

Part III

Administrative, Procedural, and Miscellaneous

26 CFR 601.201: Rulings and determination letters  
(Also Part I, Sections 846; 1.846-1.)

Rev. Proc. 99-15

SECTION 1. PURPOSE

This revenue procedure prescribes the loss payment patterns and discount factors for the 1998 accident year. These factors will be used for computing discounted unpaid losses under § 846 of the Internal Revenue Code. See Rev. Proc. 98-11, 1998-4 I.R.B. 9, for background concerning the loss payment patterns and application of the discount factors.

SEC. 2. SCOPE

This revenue procedure applies to any taxpayer that is required to discount its unpaid losses under § 846 for a line of business using discount factors published by the Secretary.

SEC. 3. TABLES OF DISCOUNT FACTORS

.01 The following tables present separately for each line of business the discount factors under § 846 for accident year 1998. All the discount factors presented in this section were determined using the applicable interest rate under § 846(c) for 1998, which is 6.31 percent, and by assuming all loss payments occur in the middle of the calendar year.

.02 If the groupings of individual lines of business on the annual statement changes, taxpayers must discount the unpaid

losses on the resulting lines of business in accordance with the discounting patterns that would have applied to those unpaid losses based on their classification on the 1995 annual statement. In addition, section V of Notice 88-100, 1988-2 C.B. 439, provides rules concerning the determination of losses for accident years not separately reported on the annual statement.

.03 Tables

**Accident and Health (Other Than Disability Income or Credit Disability Insurance)**

Discount factor for all years equals 96.9869 percent.

**Auto Physical Damage**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	89.9430	89.9430	10.0570	9.7016	96.4662
AY+ 1	99.3814	9.4384	0.6186	0.5822	94.1086
AY+ 2	N/A	0.3093	0.3093	0.3000	96.9869
AY+ 3	N/A	0.3093	0.0000	0.0000	***

**Commercial Auto/Truck Liability/Medical**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	25.8075	25.8075	74.1925	64.9208	87.5031
AY+ 1	49.8793	24.0718	50.1207	44.1976	88.1823
AY+ 2	67.6592	17.7799	32.3408	28.6542	88.6007
AY+ 3	79.7711	12.1119	20.2289	17.9741	88.8535
AY+ 4	88.2132	8.4421	11.7868	10.4038	88.2671
AY+ 5	93.1778	4.9646	6.8222	5.9415	87.0908
AY+ 6	95.9623	2.7845	4.0377	3.4454	85.3310
AY+ 7	97.0091	1.0468	2.9909	2.5835	86.3785
AY+ 8	97.5719	0.5628	2.4281	2.1662	89.2148
AY+ 9	98.2191	0.6471	1.7809	1.6357	91.8421
AY+10	N/A	0.6471	1.1338	1.0717	94.5157
AY+11	N/A	0.6471	0.4867	0.4721	96.9869
AY+12	N/A	0.4867	0.0000	0.0000	***

**Composite Discount Factors**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	35.4611	35.4611	64.5389	55.1909	85.5157
AY+ 1	59.1449	23.6838	40.8551	34.2539	83.8423
AY+ 2	70.8220	11.6771	29.1780	24.3754	83.5404
AY+ 3	81.9019	11.0799	18.0981	14.4894	80.0603
AY+ 4	86.3688	4.4669	13.6312	10.7980	79.2152
AY+ 5	90.0497	3.6809	9.9503	7.6841	77.2246
AY+ 6	92.7488	2.6991	7.2512	5.3860	74.2771
AY+ 7	93.8259	1.0771	6.1741	4.6153	74.7524
AY+ 8	94.2415	0.4156	5.7585	4.4780	77.7634
AY+ 9	94.8568	0.6153	5.1432	4.1261	80.2252
AY+10	N/A	0.6153	4.5279	3.7520	82.8658
AY+11	N/A	0.6153	3.9125	3.3543	85.7336
AY+12	N/A	0.6153	3.2972	2.9316	88.9107
AY+13	N/A	0.6153	2.6819	2.4821	92.5511
AY+14	N/A	0.6153	2.0665	2.0043	96.9869
AY+15	N/A	2.0665	0.0000	0.0000	***

