Appendix

Interest Factors for the Future Value of One Dollar: FVIF = $(1 + i)^n$

Time period (e.g., year)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100	1.120	1.140	1.150	1.160	1.180	1.200
2	1.020	1.040	1.061	1.082	1.102	1.124	1.145	1.166	1.188	1.210	1.254	1.300	1.322	1.346	1.392	1.440
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331	1.405	1.482	1.521	1.561	1.643	1.728
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464	1.574	1.689	1.749	1.811	1.939	2.074
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611	1.762	1.925	2.011	2.100	2.288	2.488
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772	1.974	2.195	2.313	2.436	2.697	2.986
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949	2.211	2.502	2.660	2.826	3.186	3.583
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144	2.476	2.853	3.059	3.278	3.759	4.300
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358	2.773	3.252	3.518	3.803	4.436	5.160
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594	3.106	3.707	4.046	4.411	5.234	6.192
11	1.116	1.243	1.384	1.539	1.710	1.898	2.105	2.332	2.580	2.853	3.479	4.226	4.652	5.117	6.176	7.430
12	1.127	1.268	1.426	1.601	1.796	2.012	2.252	2.518	2.813	3.138	3.896	4.818	5.350	5.936	7.287	8.916
13	1.138	1.294	1.469	1.665	1.886	2.133	2.410	2.720	3.066	3.452	4.363	5.492	6.153	6.886	8.599	10.699
14	1.149	1.319	1.513	1.732	1.980	2.261	2.579	2.937	3.342	3.797	4.887	6.261	7.076	7.988	10.147	12.839
15	1.161	1.346	1.558	1.801	2.079	2.397	2.759	3.172	3.642	4.177	5.474	7.138	8.137	9.266	11.973	15.407
16	1.173	1.373	1.605	1.873	2.183	2.540	2.952	3.426	3.970	4.595	6.130	8.137	9.358	10.748	14.129	18.488
17	1.184	1.400	1.653	1.948	2.292	2.693	3.159	3.700	4.328	5.054	6.866	9.276	10.761	12.468	16.672	22.186
18	1.196	1.428	1.702	2.026	2.407	2.854	3.380	3.996	4.717	5.560	7.690	10.575	12.375	14.463	19.673	26.623
19	1.208	1.457	1.754	2.107	2.527	3.026	3.617	4.316	5.142	6.116	8.613	12.056	14.232	16.777	23.214	31.948
20	1.220	1.486	1.806	2.191	2.653	3.207	3.870	4.661	5.604	6.728	9.646	13.743	16.367	19.461	27.393	38.337
25	1.282	1.641	2.094	2.666	3.386	4.292	5.427	6.848	8.623	10.835	17.000	26.462	32.919	40.874	62.668	95.396
30	1.348	1.811	2.427	3.243	4.322	5.743	7.612	10.063	13.268	17.449	29.960	50.950	66.212	85.850	143.370	237.370

Appendix

B Interest Factors for the Present Value of One Dollar: PVIF = $1/(1 + i)^n$

Time period (e.g., year)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909	.893	.877	.870	.862	.847	.833	.806	.781
2	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826	.797	.769	.756	.743	.718	.694	.650	.610
3	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751	.712	.675	.658	.641	.609	.579	.524	.477
4	.961	.924	.889	.855	.823	.792	.763	.735	.708	.683	.636	.592	.572	.552	.516	.482	.423	.373
5	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621	.567	.519	.497	.476	.437	.402	.341	.291
6	.942	.888	.838	.790	.746	.705	.666	.630	.596	.564	.507	.456	.432	.410	.370	.335	.275	.227
7	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513	.452	.400	.376	.354	.314	.279	.222	.178
8	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467	.404	.351	.327	.305	.266	.233	.179	.139
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424	.361	.308	.284	.263	.226	.194	.144	.108
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386	.322	.270	.247	.227	.191	.162	.116	.085
11	.896	.804	.722	.650	.585	.527	.475	.429	.388	.350	.287	.237	.215	.195	.162	.135	.094	.066
12	.887	.788	.701	.625	.557	.497	.444	.397	.356	.319	.257	.208	.187	.168	.137	.112	.076	.052
13	.879	.773	.681	.601	.530	.469	.415	.368	.326	.290	.229	.182	.163	.145	.116	.093	.061	.040
14	.870	.758	.661	.577	.505	.442	.388	.340	.299	.263	.205	.160	.141	.125	.099	.078	.049	.032
15	.861	.743	.642	.555	.481	.417	.362	.315	.275	.239	.183	.140	.123	.108	.084	.065	.040	.025
16	.853	.728	.623	.534	.458	.394	.339	.292	.252	.218	.163	.123	.107	.093	.071	.054	.032	.019
17	.844	.714	.605	.513	.436	.371	.317	.270	.231	.198	.146	.108	.093	.080	.060	.045	.026	.015
18	.836	.700	.587	.494	.416	.350	.296	.250	.212	.180	.130	.095	.081	.069	.051	.038	.021	.012
19	.828	.686	.570	.475	.396	.331	.276	.232	.194	.164	.116	.083	.070	.060	.043	.031	.017	.009
20	.820	.673	.554	.456	.377	.312	.258	.215	.178	.149	.104	.073	.061	.051	.037	.026	.014	.007
25	.780	.610	.478	.375	.295	.233	.184	.146	.116	.092	.059	.038	.030	.024	.016	.010	.005	.003
30	.742	.552	.412	.308	.231	.174	.131	.099	.075	.057	.033	.020	.015	.012	.007	.004	.002	.001

