



Present

The Wild and Wacky World of Finance (Part 3)

1997 Cerebellum Corporation • 800-VCR-REVU

I. Cost of Capital

- A. The Logic of Cost of Capital
 - 1. Cost of Capital
 - 2. Capital Components
 - 3. Capital Structure
 - 4. Weighted Average Cost of Capital

- B. The Cost of Debt
 - 1. Calculating Cost of debt
 - 2. Example

- C. The Cost of Preferred Stock
 - 1. Calculating Cost of Preferred Stock
 - 2. Example

- D. Cost of Retained Earnings
 - 1. CAP-M
 - 2. Bond-Yield-Plus-Risk-Premium
 - 3. Discounted Cash Flow

- E. The Cost of New Common Stock

- F. Calculating the Weighted Average Cost of Capital
 - 1. WACC when using Retained Earnings
 - 2. WACC when issuing New Common Stock

- G. The Marginal Cost of Capital

II. The Basics of Capital Budgeting

- A. What is Capital Budgeting
 - 1. Definition

- 2. Where do projects come from
 - B. Different Kinds of Projects
 - 1. Mandatory Projects
 - 2. Expansion Projects
 - 3. Replacement Projects

- C. Isn't this similar to Stock Valuation?

- D. Capital Budgeting Decision Methods
 - 1. Payback
 - 2. Discounted Payback
 - 3. Net Present Value
 - 4. Profitability Index
 - 5. Internal Rate of Return (IRR)
 - 6. Modified Internal Rate of Return (MIRR)

III. Capital Budgeting with Certainty

- A. What are we doing?
 - 1. Cash Flows
 - 2. Incremental Cash

- 3. The Game Plan
- 4. Captain Blahr

- B. The Cashflows and the Process

- 1. Net Investment Cash Outlay
 - a) New Equipment
 - b) Change in Net Working Capital

- 2. Operating Cash Flows (OCFs)
 - a) Total Income

- b) Total Costs
- c) Subtract Depreciation
- d) Subtract Taxes
- e) Add Back Depreciation

- 3. Net Disposal Cashflow
 - a) Salvage Value
 - b) Subtract Taxes
 - c) Return on Net Working Capital
- 4. Captain Blahr's Cashflows

- C. Evaluation of a Capital Budget

- 1. Payback
- 2. Discounted Payback
- 3. Net Present Value
- 4. Profitability Index
- 5. IRR
- 6. MIRR

- D. Example Two: Replacement

- 1. Intro to Z-co and Replacement
- 2. NICO
- 3. Changes to OCFs
 - a) After-Tax savings on expenses
 - b) After-Tax benefits on Depreciation
- 4. Net Disposal Cashflow
- 5. Find the Present Value
- 6. Evaluation

Cost of Debt:

after taxes = $K_d(1-T)$

Cost of Preferred Stock:

$$K_{ps} = \frac{D_{ps}}{P_n}$$

Cost of Retained Earnings:

using CAPM: $K_s = K_{rf} + \beta(K_m - K_{rf})$

using Bond-yield-plus-risk-premium: $i + [3 - 7]$

using DCF: $K_s = \frac{DIV}{Price} + g$

Cost of New Common Stock:

$$K_c = \frac{D_e}{P_c(1-F)} + g$$

Weighted Average Cost of Capital

$WACC = W_d K_d(1-T) + W_{ps} K_{ps} + W_e K_s$
(using retained earnings)

$WACC = W_d K_d(1-T) + W_{ps} K_{ps} + W_e K_c$
(using new common stock)

How to do a Capital Budget:

1. Determine the cost of the project.
2. Estimate the expected cashflows the project will create.
3. Estimate the riskiness of the projected cashflows.
4. Determine the cost of capital at which the cashflows should be discounted.
5. Estimate the revenues of the project to the business by using the expected cashflows to calculate a present value.
6. Apply decision method to accept or reject project.