**Fidelity/Surety**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	24.1540	24.1540	75.8460	70.0985	92.4222
AY+ 1	59.0961	34.9421	40.9039	38.4941	94.1086
AY+ 2	N/A	20.4520	20.4520	19.8357	96.9869
AY+ 3	N/A	20.4520	0.0000	0.0000	***

**Financial Guaranty/Mortgage Guaranty**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	9.2513	9.2513	90.7487	83.8302	92.3762
AY+ 1	50.5659	41.3146	49.4341	46.5217	94.1086
AY+ 2	N/A	24.7171	24.7171	23.9723	96.9869
AY+ 3	N/A	24.7171	0.0000	0.0000	***

**International (Composite)**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	35.4611	35.4611	64.5389	55.1909	85.5157
AY+ 1	59.1449	23.6838	40.8551	34.2539	83.8423
AY+ 2	70.8220	11.6771	29.1780	24.3754	83.5404
AY+ 3	81.9019	11.0799	18.0981	14.4894	80.0603
AY+ 4	86.3688	4.4669	13.6312	10.7980	79.2152
AY+ 5	90.0497	3.6809	9.9503	7.6841	77.2246
AY+ 6	92.7488	2.6991	7.2512	5.3860	74.2771
AY+ 7	93.8259	1.0771	6.1741	4.6153	74.7524
AY+ 8	94.2415	0.4156	5.7585	4.4780	77.7634
AY+ 9	94.8568	0.6153	5.1432	4.1261	80.2252
AY+10	N/A	0.6153	4.5279	3.7520	82.8658
AY+11	N/A	0.6153	3.9125	3.3543	85.7336
AY+12	N/A	0.6153	3.2972	2.9316	88.9107
AY+13	N/A	0.6153	2.6819	2.4821	92.5511
AY+14	N/A	0.6153	2.0665	2.0043	96.9869
AY+15	N/A	2.0665	0.0000	0.0000	***

**Medical Malpractice -- Claims-Made**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	6.3899	6.3899	93.6101	76.7454	81.9841
AY+ 1	24.0011	17.6112	75.9989	63.4297	83.4614
AY+ 2	42.6970	18.6959	57.3030	48.1554	84.0365
AY+ 3	58.0610	15.3640	41.9390	35.3527	84.2955
AY+ 4	69.6653	11.6043	30.3347	25.6187	84.4533
AY+ 5	75.6033	5.9380	24.3967	21.1127	86.5391
AY+ 6	81.8786	6.2753	18.1214	15.9746	88.1535
AY+ 7	87.8539	5.9753	12.1461	10.8217	89.0962
AY+ 8	89.5207	1.6668	10.4793	9.7859	93.3839
AY+ 9	94.3025	4.7818	5.6975	5.4731	96.0616
AY+10	N/A	4.7818	0.9157	0.8881	96.9869
AY+11	N/A	0.9157	0.0000	0.0000	***

**Medical Malpractice -- Occurrence**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	2.1239	2.1239	97.8761	71.4127	72.9623
AY+ 1	6.4831	4.3592	93.5169	71.4242	76.3757
AY+ 2	15.5987	9.1156	84.4013	66.5322	78.8284
AY+ 3	31.9062	16.3075	68.0938	53.9163	79.1794
AY+ 4	45.0931	13.1868	54.9069	43.7218	79.6290
AY+ 5	50.0751	4.9821	49.9249	41.3439	82.8121
AY+ 6	60.9728	10.8976	39.0272	32.7165	83.8298
AY+ 7	69.2138	8.2411	30.7862	26.2837	85.3752
AY+ 8	72.8658	3.6519	27.1342	24.1769	89.1010
AY+ 9	80.0005	7.1347	19.9995	18.3460	91.7325
AY+10	N/A	7.1347	12.8648	12.1473	94.4228
AY+11	N/A	7.1347	5.7300	5.5574	96.9869
AY+12	N/A	5.7300	0.0000	0.0000	***

**Miscellaneous Casualty**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Discounted Unpaid Losses at Year End (%)	Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	77.6669	77.6669	22.3331	21.1580	94.7384
AY+ 1	94.0673	16.4004	5.9327	5.5832	94.1086
AY+ 2	N/A	2.9664	2.9664	2.8770	96.9869
AY+ 3	N/A	2.9664	0.0000	0.0000	***