Appendix

C

Interest Factors for the Future Value of an Annuity of One Dollar:

$$\text{FVAIF} = \frac{(1 + i)^n - 1}{i}$$

Time period (e.g., year)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	20%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.010	2.020	2.030	2.040	2.050	2.060	2.070	2.080	2.090	2.100	2.120	2.140	2.160	2.200
3	3.030	3.060	3.091	3.122	3.152	3.184	3.215	3.246	3.278	3.310	3.374	3.440	3.506	3.640
4	4.060	4.122	4.184	4.246	4.310	4.375	4.440	4.506	4.573	4.641	4.770	4.921	5.067	5.368
5	5.101	5.204	5.309	5.416	5.526	5.637	5.751	5.867	5.985	6.105	6.353	6.610	6.877	7.442
6	6.152	6.308	6.468	6.633	6.802	6.975	7.153	7.336	7.523	7.716	8.115	8.536	8.978	9.930
7	7.214	7.434	7.662	7.898	8.142	8.394	8.654	8.923	9.200	9.487	10.089	10.730	11.413	12.915
8	8.286	8.583	8.892	9.214	9.549	9.897	10.260	10.637	11.028	11.436	12.300	13.233	14.240	16.499
9	9.369	9.755	10.159	10.583	11.027	11.491	11.978	12.488	13.021	13.579	14.776	16.085	17.518	20.798
10	10.462	10.950	11.464	12.006	12.578	13.181	13.816	14.487	15.193	15.937	17.549	19.337	21.321	25.958
11	11.567	12.169	12.808	13.486	14.207	14.972	15.784	16.645	17.560	18.531	20.655	23.044	25.732	32.150
12	12.683	13.412	14.192	15.026	15.917	16.870	17.888	18.977	20.141	21.384	24.138	27.271	30.850	39.580
13	13.809	14.680	15.618	16.627	17.713	18.882	20.141	21.495	22.953	24.523	28.029	32.089	36.786	48.496
14	14.947	15.974	17.086	18.292	19.599	21.051	22.550	24.215	26.019	27.975	32.393	37.581	43.672	59.195
15	16.097	17.293	18.599	20.024	21.579	23.276	25.129	27.152	29.361	31.772	37.280	43.842	51.659	72.035
16	17.258	18.639	20.157	21.825	23.657	25.673	27.888	30.324	33.003	35.950	42.753	50.980	60.925	87.442
17	18.430	20.012	21.762	23.698	25.840	28.213	30.840	33.750	36.974	40.545	48.884	59.118	71.673	105.93
18	19.615	21.412	23.414	25.645	28.132	30.906	33.999	37.450	41.301	45.599	55.750	68.934	84.140	128.11
19	20.811	22.841	25.117	27.671	30.539	33.760	37.379	41.446	46.018	51.159	63.440	78.969	98.603	154.74
20	22.019	24.297	26.870	29.778	33.066	36.786	40.995	45.762	51.160	57.275	72.052	91.025	115.37	186.68
25	28.243	32.030	36.459	41.646	47.727	54.865	63.249	73.106	84.701	98.347	133.33	181.87	249.21	471.96
30	34.785	40.568	47.575	56.085	66.439	79.058	94.461	113.283	136.308	164.494	241.333	356.878	530.310	1181.8

Appendix

D Interest Factors for the Present Value of an Annuity of One Dollar:

$$\text{PVAIF} = \frac{1 - \dfrac{1}{(1+i)^n}}{i} = \frac{1-(1+i)^{-n}}{i}$$

Time period (e.g., year)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	18%	20%	24%	28%	32%	36%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.893	0.877	0.862	0.847	0.833	0.806	0.781	0.758	0.735
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.690	1.647	1.605	1.566	1.528	1.457	1.392	1.332	1.276
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.402	2.322	2.246	2.174	2.106	1.981	1.868	1.766	1.674
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.037	2.914	2.798	2.690	2.589	2.404	2.241	2.096	1.966
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.605	3.433	3.274	3.127	2.991	2.745	2.532	2.345	2.181
6	5.795	5.601	5.417	5.242	5.076	4.917	4.766	4.623	4.486	4.355	4.111	3.889	3.685	3.498	3.326	3.020	2.759	2.534	2.399
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.574	4.288	4.039	3.812	3.605	3.242	2.937	2.678	2.455
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	4.968	4.639	4.344	4.078	3.837	3.421	3.076	2.786	2.540
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.985	5.759	5.328	4.946	4.607	4.303	4.031	3.566	3.184	2.868	2.603
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.650	5.216	4.833	4.494	4.193	3.682	3.269	2.930	2.650
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	5.988	5.453	5.029	4.656	4.327	3.776	3.335	2.978	2.683
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	6.194	5.660	5.197	4.793	4.439	3.851	3.387	3.013	2.708
13	12.134	11.348	10.635	9.986	9.394	8.534	8.358	7.904	7.487	7.103	6.424	5.842	5.342	4.910	4.533	3.912	3.427	3.040	2.727
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	6.628	6.002	5.468	5.008	4.611	3.962	3.459	3.061	2.740
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.060	7.606	6.811	6.142	5.575	5.092	4.675	4.001	3.483	3.076	2.750
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.312	7.824	6.974	6.265	5.669	5.162	4.730	4.003	3.503	3.088	2.758
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.002	7.120	6.373	5.749	5.222	4.775	4.059	3.518	3.097	2.763
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.250	6.467	5.818	5.273	4.812	4.080	3.529	3.104	2.767
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.366	6.550	5.877	5.316	4.844	4.097	3.539	3.109	2.770
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.128	8.514	7.469	6.623	5.929	5.353	4.870	4.110	3.546	3.113	2.772
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077	7.843	6.873	6.097	5.467	4.948	4.147	3.564	3.122	2.776
30	25.808	22.937	19.600	17.292	15.373	13.765	12.409	11.258	10.274	9.427	8.055	7.003	6.177	5.517	4.979	4.160	3.569	3.124	2.778