TABLE UNO - FVIF

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100	1.110	1.120	1.130	1.140	1.150	1.160	1.170	1.180	1.190	1.200
2	1.020	1.040	1.061	1.082	1.103	1.124	1.145	1.166	1.188	1.210	1.232	1.254	1.277	1.300	1.323	1.346	1.369	1.392	1.416	1.440
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331	1.368	1.405	1.443	1.482	1.521	1.561	1.602	1.643	1.685	1.728
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464	1.518	1.574	1.630	1.689	1.749	1.811	1.874	1.939	2.005	2.074
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611	1.685	1.762	1.842	1.925	2.011	2.100	2.192	2.288	2.386	2.488
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772	1.870	1.974	2.082	2.195	2.313	2.436	2.565	2.700	2.840	2.986
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949	2.076	2.211	2.353	2.502	2.660	2.826	3.001	3.185	3.379	3.583
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144	2.305	2.476	2.658	2.853	3.059	3.278	3.511	3.759	4.021	4.300
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358	2.558	2.773	3.004	3.252	3.518	3.803	4.108	4.435	4.785	5.160
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594	2.839	3.106	3.395	3.707	4.046	4.411	4.807	5.234	5.695	6.192
11	1.116	1.243	1.384	1.539	1.710	1.898	2.105	2.332	2.580	2.853	3.152	3.479	3.836	4.226	4.652	5.117	5.624	6.176	6.777	7.430
12	1.127	1.268	1.426	1.601	1.796	2.012	2.252	2.518	2.813	3.138	3.498	3.896	4.335	4.818	5.350	5.936	6.580	7.288	8.064	8.916
13	1.138	1.294	1.469	1.665	1.886	2.133	2.410	2.720	3.066	3.452	3.883	4.363	4.898	5.492	6.153	6.886	7.699	8.599	9.596	10.699
14	1.149	1.319	1.513	1.732	1.980	2.261	2.579	2.937	3.342	3.797	4.310	4.887	5.535	6.261	7.076	7.988	9.007	10.147	11.420	12.839
15	1.161	1.346	1.558	1.801	2.079	2.397	2.759	3.172	3.642	4.177	4.785	5.474	6.254	7.138	8.137	9.266	10.539	11.974	13.590	15.407
16	1.173	1.373	1.605	1.873	2.183	2.540	2.952	3.426	3.970	4.595	5.311	6.130	7.067	8.137	9.358	10.748	12.330	14.129	16.172	18.488
17	1.184	1.400	1.653	1.948	2.292	2.693	3.159	3.700	4.328	5.054	5.895	6.866	7.986	9.276	10.761	12.468	14.426	16.672	19.244	22.186
18	1.196	1.428	1.702	2.026	2.407	2.854	3.380	3.996	4.717	5.560	6.544	7.690	9.024	10.575	12.375	14.463	16.879	19.673	22.901	26.623
19	1.208	1.457	1.754	2.107	2.527	3.026	3.617	4.316	5.142	6.116	7.263	8.613	10.197	12.056	14.232	16.777	19.748	23.214	27.252	31.948
20	1.220	1.486	1.806	2.191	2.653	3.207	3.870	4.661	5.604	6.727	8.062	9.646	11.523	13.743	16.367	19.461	23.106	27.393	32.429	38.338
21	1.232	1.516	1.860	2.279	2.786	3.400	4.141	5.034	6.109	7.400	8.949	10.804	13.021	15.668	18.822	22.574	27.034	32.324	38.591	46.005
22	1.245	1.546	1.916	2.370	2.925	3.604	4.430	5.437	6.659	8.140	9.934	12.100	14.714	17.861	21.645	26.186	31.629	38.142	45.923	55.206
23	1.257	1.577	1.974	2.465	3.072	3.820	4.741	5.871	7.258	8.954	11.026	13.552	16.627	20.362	24.891	30.376	37.006	45.649	54.649	66.247
24	1.270	1.608	2.033	2.563	3.225	4.049	5.072	6.341	7.911	9.850	12.239	15.179	18.788	23.212	28.625	35.236	43.297	53.109	65.032	79.497
25	1.282	1.641	2.094	2.666	3.386	4.292	5.427	6.848	8.623	10.835	13.585	17.000	21.231	26.462	32.919	40.874	50.658	62.669	77.388	95.396
26	1.295	1.673	2.157	2.772	3.556	4.549	5.807	7.396	9.399	11.918	15.080	19.040	23.991	30.167	37.857	47.474	59.270	73.949	92.092	114.475
27	1.308	1.707	2.221	2.883	3.733	4.822	6.214	7.988	10.245	13.110	16.739	21.327	27.109	34.390	43.535	55.000	69.345	87.260	109.589	137.371
28	1.321	1.741	2.288	2.999	3.920	5.112	6.649	8.627	11.167	14.421	18.580	23.88	30.633	39.204	50.066	63.800	81.134	102.967	130.411	164.845
29	1.335	1.776	2.357	3.119	4.116	5.418	7.114	9.317	12.172	15.863	20.62	26.75	34.616	44.693	57.575	74.009	94.927	121.501	155.189	197.814
30	1.348	1.811	2.427	3.243	4.332	5.743	7.612	10.063	13.268	17.449	22.89	29.96	39.116	50.950	66.212	85.850	111.065	143.371	184.675	237.376
35	1.417	2.000	2.814	3.946	5.516	7.686	10.677	14.785	20.414	28.102	38.575	52.800	72.069	98.100	133.176	180.314	243.50	328.00	440.70	590.67
40	1.489	2.208	3.262	4.801	7.040	10.286	14.974	21.725	31.409	45.259	65.001	93.051	132.782	188.88	267.86	378.54	533.87	750.38	1051.67	1469.8
45	1.565	2.438	3.782	5.841	8.985	13.765	21.002	31.920	48.327	72.890	109.503	163.99	244.64	363.68	538.77	795.44	1170.5	1716.7	2509.7	3657.3
50	1.645	2.692	4.384	7.107	11.467	18.420	29.457	46.902	74.358	117.391	184.56	289.00	450.74	700.23	1083.66	1670.7	2566.2	3927.4	5988.9	9100.4
55	1.729	2.972	5.082	8.646	14.636	24.650	41.315	68.914	114.408	189.059	311.00	509.32	830.5	1348.2	2179.6	3509.0	5626.3	8984.8	14291.7	—