**Multiple Peril Lines  
(Homeowners/Farmowners Multiple Peril, Commercial Multiple Peril,  
and Special Liability (Ocean Marine, Aircraft (All Perils),  
Boiler and Machinery))**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	55.9587	55.9587	44.0413	39.0450	88.6553
AY+ 1	77.8939	21.9352	22.1061	18.8920	85.4607
AY+ 2	84.0083	6.1144	15.9917	13.7797	86.1681
AY+ 3	91.3188	7.3105	8.6812	7.1116	81.9199
AY+ 4	92.1670	0.8482	7.8330	6.6858	85.3545
AY+ 5	94.3838	2.2168	5.6162	4.8220	85.8592
AY+ 6	96.4959	2.1121	3.5041	2.9486	84.1467
AY+ 7	97.3670	0.8712	2.6330	2.2365	84.9399
AY+ 8	98.0034	0.6364	1.9966	1.7214	86.2176
AY+ 9	98.4059	0.4025	1.5941	1.4151	88.7674
AY+10	N/A	0.4025	1.1916	1.0894	91.4173
AY+11	N/A	0.4025	0.7892	0.7431	94.1661
AY+12	N/A	0.4025	0.3867	0.3750	96.9869
AY+13	N/A	0.3867	0.0000	0.0000	***

**Other (Including Credit)**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	66.7418	66.7418	33.2582	31.3484	94.2575
AY+ 1	89.2755	22.5337	10.7245	10.0927	94.1086
AY+ 2	N/A	5.3622	5.3622	5.2007	96.9869
AY+ 3	N/A	5.3622	0.0000	0.0000	***

**Other Liability -- Claims-Made**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	10.2440	10.2440	89.7560	73.7589	82.1771
AY+ 1	29.3763	19.1323	70.6237	58.6864	83.0973
AY+ 2	44.4111	15.0349	55.5889	46.8875	84.3470
AY+ 3	67.8197	23.4086	32.1803	25.7103	79.8946
AY+ 4	73.4753	5.6555	26.5247	21.5014	81.0617
AY+ 5	78.8604	5.3852	21.1396	17.3057	81.8638
AY+ 6	83.5027	4.6422	16.4973	13.6112	82.5054
AY+ 7	84.0676	0.5649	15.9324	13.8876	87.1656
AY+ 8	85.2129	1.1453	14.7871	13.5830	91.8570
AY+ 9	90.5992	5.3863	9.4008	8.8865	94.5285
AY+10	N/A	5.3863	4.0145	3.8936	96.9869
AY+11	N/A	4.0145	0.0000	0.0000	***

**Other Liability -- Occurrence**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	13.5751	13.5751	86.4249	67.7139	78.3500
AY+ 1	26.3964	12.8213	73.6036	58.7671	79.8426
AY+ 2	40.2725	13.8761	59.7275	48.1680	80.6464
AY+ 3	55.4566	15.1841	44.5434	35.5516	79.8134
AY+ 4	65.3309	9.8742	34.6691	27.6139	79.6498
AY+ 5	74.0647	8.7339	25.9353	20.3511	78.4690
AY+ 6	80.9090	6.8442	19.0910	14.5784	76.3627
AY+ 7	84.3622	3.4532	15.6378	11.9378	76.3395
AY+ 8	84.6163	0.2542	15.3837	12.4290	80.7938
AY+ 9	86.7311	2.1147	13.2689	11.0329	83.1483
AY+10	N/A	2.1147	11.1542	9.5486	85.6057
AY+11	N/A	2.1147	9.0395	7.9707	88.1769
AY+12	N/A	2.1147	6.9247	6.2932	90.8806
AY+13	N/A	2.1147	4.8100	4.5099	93.7612
AY+14	N/A	2.1147	2.6953	2.6140	96.9869
AY+15	N/A	2.6953	0.0000	0.0000	***



