personas de edad 15 años.

$d(x)$  : Indica el número de personas que fallecen a la edad  $x$ , sin alcanzar la edad  $x+1$ , donde  $d(x) = l(x) - l(x+1)$ .

$q(x)$  : Indica la probabilidad de fallecer a la edad  $x$ , sin alcanzar la edad  $x+1$ .  
Esto es  $q(x) = d(x)/l(x)$ .

$e^{\circ}(x)$  : Esperanza de vida completa. Tiempo esperado de vida de una persona de edad  $x$ , antes de morir.

TABLA DE MORTALIDAD BEPS HOMBRES				
x	l(x)	d(x)	q(x)	$e^{\circ}(x)$
15	1,000,000	1,129	0.001129	62.2
16	998,871	1,135	0.001137	61.2
17	997,735	1,145	0.001147	60.3
18	996,591	1,153	0.001157	59.4
19	995,437	1,165	0.001171	58.4
20	994,272	1,178	0.001185	57.5
21	993,094	1,194	0.001202	56.6
22	991,899	1,213	0.001223	55.6
23	990,687	1,232	0.001243	54.7
24	989,455	1,255	0.001268	53.8
25	988,200	1,280	0.001296	52.9
26	986,920	1,307	0.001325	51.9
27	985,613	1,338	0.001357	51.0
28	984,275	1,372	0.001393	50.1
29	982,903	1,408	0.001432	49.1
30	981,495	1,446	0.001474	48.2
31	980,049	1,491	0.001521	47.3
32	978,558	1,538	0.001572	46.3
33	977,020	1,588	0.001625	45.4
34	975,432	1,643	0.001685	44.5
35	973,789	1,702	0.001748	43.6
36	972,087	1,765	0.001815	42.6
37	970,323	1,832	0.001888	41.7
38	968,490	1,904	0.001966	40.8
39	966,586	1,979	0.002048	39.9
40	964,607	2,061	0.002137	38.9
41	962,546	2,147	0.002230	38.0
42	960,399	2,237	0.002329	37.1
43	958,162	2,332	0.002434	36.2
44	955,830	2,498	0.002614	35.3
45	953,331	2,685	0.002817	34.4
46	950,646	2,891	0.003041	33.5
47	947,755	3,113	0.003284	32.6
48	944,643	3,355	0.003552	31.7
49	941,287	3,620	0.003846	30.8
50	937,667	3,906	0.004166	29.9

TABLA DE MORTALIDAD BEPS MUJERES				
x	l(x)	d(x)	q(x)	$e^{\circ}(x)$
15	1,000,000	293	0.000293	68.5
16	999,707	301	0.000301	67.5
17	999,406	309	0.000309	66.5
18	999,097	318	0.000318	65.5
19	998,779	329	0.000329	64.5
20	998,450	339	0.000340	63.6
21	998,111	351	0.000352	62.6
22	997,760	364	0.000365	61.6
23	997,396	378	0.000379	60.6
24	997,018	393	0.000394	59.6
25	996,625	411	0.000412	58.7
26	996,214	429	0.000431	57.7
27	995,785	449	0.000451	56.7
28	995,336	472	0.000474	55.7
29	994,864	497	0.000499	54.8
30	994,367	524	0.000526	53.8
31	993,844	553	0.000556	52.8
32	993,291	585	0.000589	51.9
33	992,706	620	0.000625	50.9
34	992,085	659	0.000664	49.9
35	991,427	702	0.000708	49.0
36	990,725	749	0.000756	48.0
37	989,976	799	0.000807	47.0
38	989,177	855	0.000865	46.1
39	988,321	918	0.000928	45.1
40	987,404	985	0.000997	44.1
41	986,419	1,059	0.001073	43.2
42	985,360	1,139	0.001156	42.2
43	984,222	1,228	0.001248	41.3
44	982,993	1,325	0.001348	40.3
45	981,668	1,432	0.001459	39.4
46	980,236	1,549	0.001580	38.4
47	978,687	1,676	0.001712	37.5
48	977,011	1,816	0.001859	36.6
49	975,195	1,969	0.002020	35.6
50	973,225	2,137	0.002196	34.7