TABLE DOS - FVIFA

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	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	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	2.110	2.120	2.130	2.140	2.150	2.160	2.170	2.180	2.190	2.200
3	3.030	3.060	3.091	3.122	3.153	3.184	3.215	3.264	3.278	3.310	3.342	3.374	3.407	3.440	3.473	3.506	3.539	3.572	3.606	3.640
4	4.060	4.122	4.184	4.246	4.310	4.375	4.440	4.506	4.573	4.641	4.710	4.779	4.850	4.921	4.993	5.066	5.141	5.215	5.291	5.368
5	5.101	5.204	5.309	5.416	5.526	5.637	5.751	5.867	5.985	6.105	6.228	6.353	6.480	6.610	6.742	6.877	7.014	7.154	7.297	7.442
6	6.152	6.308	6.468	6.633	6.802	6.975	7.153	7.336	7.523	7.716	7.913	8.115	8.323	8.536	8.754	8.977	9.207	9.442	9.683	9.930
7	7.214	7.434	7.662	7.898	8.142	8.394	8.654	8.923	9.200	9.487	9.783	10.089	10.405	10.730	11.067	11.414	11.772	12.142	12.523	12.916
8	8.286	8.593	8.892	9.214	9.549	9.897	10.260	10.637	11.028	11.436	11.859	12.300	12.757	13.233	13.727	14.240	14.773	15.327	15.902	16.499
9	9.369	9.755	10.159	10.583	11.027	11.491	11.978	12.488	13.021	13.579	14.164	14.776	15.416	16.085	16.786	17.519	18.285	19.086	19.923	20.799
10	10.462	10.950	11.464	12.006	12.578	13.181	13.816	14.487	15.193	15.937	16.722	17.549	18.420	19.337	20.304	21.321	22.393	23.521	24.709	25.959
11	11.567	12.169	12.808	13.486	14.207	14.972	15.784	16.645	17.560	18.531	19.561	20.655	21.814	23.045	24.349	25.733	27.200	28.755	30.400	32.150
12	12.683	13.412	14.192	15.026	15.917	16.870	17.888	18.977	20.141	21.384	22.713	24.133	25.650	27.271	29.002	30.850	32.824	34.931	37.180	39.581
13	13.809	14.680	15.618	16.627	17.713	18.882	20.141	21.495	22.953	24.523	26.212	28.029	29.985	32.089	34.352	36.786	39.404	42.219	45.244	48.497
14	14.947	15.974	17.086	18.292	19.599	21.015	22.550	24.215	26.019	27.975	30.095	32.393	34.883	37.581	40.505	43.672	47.103	50.818	54.841	59.196
15	16.097	17.293	18.599	20.024	21.579	23.276	25.129	27.152	29.361	31.772	34.405	37.280	40.417	43.842	47.580	51.660	56.110	60.965	66.261	72.035
16	17.258	18.639	20.157	21.825	23.657	25.673	27.888	30.324	33.003	35.950	39.190	42.753	46.672	50.980	55.717	60.925	66.649	72.939	79.850	87.442
17	18.430	20.012	21.762	23.698	25.840	28.213	30.840	33.750	36.974	40.545	44.501	48.884	53.739	59.118	65.075	71.673	78.979	87.068	96.022	105.931
18	19.615	21.412	23.414	25.645	28.132	30.906	33.999	37.450	41.301	45.599	50.396	55.750	61.725	68.394	75.836	84.141	93.406	103.740	115.266	128.117