**Private Passenger Auto Liability/Medical**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	37.9339	37.9339	62.0661	56.2567	90.6400
AY+ 1	67.7044	29.7705	32.2956	29.1111	90.1396
AY+ 2	81.5316	13.8272	18.4684	16.6913	90.3774
AY+ 3	89.8898	8.3583	10.1102	9.1266	90.2713
AY+ 4	94.6531	4.7633	5.3469	4.7912	89.6074
AY+ 5	97.1265	2.4734	2.8735	2.5433	88.5087
AY+ 6	98.4587	1.3322	1.5413	1.3302	86.3036
AY+ 7	98.9811	0.5224	1.0189	0.8755	85.9258
AY+ 8	99.2330	0.2519	0.7670	0.6710	87.4859
AY+ 9	99.4067	0.1737	0.5933	0.5343	90.0498
AY+10	N/A	0.1737	0.4196	0.3889	92.6798
AY+11	N/A	0.1737	0.2460	0.2344	95.2948
AY+12	N/A	0.1737	0.0723	0.0701	96.9869
AY+13	N/A	0.0723	0.0000	0.0000	***

**Products Liability -- Claims-Made**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	4.9750	4.9750	95.0250	75.3503	79.2952
AY+ 1	15.1072	10.1322	84.8928	69.6580	82.0540
AY+ 2	30.9560	15.8488	69.0440	57.7122	83.5875
AY+ 3	38.2420	7.2860	61.7580	53.8414	87.1813
AY+ 4	68.6101	30.3681	31.3899	25.9272	82.5975
AY+ 5	78.5966	9.9865	21.4034	17.2665	80.6719
AY+ 6	88.3971	9.8005	11.6029	8.2511	71.1122
AY+ 7	93.2957	4.8986	6.7043	3.7210	55.5008
AY+ 8	88.3815	-4.9142	11.6185	9.0226	77.6571
AY+ 9	89.6105	1.2290	10.3895	8.3247	80.1263
AY+10	N/A	1.2290	9.1604	7.5828	82.7774
AY+11	N/A	1.2290	7.9314	6.7940	85.6598
AY+12	N/A	1.2290	6.7024	5.9555	88.8568
AY+13	N/A	1.2290	5.4733	5.0641	92.5229
AY+14	N/A	1.2290	4.2443	4.1164	96.9869
AY+15	N/A	4.2443	0.0000	0.0000	***

**Products Liability -- Occurrence**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	9.0653	9.0653	90.9347	68.5447	75.3780
AY+ 1	14.9035	5.8382	85.0965	66.8503	78.5583
AY+ 2	29.2591	14.3555	70.7409	56.2670	79.5396
AY+ 3	45.6462	16.3871	54.3538	42.9213	78.9665
AY+ 4	57.5945	11.9483	42.4055	33.3101	78.5514
AY+ 5	63.8634	6.2689	36.1366	28.9483	80.1080
AY+ 6	75.2266	11.3632	24.7734	19.0587	76.9322
AY+ 7	78.2679	3.0413	21.7321	17.1256	78.8030
AY+ 8	78.1898	-0.0781	21.8102	18.2867	83.8447
AY+ 9	81.8722	3.6825	18.1278	15.6437	86.2972
AY+10	N/A	3.6825	14.4453	12.8340	88.8455
AY+11	N/A	3.6825	10.7628	9.8469	91.4903
AY+12	N/A	3.6825	7.0803	6.6714	94.2243
AY+13	N/A	3.6825	3.3979	3.2955	96.9869
AY+14	N/A	3.3979	0.0000	0.0000	***

**Reinsurance A (Nonproportional Property)**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	27.1668	27.1668	72.8332	64.6044	88.7020
AY+ 1	68.7008	41.5340	31.2992	25.8566	82.6112
AY+ 2	70.0362	1.3354	29.9638	26.1113	87.1429
AY+ 3	87.5338	17.4976	12.4662	9.7178	77.9528
AY+ 4	90.2132	2.6794	9.7868	7.5683	77.3318
AY+ 5	91.3751	1.1619	8.6249	6.8479	79.3965
AY+ 6	94.3845	3.0095	5.6155	4.1770	74.3844
AY+ 7	93.3293	-1.0552	6.6707	5.5286	82.8791
AY+ 8	N/A	1.0387	5.6320	4.8065	85.3426
AY+ 9	N/A	1.0387	4.5932	4.0387	87.9283
AY+10	N/A	1.0387	3.5545	3.2226	90.6623
AY+11	N/A	1.0387	2.5158	2.3549	93.6071
AY+12	N/A	1.0387	1.4771	1.4325	96.9869
AY+13	N/A	1.4771	0.0000	0.0000	***