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TABLA DE MORTALIDAD BEPS HOMBRES				
x	l(x)	d(x)	q(x)	e <sup>v</sup> (x)
51	933,761	4,218	0.004517	29.0
52	929,543	4,557	0.004902	28.2
53	924,986	4,923	0.005322	27.3
54	920,063	5,322	0.005784	26.4
55	914,741	5,700	0.006231	25.6
56	909,041	6,119	0.006731	24.7
57	902,922	6,582	0.007290	23.9
58	896,340	7,094	0.007914	23.1
59	889,246	7,658	0.008612	22.3
60	881,588	8,279	0.009392	21.5
61	873,308	8,962	0.010262	20.7
62	864,346	9,711	0.011236	19.9
63	854,635	10,715	0.012537	19.1
64	843,920	11,778	0.013956	18.3
65	832,142	12,898	0.015500	17.6
66	819,244	14,076	0.017181	16.8
67	805,168	15,307	0.019011	16.1
68	789,861	16,589	0.021003	15.4
69	773,272	17,917	0.023170	14.7
70	755,355	19,282	0.025527	14.1
71	736,073	20,679	0.028094	13.4
72	715,394	22,094	0.030884	12.8
73	693,300	23,515	0.033918	12.2
74	669,785	24,927	0.037217	11.6
75	644,857	26,312	0.040803	11.0
76	618,545	27,648	0.044699	10.5
77	590,897	28,913	0.048931	10.0
78	561,984	30,083	0.053529	9.4
79	531,901	31,126	0.058519	9.0
80	500,775	32,016	0.063933	8.5
81	468,759	32,515	0.069364	8.0
82	436,244	32,830	0.075255	7.6
83	403,414	32,938	0.081648	7.2
84	370,476	32,818	0.088583	6.8
85	337,658	32,451	0.096107	6.4
86	305,207	31,824	0.104271	6.0
87	273,383	30,927	0.113128	5.6
88	242,456	29,758	0.122737	5.3
89	212,697	28,323	0.133163	4.9
90	184,374	26,637	0.144474	4.6
91	157,737	24,725	0.156745	4.3
92	133,012	22,620	0.170060	4.0
93	110,392	20,368	0.184505	3.8
94	90,024	18,021	0.200177	3.5
95	72,004	15,638	0.217180	3.3
96	56,366	13,281	0.235628	3.0
97	43,084	11,014	0.255642	2.8
98	32,070	8,895	0.277357	2.6
99	23,175	6,974	0.300916	2.4
100	16,202	5,289	0.326476	2.2
101	10,912	3,865	0.354208	2.0
102	7,047	2,708	0.384295	1.8
103	4,339	1,809	0.416937	1.7
104	2,530	1,144	0.452353	1.5
105	1,385	680	0.490776	1.4
106	706	376	0.532464	1.3
107	330	191	0.577692	1.1
108	139	87	0.626762	1.0
109	52	35	0.680000	0.8
110	17	17	1.000000	0.5

TABLA DE MORTALIDAD BEPS MUJERES				
x	l(x)	d(x)	q(x)	e <sup>v</sup> (x)
51	971,088	2,321	0.002390	33.8
52	968,767	2,522	0.002603	32.9
53	966,245	2,740	0.002836	31.9
54	963,505	2,980	0.003093	31.0
55	960,526	3,213	0.003345	30.1
56	957,313	3,471	0.003626	29.2
57	953,842	3,758	0.003940	28.3
58	950,084	4,079	0.004293	27.4
59	946,005	4,435	0.004688	26.6
60	941,570	4,832	0.005131	25.7
61	936,739	5,270	0.005626	24.8
62	931,468	5,759	0.006182	23.9
63	925,710	6,300	0.006805	23.1
64	919,410	6,898	0.007502	22.2
65	912,512	7,558	0.008283	21.4
66	904,954	8,288	0.009158	20.6
67	896,666	9,090	0.010138	19.8
68	887,576	9,973	0.011236	19.0
69	877,604	10,939	0.012465	18.2
70	866,664	11,996	0.013842	17.4
71	854,668	13,148	0.015384	16.6
72	841,520	14,399	0.017110	15.9
73	827,122	15,751	0.019043	15.2
74	811,371	17,205	0.021205	14.4
75	794,166	18,762	0.023625	13.7
76	775,404	20,418	0.026332	13.1
77	754,986	22,167	0.029361	12.4
78	732,819	23,999	0.032749	11.8
79	708,820	25,897	0.036535	11.1
80	682,923	27,840	0.040766	10.6
81	655,083	29,365	0.044826	10.0
82	625,718	30,843	0.049291	9.4
83	594,875	32,243	0.054201	8.9
84	562,632	33,533	0.059600	8.4
85	529,099	34,675	0.065537	7.9
86	494,424	35,630	0.072064	7.4
87	458,794	36,356	0.079243	6.9
88	422,438	36,809	0.087136	6.5
89	385,628	36,949	0.095815	6.0
90	348,679	36,736	0.105359	5.6
91	311,943	36,140	0.115853	5.2
92	275,803	35,135	0.127393	4.8
93	240,668	33,713	0.140082	4.5
94	206,955	32,115	0.155180	4.1
95	174,840	29,834	0.170637	3.8
96	145,006	28,358	0.195562	3.5
97	116,648	25,084	0.215041	3.2
98	91,564	21,651	0.236460	2.9
99	69,913	18,178	0.260013	2.7
100	51,734	14,792	0.285912	2.5
101	36,943	11,615	0.314391	2.2
102	25,328	8,756	0.345707	2.0
103	16,572	6,300	0.380141	1.8
104	10,272	4,294	0.418006	1.7
105	5,978	2,748	0.459642	1.5
106	3,231	1,633	0.505426	1.3
107	1,598	888	0.555769	1.2
108	710	434	0.611128	1.0
109	276	185	0.672000	0.8
110	91	91	1.000000	0.5