19	20.811	22.841	25.117	27.671	30.539	33.760	37.379	41.446	46.018	51.159	56.939	63.440	70.749	78.769	88.212	98.603	110.285	123.414	138.166	154.710
20	22.019	24.297	26.870	29.778	33.066	36.786	40.995	45.762	51.160	57.275	64.203	72.052	80.947	91.025	102.444	115.380	130.033	146.628	165.418	186.688
21	23.249	25.783	28.636	31.969	35.719	39.993	44.865	50.423	56.765	64.002	72.265	81.699	92.47	104.77	118.81	134.84	153.14	174.02	197.85	225.03
22	24.472	27.299	30.537	34.248	38.505	43.392	49.006	55.457	62.873	71.403	81.214	92.503	105.49	120.44	137.63	157.41	180.17	206.34	236.44	271.03
23	25.716	28.845	32.453	36.618	41.430	46.996	53.436	60.893	69.532	79.543	91.148	104.603	120.20	138.30	159.28	183.60	211.80	244.49	282.36	326.24
24	26.973	30.422	34.426	39.083	44.502	50.816	58.177	66.765	76.790	88.497	102.174	118.155	136.83	158.66	184.17	213.98	248.81	289.49	337.01	392.48
25	28.242	32.030	36.459	41.646	47.277	54.865	63.279	73.106	84.701	98.347	114.413	133.334	155.62	181.87	212.79	249.21	292.10	342.60	402.04	471.98
26	29.526	33.671	38.553	44.312	51.113	59.593	68.676	79.954	93.324	109.182	127.999	150.334	176.85	208.33	245.71	290.09	342.76	405.20	479.43	567.38
27	30.821	35.344	40.710	47.084	54.669	63.706	74.484	87.351	102.723	121.100	143.079	169.374	200.84	238.50	283.57	337.50	402.03	479.22	571.52	681.85
28	32.129	37.051	42.931	49.968	58.403	68.520	80.698	95.339	112.968	134.210	159.817	190.699	227.95	272.89	327.10	392.50	471.38	566.48	681.11	819.22
29	33.450	38.792	45.219	52.966	62.323	73.640	87.347	103.966	124.135	148.631	178.397	214.583	258.58	312.09	377.17	456.30	552.51	669.45	811.52	984.07
30	34.785	40.568	47.575	56.085	66.439	79.058	94.461	113.283	136.308	164.494	199.021	241.333	293.2	356.8	434.7	530.3	647.4	790.9	966.7	1181.9
35	41.66	49.99	60.46	73.65	90.32	111.43	138.24	172.32	215.71	271.02	341.59	431.66	546.68	693.57	881.17	1120.7	1426.5	1816.7	2314.2	2948.3
40	48.89	60.40	75.40	95.03	120.80	154.76	199.64	259.06	337.88	442.59	581.83	767.09	1013.70	1342.03	1779.09	2360.8	3134.5	4163.2	5529.8	7343.9
45	56.48	71.89	92.72	121.03	159.70	212.74	285.75	386.51	525.86	718.90	986.64	1358.2	1874.2	2590.6	3585.1	4965.3	6879.3	9531.6	13203.4	18283.3
50	64.46	84.58	112.80	152.67	209.35	290.34	406.53	573.77	815.08	1163.9	1668.8	2400.0	3459.5	4994.5	7217.7	10435.6	15089.5	21813.1	31515.3	45497.2
55	72.85	98.59	136.07	191.16	272.71	394.17	575.93	848.92	1260.1	1880.6	2818.2	4236.0	6380.4	9623.1	14524.1	212925.3	33090.0	49910.2	75214.0	—