**Reinsurance B (Nonproportional Liability)**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	6.6962	6.6962	93.3038	68.4920	73.4075
AY+ 1	22.3944	15.6982	77.6056	56.6279	72.9689
AY+ 2	32.6486	10.2542	67.3514	49.6284	73.6858
AY+ 3	50.2234	17.5748	49.7766	34.6391	69.5892
AY+ 4	53.5839	3.3605	46.4161	33.3600	71.8715
AY+ 5	55.6838	2.0999	44.3162	33.2998	75.1415
AY+ 6	63.6144	7.9306	36.3856	27.2240	74.8210
AY+ 7	66.4211	2.8066	33.5789	26.0480	77.5726
AY+ 8	N/A	2.8066	30.7723	24.7978	80.5850
AY+ 9	N/A	2.8066	27.9656	23.4687	83.9199
AY+10	N/A	2.8066	25.1590	22.0558	87.6656
AY+11	N/A	2.8066	22.3524	20.5537	91.9531
AY+12	N/A	2.8066	19.5457	18.9568	96.9869
AY+13	N/A	19.5457	0.0000	0.0000	***

**Reinsurance C (Financial Lines)**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	11.4622	11.4622	88.5378	76.8712	86.8230
AY+ 1	44.5791	33.1169	55.4209	47.5760	85.8449
AY+ 2	63.9134	19.3343	36.0866	30.6431	84.9154
AY+ 3	65.6185	1.7051	34.3815	30.8186	89.6372
AY+ 4	79.9778	14.3593	20.0222	17.9578	89.6897
AY+ 5	88.9152	8.9374	11.0848	9.8759	89.0943
AY+ 6	91.2490	2.3338	8.7510	8.0928	92.4785
AY+ 7	94.7645	3.5155	5.2355	4.9788	95.0957
AY+ 8	N/A	3.5155	1.7200	1.6682	96.9869
AY+ 9	N/A	1.7200	0.0000	0.0000	***

**Special Property (Fire, Allied Lines, Inland Marine,  
Earthquake, Glass, Burglary and Theft)**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	57.4895	57.4895	42.5105	40.4271	95.0992
AY+ 1	90.5193	33.0297	9.4807	8.9222	94.1086
AY+ 2	N/A	4.7404	4.7404	4.5975	96.9869
AY+ 3	N/A	4.7404	0.0000	0.0000	***

**Workers' Compensation**

Tax Year	Cumulative Losses Paid (%)	Estimated Losses Paid Each Year (%)	Unpaid Losses at Year End (%)	Discounted Unpaid Losses at Year End (%)	Discount Factors (%)
AY+ 0	23.6461	23.6461	76.3539	62.1882	81.4474
AY+ 1	44.8166	21.1705	55.1834	44.2841	80.2490
AY+ 2	57.9652	13.1486	42.0348	33.5213	79.7466
AY+ 3	72.0542	14.0889	27.9458	21.1099	75.5385
AY+ 4	80.5542	8.5000	19.4458	13.6778	70.3380
AY+ 5	84.8876	4.3334	15.1124	10.0728	66.6527
AY+ 6	87.1173	2.2297	12.8827	8.4094	65.2770
AY+ 7	88.2647	1.1473	11.7353	7.7571	66.1001
AY+ 8	88.5404	0.2757	11.4596	7.9622	69.4810
AY+ 9	88.8062	0.2658	11.1938	8.1906	73.1708
AY+10	N/A	0.2658	10.9279	8.4333	77.1719
AY+11	N/A	0.2658	10.6621	8.6913	81.5163
AY+12	N/A	0.2658	10.3963	8.9657	86.2394
AY+13	N/A	0.2658	10.1304	9.2573	91.3813
AY+14	N/A	0.2658	9.8646	9.5674	96.9869
AY+15	N/A	9.8646	0.0000	0.0000	***

**DRAFTING INFORMATION**

The principal author of this revenue procedure is Katherine A. Hossofsky of the Office of the Assistant Chief Counsel (Financial Institutions and Products). For further information regarding this revenue procedure, contact Ms. Hossofsky on (202) 622-3477 (not a toll-free number).