TABLE TRES - PVIF

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	.9901	.9804	.9709	.9615	.9542	.9434	.9346	.9259	.9174	.9091	.9009	.8929	.8850	.8772	.8696	.8621	.8547	.8475	.8403	.8333
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.8116	.7972	.7831	.7695	.7561	.7432	.7305	.7182	.7062	.6944
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7312	.7118	.6931	.6750	.6575	.6407	.6244	.6086	.5934	.5787
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6587	.6355	.6133	.5921	.5718	.5523	.5337	.5158	.4987	.4823
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5935	.5674	.5428	.5194	.4972	.4761	.4561	.4371	.4190	.4019
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5346	.5066	.4803	.4556	.4323	.4104	.3898	.3704	.3521	.3349
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4817	.4523	.4251	.3996	.3759	.3538	.3332	.3139	.2959	.2791
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4339	.4039	.3762	.3512	.3289	.3080	.2884	.2699	.2526	.2366
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3909	.3606	.3329	.3075	.2843	.2630	.2434	.2255	.2090	.1938
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3522	.3220	.2946	.2697	.2467	.2267	.2080	.1911	.1756	.1615
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.3173	.2875	.2607	.2366	.2149	.1954	.1778	.1619	.1476	.1346
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2858	.2567	.2307	.2076	.1869	.1685	.1520	.1372	.1240	.1122
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2575	.2292	.2042	.1821	.1625	.1452	.1299	.1163	.1042	.0935
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2300	.2046	.1807	.1597	.1413	.1252	.1110	.0985	.0876	.0779
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.2060	.1827	.1599	.1401	.1229	.1079	.0949	.0835	.0736	.0649
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1883	.1631	.1415	.1229	.1069	.0930	.0811	.0708	.0618	.0541
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1696	.1456	.1252	.1078	.0929	.0802	.0693	.0600	.0520	.0451
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1528	.1300	.1108	.0946	.0808	.0691	.0592	.0508	.0437	.0376
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1377	.1161	.0981	.0829	.0703	.0596	.0506	.0431	.0367	.0313
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1240	.1037	.0868	.0728	.0611	.0514	.0433	.0365	.0308	.0261
21	.8114	.6598	.5375	.4388	.3589	.2942	.2415	.1987	.1637	.1351	.1117	.0926	.0768	.0638	.0531	.0443	.0370	.0309	.0259	.0217
22	.8034	.6468	.5219	.4220	.3418	.2775	.2257	.1839	.1502	.1228	.1007	.0826	.0680	.0560	.0462	.0382	.0316	.0262	.0218	.0181
23	.7954	.6342	.5067	.4057	.3256	.2618	.2109	.1703	.1378	.1117	.0907	.0738	.0601	.0491	.0402	.0329	.0270	.0222	.0183	.0151
24	.7876	.6217	.4919	.3901	.3101	.2470	.1971	.1577	.1264	.1015	.0817	.0659	.0532	.0431	.0349	.0284	.0231	.0188	.0154	.0126
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0736	.0588	.0471	.0378	.0304	.0245	.0197	.0160	.0129	.0105
26	.7720	.5976	.4637	.3607	.2812	.2198	.1722	.1352	.1064	.0839	.0663	.0525	.0417	.0331	.0264	.0211	.0169	.0135	.0109	.0087
27	.7644	.5859	.4502	.3468	.2678	.2074	.1609	.1252	.0976	.0763	.0597	.0469	.0369	.0291	.0230	.0182	.0144	.0115	.0091	.0073
28	.7568	.5744	.4371	.3335	.2551	.1956	.1504	.1159	.0885	.0693	.0538	.0419	.0326	.0255	.0200	.0157	.0123	.0097	.0077	.0061
29	.7493	.5631	.4243	.3207	.2429	.1846	.1406	.1073	.0822	.0630	.0485	.0374	.0289	.0224	.0174	.0135	.0105	.0082	.0064	.0051
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0437	.0334	.0256	.0196	.0151	.0116	.0090	.0070	.0054	.0042
35	.7059	.5000	.3554	.2534	.1813	.1301	.0937	.0676	.0490	.0366	.0259	.0189	.0139	.0102	.0075	.0055	.0041	.0030	.0023	.0017
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0154	.0107	.0075	.0053	.0037	.0026	.0019	.0013	.0010	.0007
45	.6391	.4102	.2644	.1712	.1113	.0727	.0476	.0303	.0207	.0137	.0091	.0061	.0041	.0027	.0019	.0013	.0009	.0006	.0004	.0003
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0054	.0035	.0022	.0014	.0009	.0006	.0004	.0003	.0002	.0001
55	.5785	.3365	.1968	.1157	.0683	.0406	.0242	.0145	.0087	.0053	.0032	.0020	.0012	.0007	.0005	.0003	.0002	.0001	.0001	.0000

TABLE QUATRO – PVIFA

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	9901	9804	9709	9615	9524	9434	9346	9259	9174	9091	9009	8929	8850	8772	8696	8621	8547	8475	8403	8333
2	19704	19416	19135	18861	18594	18334	18080	17833	17591	17355	17125	16901	16681	16467	16257	16052	15852	15656	15465	15278
3	29410	28839	28286	27751	27232	26730	26243	25771	25313	24869	24437	24018	23612	23216	22832	22459	22096	21743	21399	21065
4	39020	38077	37171	36299	35460	34651	33872	33121	32397	31699	31024	30373	29745	29137	28550	27982	27432	26901	26386	25887
5	48534	47135	45797	44518	43295	42124	41002	39927	38857	37908	36959	36048	35172	34331	33522	32743	31993	31272	30576	29906
6	57955	56014	54172	52421	50757	49173	47665	46229	44859	43553	42305	41114	39975	38887	37845	36847	35892	34976	34098	33255
7	67282	64720	62303	60021	57864	55824	53893	52064	50330	48684	47122	45638	44226	42883	41604	40386	39224	38115	37057	36046
8	76517	73255	70197	67327	64632	62098	59713	57466	55348	53349	51461	49676	47988	46389	44873	43436	42072	40776	39544	38372
9	85660	81622	77861	74353	71078	68017	65152	62489	59952	57590	55370	53282	51317	49484	47716	46065	44506	43030	41633	40310
10	94713	89826	85302	81109	77217	73601	70236	67101	64177	61446	58892	56502	54262	52161	50188	48332	46586	44941	43389	41925
11	103676	97868	92526	87605	83063	78869	74987	71390	68052	64951	62065	59377	56869	54527	52337	50286	48364	46560	44865	43271
12	112551	105753	99540	93851	88634	83838	79427	75361	71607	68137	64924	61944	59176	56603	54206	51971	49894	47932	46105	44392
13	121337	113484	106350	99856	93936	88527	83577	79038	74869	71034	67499	64235	61218	58424	55831	53423	51183	49095	47147	45327
14	130037	121062	112961	105631	98986	92950	87455	82442	77862	73667	69819	66282	63025	60021	57245	54675	52293	50081	48023	46106
15	138651	128493	119379	11184	103797	97122	91079	85595	80607	76061	71909	68109	64624	61422	58474	55755	53242	50916	48759	46755
16	147179	135777	125611	116523	108378	101059	94466	88514	83126	78237	73792	69740	66039	62651	59542	56685	54053	51624	49377	47296
17	155623	142919	131661	121627	112741	104773	97632	91216	85436	80216	75488	71196	67291	63729	60472	57487	54746	52223	49897	47746
18	163983	149920	137535	126593	116896	108276	100591	93719	87556	82014	77016	72497	68399	64674	61280	58178	55339	52732	50333	48122
19	172260	156785	143238	131339	120853	111581	103356	96036	89501	83649	78393	73658	69380	65504	61982	58775	55845	53162	50700	48435
20	180456	163514	148775	135903	124622	114699	105940	98181	91285	85136	79633	74694	70248	66231	62593	59288	56278	53527	51009	48696
21	188570	170112	154510	140292	128212	117641	108355	100168	92922	86487	80571	75620	71016	66870	63125	59731	56648	53837	51268	48913
22	196604	176580	159369	145118	131630	120416	110612	102007	94424	87715	81757	76446	71695	67429	63687	60113	56984	54099	51486	49094
23	204558	182922	164436	148568	134886	123034	112722	103711	95602	88832	82664	77184	72297	67921	63988	60442	57234	54321	51688	49245
24	212434	189139	169355	152470	137986	125504	114693	105288	97066	90847	84381	78443	72829	68351	64338	60726	57465	54509	51822	49371
25	220232	195235	171431	153622	140939	127834	116536	106748	98226	90770	84217	78431	73000	68729	64641	60971	57682	54669	51951	49476
26	227952	201210	177168	155828	142752	130032	118258	107810	99290	91609	84881	78957	73717	69061	64901	61228	57831	54804	52060	49563
27	235596	206918	182370	163296	146430	132105	119867	109352	100266	92372	85478	79426	74086	69352	65135	61364	57975	54919	52151	49636
28	243164	212813	187641	166631	148981	134062	121277	110511	101161	93066	86016	80248	74412	69607	65335	61520	58099	55016	52228	49697
29	250658	218444	191885	169837	151411	135907	122777	111584	101983	93696	86501	80418	74701	69830	65509	61656	58204	55098	52292	49747
30	258077	223965	196004	172920	153725	137648	124090	112578	102737	94269	86938	80552	74957	70027	65660	61772	58294	55168	52347	49789
35	294086	249986	214872	186646	163742	144982	129477	116546	105668	96442	88552	81755	75856	70700	66166	62153	58582	55386	52512	49915
40	323945	273555	231148	197928	171591	150463	133317	119246	107574	97971	89511	82438	76344	71050	66443	62335	58713	55482	52581	49986
45	360945	294902	244187	207200	177741	154558	136055	121084	108812	98628	90079	82825	76609	71232	66543	62421	58773	55523	52611	49986
50	391961	314236	257298	214822	182559	157619	138007	122335	109617	99148	90417	83045	76752	71327	66605	62463	58801	55541	52623	49995
55	421427	331748	267744	221086	186335	159905	139399	123186	110140	99471	90617	83170	76830	71376	66636	62482	58813	55549	52628	49998

Captain Blahr Example

NICO

Ship (equipment)	8,000.00
increase in NWC	<u>3,000.00</u>
Cash outflow	11,000.00

Cash Inflows:

	Year			
	0	1	2	3
Revenue		9,000.00	9,000.00	9,000.00
Expenses		<u>5,000.00</u>	<u>5,000.00</u>	<u>5,000.00</u>
NOI		4,000.00	4,000.00	4,000.00
Depreciation		<u>2,460.00</u>	<u>3,600.00</u>	<u>1,200.00</u>
EBT		1,360.00	400.00	2,800.00
Taxes (30%)		<u>408.00</u>	<u>120.00</u>	<u>840.00</u>
NI		952.00	280.00	1,960.00
Add back Depreciation		<u>2,640.00</u>	<u>3,600.00</u>	<u>1,960.00</u>
Operational Cash Flow (OCF)		3,592.00	3,880.00	3,160.00
Sale Price + NWC				3,500.00
Actual Cash Flows	<11,000.00>	3,592.00	3,880.00	6,660.00
Present Value @ 14%		3,151.00	2,986.00	4,496.00

Z-Co Trimmer Replacement

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Cost of New Equip.	<10,000>					
Mkt. Val. of Old Equip.	500					
Tax Save on Sale	450					
Increase in NWC	<1,000>					
Total Outlay	<10,050>					
After tax depr. in cost		1,800	1,800	1,800	1,800	1,800
Tax savings from depr.		<u>1,190</u>	<u>1,670</u>	<u>470</u>	<u>150</u>	<130>
OCF		2,990	3,470	2,270	1,950	1,670
Net Disposal CF.						2,800
Net Cash Flow	<10,500>	2,990	3,470	2,270	1,950	4,470
P.V. @ 11%		2,693	2,816	1,659	1,285	2,652